Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-001 001.001 Perform aircraft safe for maintenance	5	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 001.002 Ground aircraft or equipment	5	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 001.006 Open and close engine cowling		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 001.007 Remove/install aircraft access panels	5	2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 001.008 Use interphone		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 001.010 Apply / Disconnect External Hydraulic Power	5	2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 001.011 Apply / Disconnect External Electrical Power	5	2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 002 HYDRAULIC POWER SYSTEMS Aircraft TOs													
2A6X5-001 002.001 Operational fundamentals		2016-07-11	2016-07-19				B	-	B	-	-	-	-
2A6X5-001 002.002 Perform Operational Check	5	2016-07-11	2016-07-19				2b	-	b	-	-	-	-
2A6X5-001 002.003 Inspect System Components	7	2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 002.004 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				1b	-	b	-	-	-	-
2A6X5-001 002.007 Service Accumulator		2016-07-11	2016-07-19				2b	-	b	-	-	-	-
2A6X5-001 002.008 Service Reservoir		2016-07-11	2016-07-19				1b	-	b	-	-	-	-
2A6X5-001 002.009 Bleed Hydraulic System		2016-07-11	2016-07-19				-	-	b	-	-	-	-
2A6X5-001 002.010 Remove / Install Components													
2A6X5-001 002.010.001 Pumps		2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 002.010.002 Motors		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 002.010.003 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 002.010.004 Filters		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 002.010.005 Reservoirs		2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 002.010.006 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 002.010.007 Accumulators		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 002.010.008 Indicating Devices		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003 LAND NG GEAR SYSTEMS Applicable aircraft TOs													
2A6X5-001 003.001 Operational fundamentals		2016-07-11	2016-07-19				B	-	B	-	-	-	-
2A6X5-001 003.002 Perform operational check of normal system		2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 003.003 Perform operational check of emergency system		2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 003.004 Inspect System Components	7	2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 003.005 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				1b	-	b	-	-	-	-
2A6X5-001 003.006 Service Struts		2016-07-11	2016-07-19				1b	-	b	-	-	-	-
2A6X5-001 003.007 Bleed landing gear system		2016-07-11	2016-07-19				-	-	b	-	-	-	-
2A6X5-001 003.008 Perform adjustments		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003.009 Remove / Install Components													
2A6X5-001 003.009.001 Actuators		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003.009.002 Motors		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003.009.003 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003.009.004 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 003.009.005 Swivels		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004 NOSE WHEEL STEERING SYSTEMS Applicable Aircraft TOs													
2A6X5-001 004.001 Operational Fundamentals		2016-07-11	2016-07-19				B	-	B	-	-	-	-
2A6X5-001 004.002 Perform Operational Check	5	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 004.003	7	2016-07-11	2016-07-19				2b	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Inspect System Components													
2A6X5-001 004.004 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 004.005 Bleed system		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004.006 Perform adjustments		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004.007 Remove / Install Components													
2A6X5-001 004.007.001 Actuators		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004.007.002 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004.007.003 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 004.007.004 Swivels		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005 WHEEL BRAKE SYSTEM Applicable Aircraft TOs													
2A6X5-001 005.001 Operational fundamentals		2016-07-11	2016-07-19				B	-	B	-	-	-	-
2A6X5-001 005.002 Perform Operational Check	5	2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.003 Inspect System Components	7	2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.004 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				1b	-	b	-	-	-	-
2A6X5-001 005.005 Bleed brake system		2016-07-11	2016-07-19				-	-	b	-	-	-	-
2A6X5-001 005.006 Perform adjustments		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.007 Remove / Install Components													
2A6X5-001 005.007.001 Swivels		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.007.002 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.007.003 Accumulators		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.007.004 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 005.007.005 Brake Assemblies		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 006 FLIGHT CONTROL SYSTEMS Applicable Aircraft TOs													
2A6X5-001 006.001 Operational fundamentals		2016-07-11	2016-07-19				B	-	B	-	-	-	-
2A6X5-001 006.002 Perform Operational Check	5	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 006.003 Inspect System Components	7	2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 006.004 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				2b	-	b	-	-	-	-
2A6X5-001 006.005 Bleed flight control system		2016-07-11	2016-07-19				-	-	b	-	-	-	-
2A6X5-001 006.006 Perform adjustments		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 006.007 Remove / Install Components													
2A6X5-001 006.007.001 Actuators		2016-07-11	2016-07-19				2b	-	-	-	-	-	-
2A6X5-001 006.007.002 Motors		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 006.007.003 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 006.007.004 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 006.007.005 Swivels		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 007 WEAPONS/CARGO DOOR SYSTEMS Applicable Aircraft TOs													
2A6X5-001 007.001 Operational fundamentals		2016-07-11	2016-07-19				A	-	B	-	-	-	-
2A6X5-001 007.002 Perform Operational Check	5	2016-07-11	2016-07-19				1b	-	-	-	-	-	-
2A6X5-001 007.003 Inspect System Components	7	2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 007.004 Troubleshoot Malfunctions	7	2016-07-11	2016-07-19				-	-	b	-	-	-	-
2A6X5-001 007.005 Bleed system		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 007.006 Perform adjustments		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 007.007 Remove / Install Components													
2A6X5-001 007.007.001 Actuators		2016-07-11	2016-07-19				-	-	-	-	-	-	-
2A6X5-001 007.007.002 Motors		2016-07-11	2016-07-19				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level		
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC	
2A6X5-001 007.007.003 Valves		2016-07-11	2016-07-19				-	-	-	-	-	-	-	
2A6X5-001 007.007.004 Manifolds		2016-07-11	2016-07-19				-	-	-	-	-	-	-	
2A6X5-001 007.007.005 Swivels		2016-07-11	2016-07-19				-	-	-	-	-	-	-	
2A6X5-001 007.007.006 Pumps		2016-07-11	2016-07-19				-	-	-	-	-	-	-	
2A6X5-005 001 A RCRAFT GROUND HANDLING TO 1C-5A-2-1, 00-5-172, TO 1C-5A-2-4, 1C-5A-2-2, 1C-5M-2 series														
2A6X5-005 001.001 Perform Aircraft Safe for Maintenance	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.002 Ground Aircraft or Equipment	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.009 Remove / Install Aircraft Access Panels	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.010 Use Interphone	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.011 Perform Aircraft Egress	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.019 Apply / Disconnect External Legacy Electrical Power	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.020 Apply / disconnect external electrical power avionics modernization program (AMP) modified aircraft	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.021 Apply/disconnect external electrical power M-modified aircraft	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 001.022 Apply / Disconnect External Hydraulic Power	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 002 HYDRAULIC POWER SYSTEMS TOs 1C-5A-2-3 series, 1C-5M-2-3 series														
2A6X5-005 002.005 Perform Operational Check	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 002.009 Service Accumulators	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 002.010 Service Reservoir	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 002.011 Remove / Install Components														
2A6X5-005 002.011.001 Engine Driven Pumps	5	2016-05-09	2016-07-28				-	-	-	-	-	-	-	
2A6X5-005 002.011.002 Accumulators	5	2016-05-09	2016-07-28				-	-	-	-	-	-	-	
2A6X5-005 002.011.004 Suction line wiggins/linflex fitting	5	2016-05-09	2016-07-28				-	-	-	-	-	-	-	
2A6X5-005 002.011.005 Engine Driven Pump Depressurization Valve	5	2016-05-09	2016-07-28				-	-	-	-	-	-	-	
2A6X5-005 002.011.012 Hydraulic Manifold Cartridge Valves	5	2016-05-09	2016-07-28				-	-	-	-	-	-	-	
2A6X5-005 004 AUXILIARY POWER UNIT HYDRAULIC START SYSTEM 1C-5A-2 series, 1C-5A-2-4														
2A6X5-005 004.003 Perform Operational Check	5	2016-06-08					-	-	-	-	-	-	-	
2A6X5-005 005 LAND NG GEAR SYSTEMS TOs 1C-5A-10 series, 1C-5A-2-10, 1C-5M-2-10														
2A6X5-005 005.018 Service MLG Strut	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 005.019 Service NLG Strut	5	2016-04-13	2016-04-13				-	-	-	-	-	-	-	
2A6X5-005 005.021 Remove / Install Components														
2A6X5-005 005.021.003 Control manifold (NLG, MLG)	5	2016-05-09					-	-	-	-	-	-	-	
2A6X5-005 006 NLG / MLG CASTER STEER NG SYSTEMS TOs 1C-5A-2-10 series, 1C-5M-2-10 series														
2A6X5-005 006.003 Perform Operational Check of NLG Steering Components	5						-	-	-	-	-	-	-	
2A6X5-005 007 LAND NG GEAR KNEEL SYSTEM TOs 1C-5A-2-10 series, 1C-5M-2-10 series														
2A6X5-005 007.003 Perform Operational Check of Kneeling System	5						-	-	-	-	-	-	-	
2A6X5-005 007.005 Remove / Install Components														

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		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level		
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC	
2A6X5-005 007.005.002 MLG Kneel Motor	5	2016-05-09	2016-08-01				-	-	-	-	-	-	-	
2A6X5-005 008 WHEEL BRAKE SYSTEM TOs 1C-5A-2-10, 1C-5M-2-10														
2A6X5-005 008.002 Perform operational check and brake/anti-skid bite Check	5						-	-	-	-	-	-	-	
2A6X5-005 009 FWD LOADING SYSTEM TOs 1C-5A-2-12 series, 1C-5M-2-12 series														
2A6X5-005 009.005 Operate Fwd Visor and Ramp System														
2A6X5-005 009.005.002 Auto Mode	5						-	-	-	-	-	-	-	
2A6X5-005 009.006 Remove / Install Components														
2A6X5-005 009.006.004 Visor Lock Actuator	5	2016-05-09	2016-08-01				-	-	-	-	-	-	-	
2A6X5-005 010 AFT LOADING SYSTEM TOs 1C-5A-2-12 series, 1C-5M-2-12 series														
2A6X5-005 010.006 Operate Aft Cargo Doors and Ramp Loading Systems														
2A6X5-005 010.006.002 Auto Mode	5						-	-	-	-	-	-	-	
2A6X5-005 011 PRIMARY FLIGHT CONTROL SYSTEMS TOs 1C-5A-2-9 series, 1C-5A-2-9-1, 1C-5M-2-9														
2A6X5-005 011.001 Operational Fundamentals		2016-09-28					-	-	-	-	-	-	-	
2A6X5-005 011.003 Perform Operational Check of Primary Flight Controls	5						-	-	-	-	-	-	-	
2A6X5-005 011.005 Remove / Install Components														
2A6X5-005 011.005.001 Aileron Manifold	5	2016-05-09					-	-	-	-	-	-	-	
2A6X5-005 011.005.004 Aileron Actuator	5	2016-05-09					-	-	-	-	-	-	-	
2A6X5-005 011.005.009 Primary Flight Control Gust Locks	5	2016-05-09					-	-	-	-	-	-	-	
2A6X5-005 012 SECONDARY FLIGHT CONTROL SYSTEMS TOs 1C-5A-2-9 series, 1C-5M-2-9 series														
2A6X5-005 012.001 Operational Fundamentals							-	-	-	-	-	-	-	
2A6X5-005 012.003 Perform Operational Check of Secondary Flight Controls	5						-	-	-	-	-	-	-	
2A6X5-005 012.006 Remove / Install Components														
2A6X5-005 012.006.003 Norm/Alt Pitch Trim Manifold and Components		2016-06-14	2016-06-16				-	-	-	-	-	-	-	
2A6X5-005 012.006.004 Normal/Alternate pitch trim motor/brake		2016-06-14	2016-06-16				-	-	-	-	-	-	-	
2A6X5-005 013 CREW ENTRY DOOR / STAIR LADDER TOs 1C-5A-2-12 series, 1C-5M-2-12 series														
2A6X5-005 013.002 Perform Operational Check	5						-	-	-	-	-	-	-	
2A6X5-005 019 NSPECT / OVERHAUL / BENCH CHECK EQUIPMENT 9H2-5-247-3, TO 9H2-5-221-3, TO 9H2-5-210-3,TO 9H2-4-186-3, TO H8-5-213-3, TO 19H8-14-99-3,TO 9H8-30-93-3														
2A6X5-005 019.001 FWD Doors														
2A6X5-005 019.001.001 Bench Check Visor Lock Cylinder	5						-	-	-	-	-	-	-	
2A6X5-005 019.001.002 Repair/Overhaul Visor Lock Cylinder	5						-	-	-	-	-	-	-	
2A6X5-006 002 HYDRAULIC POWER SYSTEMS TOs 1C-17A-2-29 series, 1C-17A-12JG-2-29 series														
2A6X5-006 002.001 Operational Fundamentals		2016-09-25	2016-09-27				-	-	-	-	-	-	-	
2A6X5-006 002.002 Inspect System	7	2016-09-25	2016-09-27				-	-	-	-	-	-	-	
2A6X5-006 002.008 Operational Check Main Hydraulic	5	2016-09-25	2016-09-27				-	-	-	-	-	-	-	

Career Field Education and Training Plan (CFETP)														
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		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Power System													
2A6X5-006 002.009 Operational Check Auxiliary Hydraulic Power System	5	2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.010 Operate Hydraulic System Controller	5	2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015 Remove / Install Components													
2A6X5-006 002.015.007 Filter Bowl Ratchet Lever		2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015.008 Eng Filter Manifold Assembly		2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015.009 Eng Filter Manifold Bleed Valve		2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015.015 Filter Elements	5	2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015.038 Filter Manifold Diff Press Indicators		2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-006 002.015.039 Return Filter Manifold Press Transducers		2016-09-25	2016-09-27				-	-	-	-	-	-	-
2A6X5-012 001 A RCRAFT GROUND HANDLING TO 1C-10K(A)-2-7, 2-9, 2-10, 2-12, 2-20													
2A6X5-012 001.001 Ground aircraft or equipment	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.002 Lubricate aircraft components		2012-05-01	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 001.003 Tow Aircraft		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 001.004 Perform Wing/Tail Walker Duties IAW Applicable TO/Checklist		2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.005 Install and remove ground safety devices	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.006 Perform refuel/defuel team member duties IAW TO/checklist		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 001.007 Open and close engine cowling	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.008 Remove / Install Aircraft Access Panels	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.009 Use Interphone	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.010 Marshall Aircraft		2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.011 Perform Aircraft Egress	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.012 Foreign Object Damage (FOD)/Dropped Object Program (DOPP) In and Around Aircraft		2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.013 Apply / Disconnect External Electrical Power	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 001.014 Apply / Disconnect External Hydraulic Power	5	2011-08-01	2011-11-01				-	-	-	-	-	-	-
2A6X5-012 001.015 Jack and Level Aircraft													
2A6X5-012 001.015.001 Safety		2012-05-28	2014-10-23				-	-	-	-	-	-	-
2A6X5-012 001.015.002 Manual		2012-05-28	2014-10-23				-	-	-	-	-	-	-
2A6X5-012 001.015.003 Manifold		2012-05-28	2014-10-23				-	-	-	-	-	-	-
2A6X5-012 001.015.004 Perform Jacking Team Member Duties		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 002 HYDRAULIC POWER SYSTEMS TO 1C-10K(A)-2-29													
2A6X5-012 002.001 Main Hydraulic System													
2A6X5-012 002.001.001 Operational Fundamentals		2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 002.001.002 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.001.003 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.004 Operate Main Hydraulic System	5	2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 002.001.005 Troubleshoot Main Hydraulic System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.001.006 Flush hydraulic system		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.007 Service Reservoir	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.008 Service Accumulator	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 Remove / Install Components													

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 002.001.009 001 Engine Driven Pumps	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 002 Accumulators		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 003 Air eliminators		2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 004 Engine and system manifold filters		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 005 Engine hydraulic manifolds		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 006 Hydraulic system manifolds		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.001.009 007 Reservoirs		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 002.001.009 008 Case drain bleed and check valves		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 009 Flight control by-pass valves		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 010 Hydraulic fire shutoff valves		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 011 Maintenance isolation valves		2012-05-01	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 012 Pump bleed and auto prime valve		2012-09-17	2012-09-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 013 Relief and by-pass valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 002.001.009 014 System relief valve		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 002.002 Auxiliary Hydraulic System													
2A6X5-012 002.002.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.002.002 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.002.003 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.002.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.002.005 Remove / Install Components													
2A6X5-012 002.002.005 001 Electric motor driven auxiliary pump	5	2011-09-14	2011-11-01				-	-	-	-	-	-	-
2A6X5-012 002.002.005 002 Reversible motor pump	5	2012-04-23	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 002.002.005 003 Motor Pump Shutoff Valve		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 002.002.005 004 Auxiliary pump manifold		2012-04-23	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 002.002.005 005 Reversible pump manifold		2012-04-23	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 002.003 Hydraulic Indication System													
2A6X5-012 002.003.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.003.002 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.003.003 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.003.004 Troubleshoot system	7	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.003.005 Remove / Install Components													
2A6X5-012 002.003.005 001 Reservoir temperature sensor		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.003.005 002 Case drain high temperature switch		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 002.003.005 003 Hydraulic quantity indicator		2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 002.003.005 004 Hydraulic quantity transmitter		2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 003 MAIN LANDING GEAR AND DOORS TO 1C-10K(A)-2-32													
2A6X5-012 003.001 Operate main gear doors		2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 003.002 Service Main Gear Shock Strut	5	2012-06-01	2012-06-26				-	-	-	-	-	-	-
2A6X5-012 003.003 Service Centerline Gear Shock Strut	5	2012-06-01	2012-06-26				-	-	-	-	-	-	-
2A6X5-012 003.004 Repack / Reseal Components													
2A6X5-012 003.004.001 Main gear shock strut		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 003.004.002 Centerline gear shock strut		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 004 NOSE GEAR AND DOORS TO 1C-10K(A)-2-32													
2A6X5-012 004.001 Operate nose gear door		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 004.002 Service Nose Gear Shock Strut	5	2012-06-01	2012-06-26				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 004.003 Repack / Reseal Nose Gear Shock Strut	5	2012-06-01	2012-06-26				-	-	-	-	-	-	-
2A6X5-012 005 EXTENSION AND RETRACTION TO 1C-10K(A)-2-32													
2A6X5-012 005.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 005.002 Perform operational check		2012-11-12	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 005.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 005.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 005.005 Simulated Extension / Retraction	7	2016-01-11	2016-01-13				-	-	-	-	-	-	-
2A6X5-012 005.006 Ground sensing		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 005.007 Remove / Install Components													
2A6X5-012 005.007.001 Main Gear Hydraulic Interlock Cylinder	5	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 005.007.002 Centerline gear control valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.003 Landing gear selector valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.004 Main Gear Down Lock Cylinder	5	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 005.007.005 Main gear retract cylinder		2012-05-01	2012-05-21				-	-	-	-	-	-	-
2A6X5-012 005.007.006 Main gear gland		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 005.007.007 Main gear door cylinder		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 005.007.008 Main gear door latch cylinder		2013-02-06	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.009 Nose gear retract cylinder		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 005.007.010 Nose gear unlock cylinder		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.011 Trim cylinder		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 005.007.012 Trim cylinder relief valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.013 Centerline gear retract cylinder		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.014 Centerline gear unlock cylinder		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.015 Centerline gear door links		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 006 WHEELS AND BRAKES SYSTEM TO 1C-10(K)A-2-32													
2A6X5-012 006.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 006.002 Perform operational checkout		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 006.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 006.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 006.005 Break wear check		2012-01-09	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 006.006 Bleed brake system		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 006.007 Remove / Install Components													
2A6X5-012 006.007.001 Main wheel brakes		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 006.007.002 Brake valve actuator		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 006.007.003 Brake system manifold and manifold check		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 006.007.004 Dual brake control valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 007 ANTI-SKID SYSTEM TO 1C-10K(A)-2-32													
2A6X5-012 007.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 007.002 Perform operational check		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 007.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 007.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 007.005 Perform maintenance practices		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 007.006 Remove / Install Components													
2A6X5-012 007.006.001		2013-02-22	2013-03-08				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Skid control manifold													
2A6X5-012 007.006.002 Fluid Quantity Limiter Valves	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 007.006.003 Parking brake valves		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 007.006.004 Skid control valves		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 008 STEER NG SYSTEM TO 1C-10K(A)-2-32													
2A6X5-012 008.001 Perform Operational System Check out	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 008.002 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 008.003 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 008.004 Remove / Install Components													
2A6X5-012 008.004.001 Nose Wheel Steering Cylinders	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 008.004.002 Steering manifold		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.003 Steering by-pass valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.004 Steering control valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.005 Steering relief valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.006 Steering gland	5	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009 FLIGHT CONTROL SYSTEMS AND COMPONENTS TO 1C-10K(A)-2-27													
2A6X5-012 009.001 Aileron Control System													
2A6X5-012 009.001.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.001.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.001.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.001.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.001.005 Remove / Install Components													
2A6X5-012 009 001.005.0.2014176.125852 Operate aileron system		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.001.005 001 Aileron actuators		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 009.002 Rudder Control System													
2A6X5-012 009.002.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.002.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.002.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.002.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.002.005 Remove / Install Components													
2A6X5-012 009.002.005 001 Rudder actuators		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 009.002.005 002 Non-reversible motor pump compensator		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.002.005 003 Non-reversible motor pump		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.002.005 004 Motor operated shutoff valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.003 Elevator Control Systems													
2A6X5-012 009.003.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.003.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.003.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.003.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.003.005 Remove / Install Components													
2A6X5-012 009.003.005 001 Elevator actuator		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 009.004 Horizontal Stabilizer													
2A6X5-012 009.004.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.004.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 009.004.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.004.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.004.005 Remove / Install Components													
2A6X5-012 009.004.005 001 Horizontal Stabilizer Hydraulic Motor and Brake		2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.004.005 002 Primary trim control valve		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 009.005 Flaps													
2A6X5-012 009.005.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.005.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.005.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.005.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.005.005 Remove / Install Components													
2A6X5-012 009.005.005 001 Flap actuating cylinder		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.005.005 002 Flap control valve		2012-12-03	2012-12-07				-	-	-	-	-	-	-
2A6X5-012 009.005.005 003 Flap lock valve		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 009.006 Spoiler													
2A6X5-012 009.006.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.006.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.006.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.006.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.006.005 Remove / Install Components													
2A6X5-012 009.006.005 001 Spoiler drive servo		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.007 Lift Augmenting System													
2A6X5-012 009.007.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.007.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 009.007.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.007.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.007.005 Remove / Install Components													
2A6X5-012 009.007.005 001 Slat actuator		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.007.005 002 Outboard slat balance relief valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.007.005 003 Slat control valve		2012-12-06	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.007.005 004 Slat two speed valve		2012-12-06	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 009.008 Aileron and Elevator Dampers													
2A6X5-012 009.008.001 Operational fundamentals		2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.008.002 Perform Operational Check	5	2012-01-09	2012-02-16				-	-	-	-	-	-	-
2A6X5-012 009.008.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.008.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 009.008.005 Remove / Install Components													
2A6X5-012 009.008.005 001 Aileron dampers		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 009.008.005 002 Elevator dampers		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010 NFLIGHT REFUELING SYSTEM / COMPONENTS TO 1C-10K(A)-2-28-2, TO 1C-10K(A)-2-28													
2A6X5-012 010.001 Air refueling (A/R) ancillary system													
2A6X5-012 010.001.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.001.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.001.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 010.001.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.001.005 Remove / Install Components													
2A6X5-012 010.001.005 001 Auxiliary reservoir		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.001.005 002 Boom/drogue selector valve		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.001.005 003 Pilot operated check valve		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.002 Air Refueling Fuel System													
2A6X5-012 010.002.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.002.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.002.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.002.004 Troubleshoot System using Fuel Pressure Control System Test Set	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.002.005 Remove / Install Components													
2A6X5-012 010.002.005 001 Boom and Drogue Fuel Shutoff Valve	5	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.002.005 002 Hydraulic operated dual by-pass valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.002.005 003 Fuel pump pressure control unit		2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.002.005 004 Fuel pressure indicator		2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.002.005 005 Hydraulic servo motor		2012-05-28	2012-05-31				-	-	-	-	-	-	-
2A6X5-012 010.002.005 006 Fuel pressure transducer		2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.002.005 007 Hydraulic servo control valve		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.002.005 008 A/R fuel flow rate indicator		2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.002.005 009 A/R fuel flow transmitter	5	2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.002.005 010 A / R Fuel Flow Power Supply		2012-03-01	2012-03-27				-	-	-	-	-	-	-
2A6X5-012 010.003 Boom and Nozzle													
2A6X5-012 010.003.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.003.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.003.005 Use status test panel	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.006 Use ARB test set	5	2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.007 Use nozzle tester	5	2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.008 Operate boom and nozzle	5	2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 010.003.009 Deploy boom for maintenance	5	2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 010.003.010 Extend boom	5	2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 010.003.011 Lower boom for maintenance	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 010.003.012 Raise boom after maintenance	5	2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 010.003.013 Retract boom	5	2012-01-02	2012-01-05				-	-	-	-	-	-	-
2A6X5-012 010.003.014 Remove / Install Components													
2A6X5-012 010.003.014 001 Boom		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 002 Flexible fuel coupling		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.014 003 Preload bungees cylinder		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.014 004 Gimble	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.003.014 005 ARB sliding fuel seal		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 006 Boom accelerometer		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 007 Elevator actuator		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 008 Rudder actuators (tandem)		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 009 Status test panel		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 010		2012-03-01	2012-03-21				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Nozzle Load Sensor													
2A6X5-012 010.003.014 011 Boom elevation and roll axis indication LVDT		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 012 Roll position transducer (DRVT)		2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 010.003.014 013 Boom control unit		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 014 ARB control surfaces		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 015 Annunciator lights		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 016 Telescope servo motor		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 017 Boom position indicators		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.014 018 Boom signal amplifier		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 019 Boom signal coil		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 020 ARB stowage shock absorber		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 021 Boom hoist cable	5	2013-02-22	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 010.003.014 022 Hookeye		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.014 023 Latch		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 024 Hoist motor	5	2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 025 Tension motor		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 026 Boom hoist winch		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 027 Hoist winch linear actuator		2012-07-02	2012-07-20				-	-	-	-	-	-	-
2A6X5-012 010.003.014 028 Latch striker		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 029 Pneumatic module (IDS)	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 030 Nozzle	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 031 Recoil	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 032 Boom elevator/roll controller		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 033 ARO and instructor's telescope controller		2013-02-22	2013-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 034 Inner fuel tube		2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.004 Hose and Drogue System													
2A6X5-012 010.004.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.003 Inspect System	7	2012-02-14	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.004 Troubleshoot System using Drogue Coupling Tester	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.004.005 Trail Drogue	5	2012-02-14	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.006 Rewind Drogue	5	2012-02-14	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.007 Drain drogue		2012-02-14	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.008 Remove / Install Components													
2A6X5-012 010.004.008 001 Hose		2012-02-14	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 010.004.008 002 Hose Reel	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 010.004.008 003 Hose reel hydraulic components	5	2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 011 WING A R REFUELING PODS TO 1C-10K(A)-2-28													
2A6X5-012 011.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 011.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 011.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 011.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 011.005 Built In Test (BITE) Check		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 011.006 Pod Draining		2013-04-26	2013-06-17				-	-	-	-	-	-	-
2A6X5-012 011.007		2012-03-01	2012-03-21				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Deploy/Stow Hose													
2A6X5-012 012 POD INSPECTIONS TO 1C-10K(A)-2-28-WC													
2A6X5-012 012.001 Cyclic		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.002 Home Station Check (HSC)		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.003 Pod Fault Diagnosis	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 012.004 Remove / Install Components													
2A6X5-012 012.004.001 Refueling Pod		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 012.004.002 Pylon		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 012.004.003 Rear Fairing		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 012.004.004 Nose Fairing		2012-11-26	2012-11-29				-	-	-	-	-	-	-
2A6X5-012 012.004.005 Hose		2012-12-03	2012-12-07				-	-	-	-	-	-	-
2A6X5-012 012.004.006 Hose Jettison Unit		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.007 Coupling		2012-12-03	2012-12-07				-	-	-	-	-	-	-
2A6X5-012 012.004.008 Drogue		2012-12-03	2012-12-07				-	-	-	-	-	-	-
2A6X5-012 012.004.009 Ram Air Turbine (RAT)		2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 012.004.010 Dummy Spinner Cone	5	2013-04-26	2013-06-17				-	-	-	-	-	-	-
2A6X5-012 012.004.011 Digital Refueling Control Unit (DRCU)		2013-04-26	2013-06-17				-	-	-	-	-	-	-
2A6X5-012 012.004.012 Power Supply		2013-04-26	2013-06-17				-	-	-	-	-	-	-
2A6X5-012 012.004.013 Motor Drive Unit		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.014 Hose Position Sensor		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.015 DC Motor		2013-04-26	2013-06-17				-	-	-	-	-	-	-
2A6X5-012 012.004.016 Parking Brake (Linear Actuator)		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.017 Pawl Assembly (Parking Brake)		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.018 Hose Drum Drive Unit		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.019 Gear Box Assembly		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.020 Tensator Drive	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 012.004.021 Fuel Pump		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.022 Vane Pump		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 012.004.023 Control Valve		2013-04-26	2013-08-08				-	-	-	-	-	-	-
2A6X5-012 013 A R REFUELING RECEIVER SYSTEM TO 1C-10K(A)-2-28													
2A6X5-012 013.001 Operational fundamentals		2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 013.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 013.003 Inspect System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 013.004 Troubleshoot System using UARRSI Tester	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 013.005 Remove / Install Components													
2A6X5-012 013.005.001 UARRSI		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 013.005.002 Door control cable		2012-08-22	2012-08-29				-	-	-	-	-	-	-
2A6X5-012 014 DOORS TO 1C-10K(A)-2-52													
2A6X5-012 014.001 Operational fundamentals		2011-08-01	2011-09-15				-	-	-	-	-	-	-
2A6X5-012 014.002 Perform Operational Check	5	2012-03-01	2012-03-21				-	-	-	-	-	-	-
2A6X5-012 014.003 Inspect	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 014.004 Troubleshoot System	7	2015-12-02	2015-12-03				-	-	-	-	-	-	-
2A6X5-012 014.005 Remove / Install Components													
2A6X5-012 014.005.001 Cargo door actuator		2013-03-07	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 014.005.002		2013-03-07	2013-04-26				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Cargo door latch actuator													
2A6X5-012 014.005.003 Cargo door hand pump		2013-03-07	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 014.005.004 Cargo door electric pump		2013-03-07	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 014.005.005 Cargo door reservoir		2013-03-07	2013-04-26				-	-	-	-	-	-	-
2A6X5-012 014.005.006 Cargo door control valve		2013-03-07	2013-04-26				-	-	-	-	-	-	-

JOB QUALIFICATION STANDARD CONTINUATION/WJQS

CRITICAL TASKS	TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	CERTIFICATION				
			START DATE	COMPLETION DATE	TRA NEE'S NITIALS	TRA NER'S NITIALS	CERTIFIER'S NITIALS
	32797 001	Team Communication AMCI21-104 Attachment 5 task A5.17	2013-01-08	2014-01-20			
	32797 003	Disconnect/Reconnect AIrcraft Batteries 1C-10(K)A-2-24	2015-01-21	2015-01-28			
	32797 004	Install/Remove Brake Inoperative Jumper Kit 1C-10(K)A-2-32	2013-01-08	2013-08-14			
	32797 005	Lower/Raise ARO Sighting Door to the Maintenance Position 1C-10(K)A-2-52	2013-01-08	2013-08-14			
	32797 007	Airborne Auxiliary Power (APU) Operation 1C-10(K)A-2-49	2014-01-13	2014-01-20			
	32797 009	Tail Cone Work Platform 1C-10(K)A-2-53	2013-01-08	2014-01-20			
	32797 010	Self Propelled Hi-Lift Basket (JLG) AFOSTH STD 91-2, Applicable Operating Manual					
	32797 010.001	Purpose and Description	2011-08-01	2011-09-15			
	32797 010.002	Perform Pre-use Inspection and Operate	2011-08-01	2011-09-15			
	32797 011	Self Propelled Hi-Lift Platform (Scissor Lift) AFORSH STD 91-2, Applicable Operating Manual					
	32797 011.001	Purpose and Description	2012-08-22	2012-08-29			
	32797 011.002	Perform Pre-use Inspection and Operate	2012-08-22	2012-08-29			
	32797 012	Wing Air Refueling Pod and Pylon (MK32B-752 Pod) 1C-10(K)A-2-28-2					
	32797 012.001	Inhibit/Deinhibit Pod	2013-04-26	2013-06-17			
	32797 012.002	Air Refueling Operators Control Panel (AROCP) (Remive,Inspect,Install)	2013-04-26	2013-08-08			
	32797 012.003	Flight Engineers Control Panel (FECP) (Remive,Inspect,Install)	2013-04-26	2013-08-08			
	32797 015	Tow Team Assistant 1C-10(K)A-2-9-10-00					
	32797 015.003	Perform as brake operator 1C-10(K)A-2-9-10-00	2013-01-08	2014-01-20			
	32797 015.004	Perform as wing/tail walker 1C-10(K)A-2-9-10-00	2013-12-10	2014-01-20			
	32923 020	Team Communication AMCI21-104 Attachment 5 task A5.17	2015-10-23	2015-10-23			
	32923 021	Disconnect/Reconnect AIrcraft Batteries	2015-10-23	2015-10-23			
	32923 023	Install/Remove Brake Inoperative Jumper Kit 1C-10(K)A-2-32	2015-10-23	2015-10-23			
	32923 024	Lower/Raise ARO Sighting Door to the Maintenance Position 1C-10(K)A-2-52	2015-10-23	2015-10-23			
	32923 026	Airborne Auxiliary Power (APU) Operation 1C-10(K)A-2-49	2015-10-23	2015-10-23			
	32923 028	Tail Cone Work Platform 1C-10(K)A-2-53	2015-10-23	2015-10-23			
	32923 029	Self Propelled Hi-Lift Basket (JLG) AFOSTH STD 91-2, Applicable Operating Manual					
	32923 029.001	Purpose and Description	2015-10-23	2015-10-23			
	32923 029 001.001	Perform Pre-use Inspection and Operate	2015-10-23	2015-10-23			
	32923 030	Self Propelled Hi-Lift Platform (Scissor Lift) AFORSH STD 91-2, Applicable Operating Manual					
	32923 030.001	Purpose and Description	2015-10-23	2015-10-23			
	32923 030 001.001	Perform Pre-use Inspection and Operate	2015-10-23	2015-10-23			
	32923 031	Wing Air Refueling Pod and Pylon (MK32B-752 Pod) 1C-10(K)A-2-28-2					
	32923 031.001	Inhibit/Deinhibit Pod	2015-10-23	2015-10-23			
	32923 031 001.001	Air Refueling Operators Control Panel (AROCP) (Remive,Inspect,Install)	2015-10-23	2015-10-23			
	32923 031 001.002	Flight Engineers Control Panel (FECP) (Remive,Inspect,Install)	2015-10-23	2015-10-23			
	32923 033	Hydraulic 7 Level SCR 660th AMXS					
	32923 033.001	Sign/Clear Red X (Primary AFSC)(KC-10) AFI 21-101 IAW T 0. 00-20-1	2016-08-01	2016-08-29			
	32923 033 001.001	Clear CND Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2016-08-01	2016-08-29			
	32923 033 001.002	Clear Repeat/Recur Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2016-08-01	2016-08-29			
	32923 033 001.003	Perform PI (Primary AFSC)(KC-10) AFI 21-101 AMCSUP1 14.36.4. SCR Documentation/Table 14.1. Mandatory Special Certification Roster (SCR) and Prerequisites. tem 11	2016-08-01	2016-08-29			
	32923 033 001.004	Sign Condition Tags AFI 21-101 AMCSUP1 5.14.8.6.3.	2016-08-01	2016-08-29			
	32923 033 001.005	Landing Gear Retraction Supervisor AFI 21-101	2016-08-01	2016-08-29			
	32923 034	Tow Team Assistant 1C-10(K)A-2-9-10-00					
	32923 034 001.002	Perform as brake operator 1C-10(K)A-2-9-10-00	2015-10-23	2015-10-23			
	32923 034 001.003	Perform as wing/tail walker 1C-10(K)A-2-9-10-00	2015-10-23	2015-10-23			
	32923 054	ADDITIONAL TASKS (797) SPECIAL EQUIPMENT					
	32923 054.001	Operate Calavar/Condor/ High Reach Basket and Ground Scanner (Drivers License required) AFM 24306, T.O. 1255-USAF, Applicable Owners Manual	2016-06-14	2016-06-16			
	32923 070	OPERATE					
	32923 070 001.001	Condor Highreach AFOSH 91-66	2016-06-14				

1. IDENTIFICATION DATA		
LAST NAME - FIRST NAME - MIDDLE INITIAL	GRADE/RANK	DAFSC/JOB SERIES
SSgt MM1	Staff Sergeant	2A675

INDIVIDUAL TRAINING RECORD

INDIVIDUAL'S SIGNATURE	DATE
	2016-11-01

Individual Training Record

Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A5X1-006 001 A RCRAFT GENERAL, C-5M													
2A5X1-006 001.001 Safety precautions pertaining to: TR: AFI 32-2001; TOs 00-20-1, 00-25-172, and 1C-5M-2-1													
2A5X1-006 001.001.001 High intensity sound		2016-08-18	2016-08-25				B	-	-	-	-	-	-
2A5X1-006 001.001.003 Danger Areas		2016-08-18	2016-08-25				B	-	-	-	-	-	-
2A5X1-006 001.005 Communications systems TR: TO 1C-5M-2 Series													
2A5X1-006 001.005.001 Operate VHF, UHF and HF TR: 1C-5M-2-8-1	5	2016-07-01	2016-07-06				2b	-	-	-	-	-	-
2A5X1-006 002 A RFRAME TR: TO 1C-5M-2-2													
2A5X1-006 002.004 Remove /install TR: TOs 1C-5M-2-2 and 1C-5M-2-12													
2A5X1-006 002.004.002 Pylon fairing panel assemblies		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A5X1-006 002.004.003 Pylon access panel assemblies		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A5X1-006 002.004.004 Mid panel assemblies		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A5X1-006 002.004.005 Mid sail panel assemblies		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A5X1-006 002.004.006 Pre-cooler panel assemblies		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-000 001 OPERATIONS SECURITY (OPSEC) 1 MAY 2014 TR: AFI 10-701, AFPD 10-7													
2A6X5-000 001.0.2014153.134751 SECURITY (FUNDAMENTALS)													
2A6X5-000 001.001 Definition of OPSEC		2008-04-07	2008-07-30				A	-	-	-	-	-	-
2A6X5-000 001.001.0.2014153.134751 Information Assurance (IA) Awareness DoD 5200.1R / AFI 33-211													
2A6X5-000 001 001.001.0.2014153.134750 Definition of Communication Security COMSEC AFI 33-204		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001 001.002.0.2014153.134750 Definition of computer security (COMPUSEC)		2012-09-17	2012-09-21				-	-	-	-	-	-	-
2A6X5-000 001 001.003.0.2014153.134750 Prevent security violations		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001 001.004.0.2014153.134750 Use MAJCOM/FOA EEFIs		2012-10-01	2013-02-06				-	-	-	-	-	-	-
2A6X5-000 001 001.005.0.2014153.134750 Observe security precautions involved in communications		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001 001.006.0.2014153.134750 Common COMPUSEC vulnerabilities		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001 001.007.0.2014153.134750 COMPUSEC vulnerability prevention		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001.002 Specific OPSEC vulnerabilities		2008-04-07	2008-07-30				A	-	-	-	-	-	-
2A6X5-000 001.002.0.2014153.140542 Relationship of OPSEC to other security programs such as COMSEC, information security, and physical security		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001.003.0.2014153.140542 Common OPSEC vulnerabilities		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001.004.0.2014153.140542 OPSEC significance of unclassified data		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 001.006.0.2014153.140542 Classify Information		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 002 AF OCCUPATIONAL SAFETY and HEALTH (AFOSH) PROGRAM AFI s 91-203; 91-302; 91-101, 91-104, 21-101, 32-2001, AFMAN 10-3902, and applicable OSHA standards													
2A6X5-000 002.001 Hazards of the AFSC 2A6X5		2008-04-07	2008-07-30				A	-	B	-	-	-	-
2A6X5-000 002.002 Initiate AFTO Form 55 (or equivalent)		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 002.003 AFOSH standards for AFSC 2A6X5		2008-04-07	2008-07-30				A	-	B	-	-	-	-

Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-000 002.005 Maintain Safe Work Area		2008-04-07	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 002.006 Confined Spaces		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 002.007 Use Safety Practices AFIs 21-101, 32-2001; TOs 32-1-2, 32-1-101; AFI 91-203, and Applicable AFOSH standards													
2A6X5-000 002.007.001 In shop		2016-10-05	2016-10-05				2b	-	b	-	-	-	-
2A6X5-000 002.007.002 On flightline		2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 002.007.003 Tools/equipment		2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 002.007.004 Portable fire extinguishers		2008-04-07	2008-06-27				b	-	-	-	-	-	-
2A6X5-000 002.007.005 Personal Protective Equipment (PPE)		2012-10-01	2012-10-05				-	-	a	-	-	-	-
2A6X5-000 002.008 Select/use restraint harness		2008-04-07	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 002.009 Lockout/tagout programs		2008-05-27	2008-06-27				-	-	B	-	-	-	-
2A6X5-000 002.010 Foreign object damage (FOD) prevention program		2008-04-07	2008-06-27				-	-	A	-	-	-	-
2A6X5-000 002.011 Dropped Object Prevention Program (DOPP)		2008-04-07	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 003 HAZARDOUS MATERIALS and WASTE HANDLING ACCORDING TO ENVIRONMENTAL STANDARDS EPA State Regulations; AFI 90-821, Applicable Material Safety Data Sheets (MSDS)													
2A6X5-000 003.001 Types of hazardous materials/fluids		2008-04-07	2008-06-27				A	-	B	-	-	-	-
2A6X5-000 003.002 Handling procedures		2008-04-07	2008-06-27				A	-	B	-	-	-	-
2A6X5-000 003.003 Storage and labeling		2012-10-01	2012-10-18				A	-	A	-	-	-	-
2A6X5-000 003.004 Proper disposal		2008-04-07	2008-06-27				A	-	B	-	-	-	-
2A6X5-000 004 MAINTENANCE MANAGEMENT AFI 21-103, AFI 21-101 and applicable MAJCOM directives													
2A6X5-000 004.001 Maintenance Group Organizational Structure		2009-03-08	2009-03-08				A	-	B	-	-	-	-
2A6X5-000 004.002 Basic functions/structure within the maintenance complex		2009-03-08	2009-03-08				A	-	B	-	-	-	-
2A6X5-000 004.004 Principles of Risk Management (RM)		2008-04-07	2008-07-30				-	-	-	-	-	-	-
2A6X5-000 005 MAINTENANCE INSPECTIONS AFI 21-101, TO 00-20 series													
2A6X5-000 005.001 Inspection concepts		2009-03-08	2009-03-08				A	-	B	-	-	-	-
2A6X5-000 005.002 Perform acceptance/transfer inspection on aircraft		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 005.002.0.2014153.154204 Inspection Systems TO 00-20 Series		2009-03-27	2009-04-11				A	-	B	-	-	-	-
2A6X5-000 005.003 Perform isochronal/phase/periodic inspections		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 006 MAINTENANCE DATA COLLECTION TO 00-20 series; AFCSMs 21-556, 561,563, 579													
2A6X5-000 006.001 Principles		2008-04-07	2008-06-27				B	-	B	-	-	-	-
2A6X5-000 006.002 Data Integrity		2008-04-07	2008-06-27				B	-	-	-	-	-	-
2A6X5-000 006.005 GO81 (CAMS for mobility) AMCI 21-101, AMC 1													
2A6X5-000 006.005.001 Use GO81	5	2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 006.005.002 Complete GO81 familiarization and maintenance data Collection Training	5	2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 006.006 Forms Documentation TO 00-20 series													
2A6X5-000 006.006.0.2014153.160606 GO81 (CAMS Mobility) AMCI 21-101 / AMC 1													
2A6X5-000 006.006.001 Aircraft Records / 781 Series Forms													

Career Field Education and Training Plan (CFETP)													
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-000 006 006.001.0.2014153.160606 Use GO81	5	2008-04-07	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 006.006.001 001 Use AFTO Form 781A	5	2008-04-07	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 006.006.001 002 Use AFTO Form 781H	5	2008-04-07	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 006.006.001 003 Use AFTO Form 781K	5	2008-04-07	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 006.006.001 004 Use AFTO Form 95		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 006.006.001 005 Document in-process inspection (PI) in 781A	7	2008-04-07	2008-06-27				b	-	-	-	-	-	-
2A6X5-000 006.006.002 Accomplish support equipment maintenance records AFTO Form 244		2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 006 006.002.0.2014153.160606 Complete GO81 Familiarization and Maintenance Data Collection Training (See Section D - MAJCOM Unique Requirements - AMC)	5	2008-04-07	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 007 TRAINING AFI 36-2201													
2A6X5-000 007.0.2014153.182713 SUPERVISION (FUNDAMENTALS)													
2A6X5-000 007.001 Maintenance training principles		2012-10-01	2012-10-18				A	-	B	-	-	-	-
2A6X5-000 007.001.0.2014153.182713 Orient New Personnel AFI 36-2201		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 007.002 Evaluate personnel to determine need for training		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 007.002.0.2014153.182713 Assign Personnel to Work Crews AFI 21-101		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.003.0.2014153.182713 Plan Work Assignments and Priorities AFI 21-101		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.004 Monitor effectiveness of training													
2A6X5-000 007.004.0.2014153.182713 Schedule Work Assignments AFI 21-101		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.004.001 Upgrade		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 007.004.002 Qualification training progress		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 007.005 Maintain training records	7	2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-000 007.005.0.2014153.182713 Establish													
2A6X5-000 007 005.001.0.2014153.182713 Work methods		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-000 007.006.0.2014153.182712 Evaluate Work Performance of Subordinate Personnel AFI 36-2403		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.007.0.2014153.182712 Resolve Technical Problems for Subordinate Personnel AFI 21-101		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.008.0.2014153.182712 Counsel personnel and resolve individual problems		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.009.0.2014153.182712 Initiate Action to Correct Substandard Performance by Personnel AFI 36-2908 / AFI 36-2503		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-000 007.010.0.2014153.182712 Inspect Maintenance Actions (IPI / Red X) TO 00-20-1		2012-10-01	2012-10-29				-	-	-	-	-	b	-
2A6X5-000 008 TECHNICAL PUBLICATIONS TO 00-5-1, TO 00-XX series, AFI 21-101; TO 00-5-15, applicable TCTOs													
2A6X5-000 008.001 Fundamentals of Technical Order (TO) System		2008-04-07	2008-06-27				B	-	B	-	-	-	-
2A6X5-000 008.002 Use Technical Manuals	5	2008-04-07	2008-06-27				2b	-	-	-	-	-	-
2A6X5-000 008.003 Use Methods and Procedures TOs	5	2008-04-07	2008-06-27				2b	-	-	-	-	-	-
2A6X5-000 008.003.0.2014153.182712 Plan and Supervise OJT													
2A6X5-000 008 003.001.0.2014153.182712 Prepare job qualification standards/CFETP		2012-10-01	2012-10-18				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-000 008 003.002.0.2014153.182712 Conduct training		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 008 003.003.0.2014153.182712 Counsel trainees on their progress		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 008.004 Use Abbreviated Technical Orders	5	2008-04-07	2008-06-27				2b	-	-	-	-	-	-
2A6X5-000 008.005 Comply with Time Compliance TOs	7	2012-10-01	2012-10-18				b	-	-	-	-	-	-
2A6X5-000 008.006 Initiate technical order improvement report/AFTO form 22	7	2012-10-01	2012-10-29				a	-	b	-	-	-	-
2A6X5-000 008.007 Use electronic technical manuals	5	2012-10-01	2012-10-18				2b	-	-	-	-	-	-
2A6X5-000 009 AF SUPPLY AFI 21-101, AFM 23-111, AFCSM 21-556,TO 00-25-195, AFMAN 23-110, TO 00-35D-54,TO 00-20 series													
2A6X5-000 009.001 Deficiency reporting system(Joint Deficiency Reporting System - JDRS)		2012-10-01	2012-10-18				A	-	B	-	-	-	-
2A6X5-000 009.004 Processing and controlling material													
2A6X5-000 009.004.001 Use AFTO Form 350 Tags	5	2008-05-27	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 009.004.002 Use Condition Tags	5	2012-10-01	2012-10-18				2b	-	a	-	-	-	-
2A6X5-000 009.004.005 Property accountability,(Cash collection voucher, report of survey, etc.)		2008-05-27	2008-07-30				A	-	B	-	-	-	-
2A6X5-000 009.010 Equipment Management		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 009.011 Benchstock/shopstock		2012-10-01	2012-10-18				-	-	B	-	-	-	-
2A6X5-000 009.011.0.2014153.190156 Prepare forms for special requisition, issue		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-000 010 HYDRAULIC MAINTENANCE PRINCIPLES AFI 21-101													
2A6X5-000 010.001 Composite Tool Kit (CTK) Program		2008-04-07	2008-04-09				A	-	B	-	-	-	-
2A6X5-000 010.002 Use Maintenance Materials TOs 32-1-2, 32-1-101, 32B14-3-1-101, 00-25-223, 33 Series TOs													
2A6X5-000 010.002.001 Use Tools													
2A6X5-000 010.002.001 001 Handtools		2008-04-07	2008-04-09				2b	-	b	-	-	-	-
2A6X5-000 010.002.001 002 Mechanical Measuring devices		2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 010.002.001 003 Torque Wrenches	5	2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 010.002.001 004 Electronic measuring devices		2016-07-01	2016-09-21				-	-	-	-	-	-	-
2A6X5-000 010.002.001 005 Multimeters	5	2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 010.003 Aircraft hardware / consumables TOs 00-25-223, 1-1A-8, 1-1A-14, 44H1-1-13, TO 42B2-1-3, TO 1-1-691													
2A6X5-000 010.003.001 Use Common hardware	5	2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 010.003.002 Use safetying hardware	5	2008-04-07	2008-07-30				2b	-	b	-	-	-	-
2A6X5-000 010.003.003 Use Sealing devices		2008-04-07	2008-06-27				2b	-	b	-	-	-	-
2A6X5-000 010.003.004 Fluids, Lubricants, Sealants		2008-04-07	2008-07-30				B	-	B	-	-	-	-
2A6X5-000 010.003.005 Cleaning agents		2008-04-07	2008-06-27				-	-	B	-	-	-	-
2A6X5-000 010 003.005.0.2014153.191717 Lubricants TR: TO 00-25-223		2008-04-07	2008-07-30				B	-	B	-	-	-	-
2A6X5-000 010 003.007.0.2014153.191717 Sealants TR: TO 1-1-691		2008-04-07	2008-06-27				A	-	B	-	-	-	-
2A6X5-000 010.004 Hose Assemblies TO 42E1-1-1, 00-25-223, and series; Applicable aircraft TOs													
2A6X5-000 010.004.0.2014153.191717 Corrosion identification TR: TO 1-1-691		2008-04-07	2008-06-27				A	-	B	-	-	-	-
2A6X5-000 010.004.001 Component identification/serviceability		2008-07-07	2008-09-18				A	-	A	-	-	-	-
2A6X5-000 010.004.002	5	2008-07-07	2008-09-18				-	-	b	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level		
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC	
Determine serviceability														
2A6X5-000 010.004.003 Remove/Install		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-000 010.004.004 Fabricate														
2A6X5-000 010.004.004 002 Hand	5	2012-10-01	2012-10-18				b	-	b	-	-	-	-	
2A6X5-000 010.004.005 Test	5	2012-10-01	2012-10-18				1b	-	-	-	-	-	-	
2A6X5-000 010.005 Tubing Assemblies TO 00-25-223, and applicable aircraft TOs														
2A6X5-000 010.005.001 Component Identification		2008-07-07	2008-09-18				-	-	B	-	-	-	-	
2A6X5-000 010.005.002 Determine Serviceability	5	2008-07-07	2008-09-18				-	-	b	-	-	-	-	
2A6X5-000 010.005.005 Test	5	2016-10-05	2016-10-05				-	-	-	-	-	-	-	
2A6X5-000 010.005.006 Remove/Install		2008-07-07	2008-09-18				2b	-	-	-	-	-	-	
2A6X5-000 010.006 AN/MS threaded unions/fittings TO 00-25-223, 42E1-1-1, applicable aircraft TOs														
2A6X5-000 010.006.001 Remove/reseal/install		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-000 011 A RCRAFT FAMILIARIZATION (FUNDAMENTALS) Applicable Aircraft TOs														
2A6X5-000 011.001 Principles of flight		2008-07-07	2008-09-18				B	-	B	-	-	-	-	
2A6X5-000 011.002 Aircraft designation system		2009-03-27	2009-04-11				B	-	-	-	-	-	-	
2A6X5-000 011.003 Major aircraft systems		2008-07-07	2008-09-18				B	-	-	-	-	-	-	
2A6X5-000 011.004 Location of structural components		2008-07-07	2008-09-18				B	-	-	-	-	-	-	
2A6X5-000 012 ELECTRICAL / ELECTRONIC FUNDAMENTALS APPLICABLE TO AFSC 2A6X5 TO 31 series; TO 1-1A-14, and applicable aircraft TOs														
2A6X5-000 012.001 DC fundamentals		2008-07-07	2008-09-18				A	-	B	-	-	-	-	
2A6X5-000 012.002 AC fundamentals		2008-07-07	2008-09-18				A	-	B	-	-	-	-	
2A6X5-000 012.003 Operational fundamentals of basic circuits		2008-07-07	2008-09-18				A	-	B	-	-	-	-	
2A6X5-000 012.004 Use Schematics and Diagrams	7	2012-10-01	2012-10-29				1b	-	b	-	-	-	-	
2A6X5-000 012.005 Troubleshoot circuits		2012-10-01	2012-10-29				1b	-	b	-	-	-	-	
2A6X5-000 012.006 Aircraft guarded switches		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-000 013 HYDRAULIC FUNDAMENTALS TO 00-25-223, and applicable aircraft TOs														
2A6X5-000 013.001 Principles of hydraulics/pneumatics		2008-07-07	2008-09-18				B	-	B	-	-	-	-	
2A6X5-000 013.002 Use Schematics and Diagrams	5	2008-07-07	2008-09-18				1b	-	b	-	-	-	-	
2A6X5-000 013.002.0.2014153.195948 Principles of pneumatics		2009-03-08	2009-03-08				B	-	B	-	-	-	-	
2A6X5-000 014 SHOP AND AEROSPACE GROUND EQU PMENT Applicable Equipment TOs														
2A6X5-000 014.001 Shop Equipment														
2A6X5-000 014.001.003 Hydraulic Component Test Stand														
2A6X5-000 014.001.003 001 Operate		2016-10-05	2016-10-05				2b	-	b	-	-	-	-	
2A6X5-000 014.001.003 003 Maintain		2016-10-05	2016-10-05				-	-	b	-	-	-	-	
2A6X5-000 014.001.003 004 Connect to components		2016-10-05	2016-10-05				2b	-	-	-	-	-	-	
2A6X5-000 014.002 Operate Ground Support Equipment														
2A6X5-000 014.002.001 Portable hydraulic test stands	5	2009-03-27	2009-05-29				2b	-	b	-	-	-	-	
2A6X5-000 014.002.002 External power units		2008-04-07	2008-04-09				b	-	b	-	-	-	-	
2A6X5-000 014.002.003 Nitrogen servicing carts		2008-10-21	2008-12-05				-	-	-	-	-	-	-	
2A6X5-000 014.002.004 Air compressor units		2009-03-27	2009-05-29				-	-	b	-	-	-	-	
2A6X5-000 014.002.005		2009-03-08	2009-03-08				2b	-	-	-	-	-	-	

1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Hydraulic servicing carts													
2A6X5-000 014.002.006 Maintenance stands	5	2008-04-07	2008-06-27				-	-	b	-	-	-	-
2A6X5-000 014.002.007 Air conditioner		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 014.002.008 Hydromite		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 014.002.009 Ground Heater		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-000 014.002.010 Light Carts		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-000 014.002.012 Self-Generating Nitrogen Cart		2009-03-08	2009-03-08				2b	-	b	-	-	-	-
2A6X5-000 014.002.013 Manlift		2016-07-01	2016-07-28				-	-	-	-	-	-	-
2A6X5-000 014.002.014 Universal Maintenance Stand (Scissor lift)		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-005 001 A RCRAFT GROUND HANDLING TO 1C-5A-2-1, 00-5-172, TO 1C-5A-2-4, 1C-5A-2-2, 1C-5M-2 series													
2A6X5-005 001.001 Perform Aircraft Safe for Maintenance	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.009 Remove / Install Aircraft Access Panels	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.010 Use Interphone	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.011 Perform Aircraft Egress	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.021 Apply/disconnect external electrical power M-modified aircraft	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.025 Operate embedded diagnostic system (EDS)		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 001.027 Deactivate/Reactivate FSS		2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-005 001.029 Use Restraint Harness		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002 HYDRAULIC POWER SYSTEMS TOs 1C-5A-2-3 series, 1C-5M-2-3 series													
2A6X5-005 002.001 Operational Fundamentals		2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 002.003 Operate APU/ATM		2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 002.004 Operate PTU		2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 002.005 Perform Operational Check	5	2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 002.010 Service Reservoir	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011 Remove / Install Components													
2A6X5-005 002.011.001 Engine Driven Pumps	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.003 Case Drain Flow Monitors (Engine, ATM, PTU)		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.004 Suction line wiggins/linflex fitting	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.005 Engine Driven Pump Depressurization Valve	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.006 Engine Dual Filter Pack		2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-005 002.011.010 Power Transfer Unit		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.012 Hydraulic Manifold Cartridge Valves	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 002.011.013 ATM Pump		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 004 AUXILIARY POWER UNIT HYDRAULIC START SYSTEM 1C-5A-2 series, 1C-5A-2-4													
2A6X5-005 004.001 Operational Fundamentals		2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 004.002 Inspect System	7	2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 004.003 Perform Operational Check	5	2016-08-18	2016-08-25				-	-	-	-	-	-	-
2A6X5-005 007 LAND NG GEAR KNEEL SYSTEM TOs 1C-5A-2-10 series, 1C-5M-2-10 series													
2A6X5-005 007.005 Remove / Install Components													
2A6X5-005 007.005.002 MLG Kneel Motor	5	2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 009													

Career Field Education and Training Plan (CFETP)														
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		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
FWD LOADING SYSTEM TOs 1C-5A-2-12 series, 1C-5M-2-12 series													
2A6X5-005 009.005 Operate Fwd Visor and Ramp System													
2A6X5-005 009.005.001 Manual Mode		2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-005 009.005.002 Auto Mode	5	2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-005 009.006 Remove / Install Components													
2A6X5-005 009.006.001 Cargo Door Control Manifold (Aft Cargo Doors and Ramp or Fwd Cargo Door and Ramp)		2016-03-16	2016-03-17				-	-	-	-	-	-	-
2A6X5-005 009.006.004 Visor Lock Actuator	5	2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-005 009.006.009 Line Replaceable Components (Fuses, Check Valve, Blocking Valve, cartridge valves)		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 010 AFT LOADING SYSTEM TOs 1C-5A-2-12 series, 1C-5M-2-12 series													
2A6X5-005 010.007 Remove / Install Components													
2A6X5-005 010.007.003 Aft ramp lock actuator		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-005 010.007.006 Side Door Actuator		2016-07-01	2016-07-06				-	-	-	-	-	-	-
2A6X5-006 001 A RCRAFT GROUND HANDLING TO 10 JG Series, TO 09 JG-10 Series,TO 54 JG-10 Series, TO 23JG-40 Series,TO 10JG-60 Series, TO 40JG-20 Series,TO 34JG-60 Series, TO 31JG-50 Series,TO 00JG-00 Series													
2A6X5-006 001.001 Perform aircraft safe for maintenance	5	2016-10-05	2016-10-11				-	-	-	-	-	-	-
2A6X5-006 001.009 Connect / Disconnect External Electrical Power	5	2016-10-05	2016-10-11				-	-	-	-	-	-	-
2A6X5-006 002 HYDRAULIC POWER SYSTEMS TOs 1C-17A-2-29 series, 1C-17A-12JG-2-29 series													
2A6X5-006 002.001 Operational Fundamentals		2016-10-05	2016-10-11				-	-	-	-	-	-	-
2A6X5-006 002.013 Stow/deploy RAT assembly		2016-07-01	2016-07-28				-	-	-	-	-	-	-
2A6X5-006 002.015 Remove / Install Components													
2A6X5-006 002.015.001 Engine Driven Hydraulic Pump	5	2015-10-21	2015-11-04				-	-	-	-	-	-	-
2A6X5-006 002.015.015 Filter Elements	5	2016-07-01	2016-07-28				-	-	-	-	-	-	-
2A6X5-012 001 A RCRAFT GROUND HANDLING TO 1C-10K(A)-2-7, 2-9, 2-10, 2-12, 2-20													
2A6X5-012 001.001 Ground aircraft or equipment	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.002 Lubricate aircraft components		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 001.003 Tow Aircraft		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 001.004 Perform Wing/Tail Walker Duties IAW Applicable TO/Checklist		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.005 Install and remove ground safety devices	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 001.006 Perform refuel/defuel team member duties IAW TO/checklist		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.007 Open and close engine cowling	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.008 Remove / Install Aircraft Access Panels	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 001.009 Use Interphone	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.010 Marshall Aircraft		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.011 Perform Aircraft Egress	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.012 Foreign Object Damage (FOD)/Dropped Object Program (DOPP) In and Around Aircraft		2008-04-07	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 001.013 Apply / Disconnect External Electrical Power	5	2008-04-07	2008-04-09				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 001.014 Apply / Disconnect External Hydraulic Power	5	2009-01-05	2009-01-09				-	-	-	-	-	-	-
2A6X5-012 001.015 Jack and Level Aircraft													
2A6X5-012 001.015.004 Perform Jacking Team Member Duties		2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 002 HYDRAULIC POWER SYSTEMS TO 1C-10K(A)-2-29													
2A6X5-012 002.001 Main Hydraulic System													
2A6X5-012 002.001.001 Operational Fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.001.002 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.001.003 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.001.004 Operate Main Hydraulic System	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.001.005 Troubleshoot Main Hydraulic System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.001.006 Flush hydraulic system		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-012 002.001.007 Service Reservoir	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.001.008 Service Accumulator	5	2008-10-21	2008-11-12				-	-	-	-	-	-	-
2A6X5-012 002.001.009 Remove / Install Components													
2A6X5-012 002.001.009 001 Engine Driven Pumps	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.001.009 002 Accumulators		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 003 Air eliminators		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 004 Engine and system manifold filters		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 002.001.009 005 Engine hydraulic manifolds		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 006 Hydraulic system manifolds		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 007 Reservoirs		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 002.001.009 008 Case drain bleed and check valves		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 002.001.009 009 Flight control by-pass valves		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 010 Hydraulic fire shutoff valves		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-012 002.001.009 011 Maintenance isolation valves		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 002.001.009 012 Pump bleed and auto prime valve		2009-03-27	2009-05-29				-	-	-	-	-	-	-
2A6X5-012 002.001.009 013 Relief and by-pass valve		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.001.009 014 System relief valve		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.002 Auxiliary Hydraulic System													
2A6X5-012 002.002.001 Operational fundamentals		2008-04-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.002.002 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.002.003 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.002.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.002.005 Remove / Install Components													
2A6X5-012 002.002.005 001 Electric motor driven auxiliary pump	5	2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.002.005 002 Reversible motor pump	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.002.005 003 Motor Pump Shutoff Valve		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.002.005 004 Auxiliary pump manifold		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.002.005 005 Reversible pump manifold		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.003 Hydraulic Indication System													
2A6X5-012 002.003.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.003.002 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.003.003 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 002.003.004 Troubleshoot system	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 002.003.005 Remove / Install Components													

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 002.003.005 001 Reservoir temperature sensor		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 002.003.005 002 Case drain high temperature switch		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 003 MAIN LANDING GEAR AND DOORS TO 1C-10K(A)-2-32													
2A6X5-012 003.001 Operate main gear doors		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 003.002 Service Main Gear Shock Strut	5	2009-01-05	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 003.003 Service Centerline Gear Shock Strut	5	2009-01-05	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 003.004 Repack / Reseal Components													
2A6X5-012 003.004.001 Main gear shock strut		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-012 003.004.002 Centerline gear shock strut		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-012 004 NOSE GEAR AND DOORS TO 1C-10K(A)-2-32													
2A6X5-012 004.001 Operate nose gear door		2009-01-05	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 004.002 Service Nose Gear Shock Strut	5	2009-01-05	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 004.003 Repack / Reseal Nose Gear Shock Strut	5	2009-01-05	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005 EXTENSION AND RETRACTION TO 1C-10K(A)-2-32													
2A6X5-012 005.001 Operational fundamentals		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005.002 Perform operational check		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.005 Simulated Extension / Retraction	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.006 Ground sensing		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.007 Remove / Install Components													
2A6X5-012 005.007.001 Main Gear Hydraulic Interlock Cylinder	5	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.007.002 Centerline gear control valve		2012-06-08	2012-06-22				-	-	-	-	-	-	-
2A6X5-012 005.007.003 Landing gear selector valve		2009-10-22	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 005.007.004 Main Gear Down Lock Cylinder	5	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 005.007.005 Main gear retract cylinder		2012-04-09	2012-05-14				-	-	-	-	-	-	-
2A6X5-012 005.007.006 Main gear gland		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-012 005.007.007 Main gear door cylinder		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 005.007.008 Main gear door latch cylinder		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.009 Nose gear retract cylinder		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.010 Nose gear unlock cylinder		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.011 Trim cylinder		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 005.007.012 Trim cylinder relief valve		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 005.007.013 Centerline gear retract cylinder		2009-04-01	2009-05-29				-	-	-	-	-	-	-
2A6X5-012 005.007.014 Centerline gear unlock cylinder		2012-10-01	2012-10-18				-	-	-	-	-	-	-
2A6X5-012 005.007.015 Centerline gear door links		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 006 WHEELS AND BRAKES SYSTEM TO 1C-10(K)A-2-32													
2A6X5-012 006.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 006.002 Perform operational checkout		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 006.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 006.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 006.005 Break wear check		2008-07-07	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 006.006 Bleed brake system		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 006.007													

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Remove / Install Components													
2A6X5-012 006.007.001 Main wheel brakes		2011-04-21	2011-07-12				-	-	-	-	-	-	-
2A6X5-012 006.007.002 Brake valve actuator		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 006.007.003 Brake system manifold and manifold check		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 006.007.004 Dual brake control valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 007 ANTI-SKID SYSTEM TO 1C-10K(A)-2-32													
2A6X5-012 007.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 007.002 Perform operational check		2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 007.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 007.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 007.005 Perform maintenance practices		2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 007.006 Remove / Install Components													
2A6X5-012 007.006.001 Skid control manifold		2012-04-09	2012-05-14				-	-	-	-	-	-	-
2A6X5-012 007.006.002 Fluid Quantity Limiter Valves	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 007.006.003 Parking brake valves		2009-10-22	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 007.006.004 Skid control valves		2012-04-09	2012-05-14				-	-	-	-	-	-	-
2A6X5-012 008 STEER NG SYSTEM TO 1C-10K(A)-2-32													
2A6X5-012 008.001 Perform Operational System Check out	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 008.002 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 008.003 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 008.004 Remove / Install Components													
2A6X5-012 008.004.001 Nose Wheel Steering Cylinders	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 008.004.002 Steering manifold		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.003 Steering by-pass valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.004 Steering control valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 008.004.005 Steering relief valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 009 FLIGHT CONTROL SYSTEMS AND COMPONENTS TO 1C-10K(A)-2-27													
2A6X5-012 009.001 Aileron Control System													
2A6X5-012 009.001.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.001.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.001.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.001.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.001.005 Remove / Install Components													
2A6X5-012 009 001.005.0.2014176.125852 Operate aileron system		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.001.005 001 Aileron actuators		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.002 Rudder Control System													
2A6X5-012 009.002.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.002.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.002.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.002.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.002.005 Remove / Install Components													
2A6X5-012 009.002.005 001 Rudder actuators		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.002.005 002 Non-reversible motor pump compensator		2009-03-08	2009-03-08				-	-	-	-	-	-	-

1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 009.002.005 003 Non-reversible motor pump		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 009.002.005 004 Motor operated shutoff valve		2008-10-21	2009-01-09				-	-	-	-	-	-	-
2A6X5-012 009.003 Elevator Control Systems													
2A6X5-012 009.003.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.003.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.003.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.003.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.003.005 Remove / Install Components													
2A6X5-012 009.003.005 001 Elevator actuator		2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 009.004 Horizontal Stabilizer													
2A6X5-012 009.004.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.004.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.004.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.004.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.004.005 Remove / Install Components													
2A6X5-012 009.004.005 001 Horizontal Stabilizer Hydraulic Motor and Brake		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.004.005 002 Primary trim control valve		2009-10-22	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 009.005 Flaps													
2A6X5-012 009.005.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.005.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.005.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.005.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.005.005 Remove / Install Components													
2A6X5-012 009.005.005 001 Flap actuating cylinder		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.005.005 002 Flap control valve		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.005.005 003 Flap lock valve		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.006 Spoiler													
2A6X5-012 009.006.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.006.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.006.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.006.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.006.005 Remove / Install Components													
2A6X5-012 009.006.005 001 Spoiler drive servo		2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 009.007 Lift Augmenting System													
2A6X5-012 009.007.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.007.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.007.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.007.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.007.005 Remove / Install Components													
2A6X5-012 009.007.005 001 Slat actuator		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.007.005 002 Outboard slat balance relief valve		2009-04-01	2009-05-29				-	-	-	-	-	-	-
2A6X5-012 009.007.005 003 Slat control valve		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.007.005 004 Slat two speed valve		2011-07-12	2011-09-14				-	-	-	-	-	-	-
2A6X5-012 009.008 Aileron and Elevator Dampers													
2A6X5-012 009.008.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 009.008.002	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Perform Operational Check													
2A6X5-012 009.008.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.008.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 009.008.005 Remove / Install Components													
2A6X5-012 009.008.005 001 Aileron dampers		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 009.008.005 002 Elevator dampers		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 010 NFLIGHT REFUELING SYSTEM / COMPONENTS TO 1C-10K(A)-2-28-2, TO 1C-10K(A)-2-28													
2A6X5-012 010.001 Air refueling (A/R) ancillary system													
2A6X5-012 010.001.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.001.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.001.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.001.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.001.005 Remove / Install Components													
2A6X5-012 010.001.005 001 Auxiliary reservoir		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.001.005 002 Boom/drogue selector valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.001.005 003 Pilot operated check valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.002 Air Refueling Fuel System													
2A6X5-012 010.002.001 Operational fundamentals		2008-04-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.002.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.002.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.002.004 Troubleshoot System using Fuel Pressure Control System Test Set	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.002.005 Remove / Install Components													
2A6X5-012 010.002.005 001 Boom and Drogue Fuel Shutoff Valve	5	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.002.005 002 Hydraulic operated dual by-pass valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.002.005 003 Fuel pump pressure control unit		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.002.005 004 Fuel pressure indicator		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.002.005 005 Hydraulic servo motor		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.002.005 006 Fuel pressure transducer		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.002.005 007 Hydraulic servo control valve		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.002.005 008 A/R fuel flow rate indicator		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.002.005 009 A/R fuel flow transmitter	5	2008-04-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.002.005 010 A / R Fuel Flow Power Supply		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003 Boom and Nozzle													
2A6X5-012 010.003.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.003.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.003.005 Use status test panel	5	2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.006 Use ARB test set	5	2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.007 Use nozzle tester	5	2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.008 Operate boom and nozzle	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.009 Deploy boom for maintenance	5	2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.010 Extend boom	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 010.003.011 Lower boom for maintenance	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 010.003.012	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-

1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training						
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
Raise boom after maintenance													
2A6X5-012 010.003.013 Retract boom	5	2008-05-27	2008-06-27				-	-	-	-	-	-	-
2A6X5-012 010.003.014 Remove / Install Components													
2A6X5-012 010.003.014 001 Boom		2008-10-21	2009-01-09				-	-	-	-	-	-	-
2A6X5-012 010.003.014 002 Flexible fuel coupling		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 003 Preload bungees cylinder		2009-04-01	2009-04-11				-	-	-	-	-	-	-
2A6X5-012 010.003.014 004 Gimble	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 005 ARB sliding fuel seal		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 006 Boom accelerometer		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 010.003.014 007 Elevator actuator		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 008 Rudder actuators (tandem)		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 009 Status test panel		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 010 Nozzle Load Sensor		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.014 011 Boom elevation and roll axis indication LVDT		2008-10-21	2008-12-05				-	-	-	-	-	-	-
2A6X5-012 010.003.014 012 Roll position transducer (DRVT)		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.003.014 013 Boom control unit		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 014 ARB control surfaces		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 015 Annunciator lights		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 016 Telescope servo motor		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 017 Boom position indicators		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 018 Boom signal amplifier		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 019 Boom signal coil		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.014 020 ARB stowage shock absorber		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 021 Boom hoist cable	5	2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 010.003.014 022 Hookeye		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 023 Latch		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 024 Hoist motor	5	2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 025 Tension motor		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.003.014 026 Boom hoist winch		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 027 Hoist winch linear actuator		2009-04-01	2009-04-11				-	-	-	-	-	-	-
2A6X5-012 010.003.014 028 Latch striker		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 029 Pneumatic module (IDS)	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.014 030 Nozzle	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.014 031 Recoil	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.003.014 032 Boom elevator/roll controller		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.003.014 033 ARO and instructor's telescope controller		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 010.004 Hose and Drogue System													
2A6X5-012 010.004.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.004.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 010.004.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.004.004 Troubleshoot System using Drogue Coupling Tester	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.004.005 Trail Drogue	5	2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.004.006 Rewind Drogue	5	2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.004.007 Drain drogue		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 010.004.008 Remove / Install Components													

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level	
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC
2A6X5-012 010.004.008 001 Hose		2008-10-21	2009-01-09				-	-	-	-	-	-	-
2A6X5-012 010.004.008 002 Hose Reel	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 010.004.008 003 Hose reel hydraulic components	5	2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 011 WING A R REFUELING PODS TO 1C-10K(A)-2-28													
2A6X5-012 011.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 011.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 011.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 011.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 011.005 Built In Test (BITE) Check		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 011.006 Pod Draining		2009-10-22	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 011.007 Deploy/Stow Hose		2008-10-21	2008-10-21				-	-	-	-	-	-	-
2A6X5-012 012 POD INSPECTIONS TO 1C-10K(A)-2-28-WC													
2A6X5-012 012.001 Cyclic		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.002 Home Station Check (HSC)		2011-01-12	2011-07-12				-	-	-	-	-	-	-
2A6X5-012 012.003 Pod Fault Diagnosis	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 012.004 Remove / Install Components													
2A6X5-012 012.004.001 Refueling Pod		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 012.004.002 Pylon		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 012.004.003 Rear Fairing		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 012.004.004 Nose Fairing		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 012.004.005 Hose		2009-05-29	2010-08-02				-	-	-	-	-	-	-
2A6X5-012 012.004.006 Hose Jettison Unit		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.007 Coupling		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.008 Drogue		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 012.004.009 Ram Air Turbine (RAT)		2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 012.004.010 Dummy Spinner Cone	5	2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 012.004.011 Digital Refueling Control Unit (DRCU)		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 012.004.012 Power Supply		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 012.004.013 Motor Drive Unit		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.014 Hose Position Sensor		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.015 DC Motor		2009-03-08	2009-03-08				-	-	-	-	-	-	-
2A6X5-012 012.004.016 Parking Brake (Linear Actuator)		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.017 Pawl Assembly (Parking Brake)		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.018 Hose Drum Drive Unit		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.019 Gear Box Assembly		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.020 Tensator Drive	5	2009-01-05	2009-01-09				-	-	-	-	-	-	-
2A6X5-012 012.004.021 Fuel Pump		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.022 Vane Pump		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 012.004.023 Control Valve		2011-11-01	2012-04-23				-	-	-	-	-	-	-
2A6X5-012 013 A R REFUELING RECEIVER SYSTEM TO 1C-10K(A)-2-28													
2A6X5-012 013.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 013.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-
2A6X5-012 013.003 Inspect System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-
2A6X5-012 013.004 Troubleshoot System using UARRSI Tester	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-

Career Field Education and Training Plan (CFETP)														
1. Tasks Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training							
		A	B	C	D	E	A 3-Skill Level		B 5-Skill Level			C 7-Skill Level		
		Tng Start	Tng Complete	Trainee Initialst	Trainer Initials	Certifier Initials	1) Crse	(2) CDC	(1) Crse	2) CDC	QTP	1) Crse	(2) CDC	
2A6X5-012 013.005 Remove / Install Components														
2A6X5-012 013.005.001 UARRSI		2009-04-01	2009-05-29				-	-	-	-	-	-	-	
2A6X5-012 013.005.002 Door control cable		2011-07-12	2011-09-14				-	-	-	-	-	-	-	
2A6X5-012 014 DOORS TO 1C-10K(A)-2-52														
2A6X5-012 014.001 Operational fundamentals		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-012 014.002 Perform Operational Check	5	2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-012 014.003 Inspect	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-	
2A6X5-012 014.004 Troubleshoot System	7	2012-10-01	2012-10-29				-	-	-	-	-	-	-	
2A6X5-012 014.005 Remove / Install Components														
2A6X5-012 014.005.001 Cargo door actuator		2009-03-08	2009-03-08				-	-	-	-	-	-	-	
2A6X5-012 014.005.002 Cargo door latch actuator		2009-03-08	2009-03-08				-	-	-	-	-	-	-	
2A6X5-012 014.005.003 Cargo door hand pump		2009-03-08	2009-03-08				-	-	-	-	-	-	-	
2A6X5-012 014.005.004 Cargo door electric pump		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-012 014.005.005 Cargo door reservoir		2008-07-07	2008-09-18				-	-	-	-	-	-	-	
2A6X5-012 014.005.006 Cargo door control valve		2009-05-29	2010-08-02				-	-	-	-	-	-	-	

JOB QUALIFICATION STANDARD CONTINUATION/WJQS

CRITICAL TASKS	TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	CERTIFICATION				
			START DATE	COMPLETION DATE	TRA NEE'S NITIALS	TRA NER'S NITIALS	CERTIFIER'S NITIALS
	32797 001	Team Communication AMCI21-104 Attachment 5 task A5.17	2013-03-11	2014-01-20			
	32797 003	Disconnect/Reconnect AIrcraft Batteries 1C-10(K)A-2-24	2008-10-21	2009-03-08			
	32797 004	Install/Remove Brake Inoperative Jumper Kit 1C-10(K)A-2-32	2009-05-29	2010-08-02			
	32797 005	Lower/Raise ARO Sighting Door to the Maintenance Position 1C-10(K)A-2-52	2009-03-08	2009-03-08			
	32797 007	Airborne Auxiliary Power (APU) Operation 1C-10(K)A-2-49	2008-06-20	2008-07-15			
	32797 008	Engine Operation 1C-10(K)A-2-71	2014-06-18	2014-07-23			
	32797 009	Tail Cone Work Platform 1C-10(K)A-2-53	2013-03-11	2014-01-20			
	32797 010	Self Propelled Hi-Lift Basket (JLG) AFOSTH STD 91-2, Applicable Operating Manual					
	32797 010.001	Purpose and Description	2008-07-07	2008-07-15			
	32797 010.002	Perform Pre-use Inspection and Operate	2008-07-07	2008-07-15			
	32797 011	Self Propelled Hi-Lift Platform (Scissor Lift) AFORSH STD 91-2, Applicable Operating Manual					
	32797 011.001	Purpose and Description	2009-03-08	2009-03-08			
	32797 011.002	Perform Pre-use Inspection and Operate	2009-03-08	2009-03-08			
	32797 012	Wing Air Refueling Pod and Pylon (MK32B-752 Pod) 1C-10(K)A-2-28-2					
	32797 012.001	Inhibit/Deinhibit Pod	2009-03-08	2009-03-08			
	32797 012.002	Air Refueling Operators Control Panel (AROCP) (Remive,Inspect,Install)	2009-04-01	2009-04-11			
	32797 012.003	Flight Engineers Control Panel (FECP) (Remive,Inspect,Install)	2009-04-01	2009-04-11			
	32797 014	Hydraulic 7 Level SCR 660th AMXS					
	32797 014.001	Sign/Clear Red X (Primary AFSC) AFI 21-101 IAW T 0. 00-20-1	2013-09-02	2013-10-22			
	32797 014.002	Clear CND Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2013-09-02	2013-10-22			
	32797 014.003	Clear Repeat/Recur Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2013-09-02	2013-10-22			
	32797 014.004	Perform PI (Primary AFSC) AFI 21-101 AMCSUP1 14.36.4. SCR Documentation/Table 14.1. Mandatory Special Certification Roster (SCR) and Prerequisites. tem 11	2013-09-02	2013-10-22			
	32797 014.005	Sign Condition Tags AFI 21-101 AMCSUP1 5.14.8.6.3.	2013-09-02	2013-10-22			
	32797 014.006	Landing Gear Retraction Supervisor AFI 21-101	2013-09-02	2013-10-22			
	32797 015	Tow Team Assistant 1C-10(K)A-2-9-10-00					
	32797 015.003	Perform as brake operator 1C-10(K)A-2-9-10-00	2013-03-11	2014-01-20			
	32797 015.004	Perform as wing/tail walker 1C-10(K)A-2-9-10-00	2013-03-11	2014-01-20			
	32923 020	Team Communication AMCI21-104 Attachment 5 task A5.17	2015-10-23	2015-10-23			
	32923 021	Disconnect/Reconnect AIrcraft Batteries	2015-10-23	2015-10-23			
	32923 023	Install/Remove Brake Inoperative Jumper Kit 1C-10(K)A-2-32	2015-10-23	2015-10-23			
	32923 024	Lower/Raise ARO Sighting Door to the Maintenance Position 1C-10(K)A-2-52	2015-10-23	2015-10-23			
	32923 026	Airborne Auxiliary Power (APU) Operation 1C-10(K)A-2-49	2015-10-23	2015-10-23			
	32923 027	Engine Operation 1C-10(K)A-2-71	2015-10-23	2015-10-23			
	32923 028	Tail Cone Work Platform 1C-10(K)A-2-53	2015-10-23	2015-10-23			
	32923 029	Self Propelled Hi-Lift Basket (JLG) AFOSTH STD 91-2, Applicable Operating Manual					
	32923 029.001	Purpose and Description	2015-10-23	2015-10-23			
	32923 029 001.001	Perform Pre-use Inspection and Operate	2015-10-23	2015-10-23			
	32923 030	Self Propelled Hi-Lift Platform (Scissor Lift) AFORSH STD 91-2, Applicable Operating Manual					
	32923 030.001	Purpose and Description	2015-10-23	2015-10-23			
	32923 030 001.001	Perform Pre-use Inspection and Operate	2015-10-23	2015-10-23			
	32923 031	Wing Air Refueling Pod and Pylon (MK32B-752 Pod) 1C-10(K)A-2-28-2					
	32923 031.001	Inhibit/Deinhibit Pod	2015-10-23	2015-10-23			
	32923 031 001.001	Air Refueling Operators Control Panel (AROCP) (Remive,Inspect,Install)	2015-10-23	2015-10-23			
	32923 031 001.002	Flight Engineers Control Panel (FECP) (Remive,Inspect,Install)	2015-10-23	2015-10-23			
	32923 033	Hydraulic 7 Level SCR 660th AMXS					
	32923 033.001	Sign/Clear Red X (Primary AFSC)(KC-10) AFI 21-101 IAW T 0. 00-20-1	2015-10-23	2015-10-23			
	32923 033 001.001	Clear CND Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2015-10-23	2015-10-23			
	32923 033 001.002	Clear Repeat/Recur Discrepancies 60/349 MXGOI 21-101 17.1.2.2. REPEAT, RECUR, AND CND PROCEDURES	2015-10-23	2015-10-23			
	32923 033 001.003	Perform PI (Primary AFSC)(KC-10) AFI 21-101 AMCSUP1 14.36.4. SCR Documentation/Table 14.1. Mandatory Special Certification Roster (SCR) and Prerequisites. tem 11	2015-10-23	2015-10-23			
	32923 033 001.004	Sign Condition Tags AFI 21-101 AMCSUP1 5.14.8.6.3.	2015-10-23	2015-10-23			
	32923 033 001.005	Landing Gear Retraction Supervisor AFI 21-101	2015-10-23	2015-10-23			

JOB QUALIFICATION STANDARD CONTINUATION/WJQS							
CRITICAL TASKS	TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	CERTIFICATION				
			START DATE	COMPLETION DATE	TRA NEE'S NITIALS	TRA NER'S NITIALS	CERTIFIER'S NITIALS
	32923 034	Tow Team Assistant 1C-10(K)A-2-9-10-00					
	32923 034 001.002	Perform as brake operator 1C-10(K)A-2-9-10-00	2015-10-23	2015-10-23			
	32923 034 001.003	Perform as wing/tail walker 1C-10(K)A-2-9-10-00	2015-10-23	2015-10-23			
	32923 054	ADDITIONAL TASKS (797) SPECIAL EQUIPMENT					
	32923 054.001	Operate Calavar/Condor/ High Reach Basket and Ground Scanner (Drivers License required) AFM 24306, T.O. 1255-USAF, Applicable Owners Manual	2016-03-27	2016-03-27			
	32923 059	SPECIAL CERTIFICATION TASKS (797) (ADDITIONAL QUALIFICATIONS)					
	32923 059 001.001	APU OPERATOR (C5 000307) T.O. 1C-5M-2-4, 2-4CL-2	2016-08-21	2016-09-21			
	32923 070	OPERATE					
	32923 070 001.001	Condor Highreach AFOSH 91-66	2016-03-27				

INTENTIONALLY

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TAB U

TECHNICAL CONTENT RELEASE AUTHORIZATIONS

U1. Tab J Boeing Initial Proprietary Information Release Authorization, 21 Mar 17 ..... U-2

U2. Tab J Boeing Second Review of Proprietary Photographs, 7 Apr 17 ..... U-4

U3. Redacted J-223 Attached to Boeing's 7 Apr 17 E-mail U-6

U4. Tab BB Technical Content Release Request Sent From AIB Legal Advisor to Legacy Tanker Division (AFLCMC/WKD) Technical Order Management Agent (TOMA), 2 Feb 17 ..... U-7

U5. Updated Tab BB Technical Content Release Request sent from AIB Legal Advisor to AFLCMC/WKD TOMA, 7 Feb 17 ..... U-8

U6. Tab BB Technical Content Release Memo from AFLCMC/WKD, 4 May 17 ..... U-10

U7. Memorandum for Record from AIB Legal Advisor re: Tab BB Technical Content Release Follow-up with 72 ABW/JAQ, 19 Jun 17 ..... U-11

U8. Tab BB Boeing Initial Release of Propreitary Technical Content, 12 May 17 ..... U-12

U9. Tab BB Boeing Follow-up Release of Proprietary Technical Content, 7 Jun 17 ..... U-14

U10. Correspondence from AIB Legal Advisor and Boeing re: Technical Content Release Clarification, dated 19 and 22 Jun 17 ..... U-24

U11. Attchment to 22 Jun 17 E-mail from Boeing re: Technical Content Release Clarification.. ..... U-25

U1. Tab J Boeing Initial Proprietary Information Release Authorization, dated 21 Mar 17

From:
Sent: Tuesday, March 21, 2017 5:27 PM
To: Capt USAF AFLOA (US)
Cc:
Subject: RE: Boeing Proprietary Info Release Request

Capt ,

Thanks again for your patience as we prepared our response. We've worked through the documents. It looks like we can agree to release a great deal of the content. Some of the content, however, is simply too sensitive for public dissemination. In addition, some of the content appears to be the proprietary information of a different contractor. We're not in a position to authorize public release of that information. To best explain our position, I'll FedEx a disk with redacted versions of the PDF's that reflect what we can and can't agree to release. At your earliest convenience, please respond your preferred mailing address and name to address the package to.

To ease your review of the disk, I've provided a description of the basis of each of these redactions here:

Redaction Guide to Tab J

This document is actually two separate reports, with the second report beginning at J249. Within this PDF, we're including three different markings: 1) regular redaction; 2) a "Do Not Release" stamp where Boeing wishes to withhold an entire page; and 3) yellow highlighting for FOUO material. W/respect to the actual document, the specific marks to the sections are as follows:

Part Information – This section is redacted because the information would provide key design information that makes the boom controller unique and distinguishes it from the competitors.

Pictures & Charts (J213 – J248) – The photographs in this page range are marked "Do Not Release" because it provides gimbal assembly information that is critical to the boom design that sets it apart from the competitors. The information contained in the charts at the end of the report would allow engineers for Boeing's competitors to determine the materials used that make Boeing's gimbal design unique.

Boeing BCU HF Interference Memorandum (J249 – J252) – This is the beginning of the second, older document. It discusses the internal design of the boom controller in detail, and it contains that is critical to the boom design that sets it apart from the competitors. In addition, it contains information that is proprietary to Honeywell. Finally, and possibly most significantly, the report is marked ITAR-controlled. In my with other AIBs, they've shied away from going through the painful process to get approval from the necessary government entities to release ITAR materials publicly.

Of course, this email and the forthcoming PDFs only reflect Boeing's view of this data. As you know, much of the data may be controlled by other Government groups. Boeing's review and response does not reflect consultation with nor concurrence by those groups. Most notably, Boeing highlighted FOUO data in yellow for ease of your review. Boeing doesn't wish to withhold that information, but presumes the AIB will want to clear it's release with the appropriate equity-holder. Similarly, I note the presence of the ITAR stamp on one of the reports. I'm unsure whether other material is similarly controlled or controlled in some other similar manner.

If the AIB believes it needs to release discrete pieces of information Boeing has redacted or sought to withhold, we're happy to discuss further. Please don't hesitate to contact me if you have any questions.

Best,

U2. Tab J Boeing Second Review of Proprietary Photographs, dated 7 Apr 17

From:
Sent: Friday, April 07, 2017 4:05 PM
To: Capt USAF AFLOA (US)
Cc:
Subject: KC-10 AIB - Second review of proprietary photographs
Attachments: J-223 Redacted Picture_Redacted.pdf

Capt ,

As promised, we've reviewed the photographs you asked us to take another look at. I believe we can accommodate some of your request, but probably can't for others. Specifically, our position is as follows:

J-215 = We cannot agree to public release of this picture for the reasons we discussed by phone. This same is true for each of the pictures below that we can't agree to release.

J-217 = Release

J-218 = Release

J-219 = No release

J-220 = Release

J-221 = No release

J-222 = No release

J-223 = This was a difficult picture for us, but given the emphasis you placed on using this picture, we're able allow its public release as redacted in the attachment to this email.

J-224 = No release

J-225 = Release

J-228 = No release

J-229 = Release

J-230 = Release

J-232 = No release

J-234 = No release

J-235 = No release

J-244 = No release

As before, this email only reflects Boeing's view of the photographs. They may be controlled by other Government groups in some manner. Boeing's review and response does not reflect consultation with nor concurrence by those groups.

I hope this helps.

Best,

Senior Counsel

Boeing Oklahoma

City

Oklahoma City, OK

(phone)

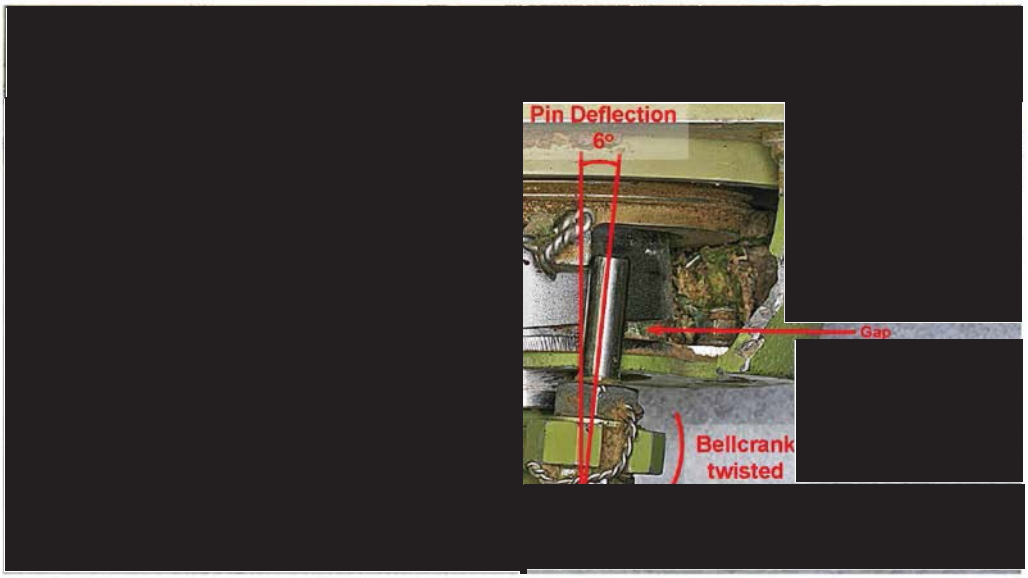
(cell)

Paralegal: ; ;

NOTICE: This communication may contain privileged or other confidential information. If you are not the intended recipient, or believe that you have received this communication in error, please do not print, copy, retransmit, disseminate, or otherwise use this information. Also, please indicate to the sender that you have received this e-mail in error, and delete the copy you have received. Thank you.

U3. Redacted J-223 Attached to Boeing's 7 Apr 17 E-mail

KC-10A, 83-0080, Class A, 1 November 2016, AFSAS #585987



Close-up showing twisted Bellcrank and measured deflection of Stud
(Figure 13)

U4. Tab BB Technical Content Release Request Sent From AIB Legal Advisor to Legacy Tanker Division (AFLCMC/WKD) Technical Order Management Agent (TOMA), dated 2 Feb 17

From: Capt USAF AFLOA (US)
Sent: Thursday, February 02, 2017 1:10 PM
To: GS-12 USAF AFMC AFLCMC/WKDMA
Cc: NH-04 USAF AFMC AFLCMC/WKDB; SrA USAF AMC 60 AMW/JA; Col USAF AMC 375 OG/OG/CC
Subject: Request for use of KC-10 TO
Attachments: Tech Manual References_Redacted.pdf
Signed By:

Mr. ,

I am the legal advisor assigned to the AFI-503 Accident Investigation Board (AIB) for the KC-10 mishap, T/N 83-0080, that occurred near Mountain Home AFB on 1 Nov 2016. The statutorily mandated purpose of the AIB is to produce a publicly releasable report of the facts and circumstances surrounding the mishap. AFI 51-503, Aerospace Accident Investigations, requires the AIB to support the facts asserted in the AIB report with interview testimony and documents. To this end, I have identified the following technical orders that are critical to buttressing our explanation of the cause of the mishap and the factors that substantially contributed to it. IAW AFI 51-503 paragraph 5.4.2, I am contacting you as the Technical Orders Manager of the following technical orders to seek your permission to include them in our AIB report. The AIB is requesting permission to include the attached portion of these pages in the AIB report. Thank you.

T.O. 1C-10(K)A-1
1) Cover page
2) Redacted pages 3-19, 1.15-35, 2A-154, 3-12, 2-69, 2A-103, 4-157 to 4-159

V/r,
, Capt, USAF
Legal Advisor, Accident Investigation Board

This email contains information related to an ongoing Accident Investigation Board (AIB). In accordance with AFI 51-503, para 7.1.3, prior to the official public release of the AIB report, board members, SMEs, contractors, and federal government employees who have been given or have obtained access to accident investigation information or documents shall not disclose that information or the contents of the report for other than official and authorized purposes. The only authorized disclosures of accident information or the contents of the report shall be for the purpose of facilitating the accident investigation.

U5. Updated Tab BB Technical Content Release Request Sent From AIB Legal Advisor to AFLCMC/WKD TOMA, dated 7 Feb 17

From: Capt USAF AFLOA (US)
Sent: Tuesday, February 07, 2017 3:18 PM
To: GS-12 USAF AFMC AFLCMC/WKDMA
Cc: SrA USAF AMC 60 AMW/JA; Col USAF AMC 375 OG/OG/CC; NH-03 USAF AFMC AFLCMC/WKDAB; CMSgt USAF AMC 735 AMS/CCC
Subject: RE: Request for use of KC-10 TO
Signed By:

Mr. ,

Below is a list of the updated T.O. pages that we are requesting to utilize as part of our publicly releasable report. The sections that we request are as follows:

T.O. 1C-10(K)A-1 Volume 1
1) Cover page
2) Redacted pages 1.15-35, 2A-103, 2A-152 to 2A-154, 2A-160, 2-69, 3-12, 3-19,
4-157 to 4-159

T.O. 1C-10(K)A-2-28
1) Cover page
2) Task 28-70-00 Page 3 3)
Task 28-71-00 Page 3, 6
4) Task 28-71-04 Page 201 to 206
5) Task 28-71-06 Page 206 and 213 (Step 3b)
6) Task 28-72-00 Pages 1 to 3 7)
Task 28-72-05 Pages 201-205 8)
Task 28-72-10 Page 1
9) Task 28-72-11 Page 622 Table 605

T.O. 1C-10(K)A-28FI-1
1) Cover page
2) Task 28-70-00 pg 116

T.O. 1C-10(K)A-6WC-1
1) Cover page
2) Card 10LM-004.4 pg 37
3) Card 10LM-005.4 pg 85

V/r,
, Capt, USAF
Legal Advisor, Accident Investigation Board

**This email contains information related to an ongoing Accident

Investigation
Board (AIB). In accordance with AFI 51-503, para 7.1.3, prior to the official
public release of the AIB report, board members, SMEs, contractors, and federal government employees who have been given or have obtained access to accident investigation information or documents shall not disclose that information or the contents of the report for other than official and authorized purposes. The only authorized disclosures of accident information
or the contents of the report shall be for the purpose of facilitating the accident investigation.**

DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON DC 20330

MEMORANDUM FOR 72 ABW/PA

FROM: AFLCMC/WKD

SUBJECT: Security and Policy Review

1. The attached material, described below, is forwarded for security and policy review in accordance with AFI 35-102

TITLE: T.O. 1C-10(K)A-1, Flight Manual USAF series KC-10 aircraft, 1C-10(K)A-6WC-1, Preflight Basic Post and thru flight inspection work cards, 1C-10(K)A-2-28, Maintenance Manual Organizational Fuel USAF Series KC-10 aircraft 1C-10(K)A-2-28FI-1, Fault Isolation Fuel USAF Series KC-10 aircraft. Redacted technical order in support of Accident Investigation Board. Page count approximately 34

AUTHOR/ORGANIZATION: AFLCMC/WKD

PRESENTATION TO: General public

DATE: Upon Accident Investigation Board completion

LOCATION: N/A

PUBLICATION IN: Publicly releasable accident investigation report

SUBMITTAL DEADLINE: N/A

REQUEST REPLY BY: 5 May 2017

2. This request for release is made on behalf of the Accident Investigation Board KC-10 mishap, 1 November 2016. The technical orders and/or specific sections will be released in the publicly releasable accident investigation report. Coordination of each individual technical orders and/or specific sections was accomplished, approved and/or disapproved by the following. Technical Content Managers: Flight Manuals, Mr. , DSN . Mr. , DSN , Mr. , DSN and Controlling DoD Office, Mr. , DSN .

3. The material is unclassified, technically accurate, an open publication and does not appear to violate contractor's proprietary rights. I have determined that the material is suitable for public release, provided your review and Boeing's review supports this determination.

NH-04, DAF
Chief Engineer, Legacy Tanker Division

DEPARTMENT OF THE AIR FORCE
Accident Investigation Board

19 June 2017

MEMORANDUM FOR RECORD

FROM: Legal Advisor, Accident Investigation Board, KC-10A, T/N 83-0080, 1 Nov 16

SUBJECT: Technical Content Release Follow-up

1. On 4 May 2017 members of the AIB received a memorandum from the Legacy Tanker Division (AFLCMC/WKD) indicating that the technical content the AIB had requested on 2 and 7 February 2017 was suitable for public release.

2. In the 4 May 2017 email to which the memorandum was attached, the Legacy Tanker Division Chief Engineer recommended that we consult with both The Boeing Company and the acquisitions attorneys assigned to the 72nd Air Base Wing (72 ABW/JAQ). The correspondence between AIB personnel and Boeing's legal counsel are included within Tab U. I also followed up with the two individual points of contact at 72 ABW/JAQ who were included in the "Cc:" block of the 4 May 2017 email.

3. On 19 June 2017 I received a phone call response from one of those individuals indicating that 72 ABW/JAQ did not intend to conduct a technical content review in addition to those already performed by AFLCMC/WKD and Boeing, nor did they intend to provide any input in addition to the memorandum that the AIB had already received from AFLCMC/WKD.

Very respectfully,

//SIGNED//

[AIB LA] , Capt, USAF
Legal Advisor

U8. Tab BB Boeing Initial Release of Proprietary Technical Content, dated 12 May 17

From:
Sent: Friday, May 12, 2017 9:18 AM
To: Capt USAF AFLOA (US)
Cc: ( )
Subject: KC-10 AIB - Proprietary documents submitted for review on 4 May 2017

Capt ,

The Boeing Company ("Boeing") has reviewed the proprietary documents that sent to us on 4 May 2017 for potential public release. Upon review, it appears that Boeing can agree to release some of the content. Some of the content, however, is too sensitive for public dissemination. I've attached the documents Boeing agrees to release here.

For your records, the following reflects Boeing's position on each of the documents Mr. sent over on 4 May:

Documents	Position on Public Release
1C-10(K)A-6WC-1_Cards 10LM-004.4 & 005.4 and cover pages-	These cards contain significant technical content throughout. As such, we cannot agree to release this data.
2-28 cover, task 28-71-04, 28-72-05, Table 605 -	Same
28FI-1 cover and pg. 116 -	Same
1C-10(K)A-1_2A-152 to 154 -	Boeing agrees to release this data
KC-10(K)A-1_4-166 -	Boeing agrees to release this data.
KC-10(K)A-1 -	Page 2 of this document (Air Refueling Limitations) reveals significant boom design information. We can agree to release the this data so long as page 2 is redacted consistent with the attached PDF.

Please do not hesitate to contact me with any questions.

Best regards,

Senior Counsel

Boeing Oklahoma City

Oklahoma City, OK

(phone)

(cell)

Paralegal: ; ;

NOTICE: This communication may contain privileged or other confidential information. If you are not the intended recipient, or believe that you have received this communication in error, please do not print, copy, retransmit, disseminate, or otherwise use this information. Also, please indicate to the sender that you have received this e-mail in error, and delete the copy you have received. Thank you.

U9. Tab BB Boeing Follow-up Release of Proprietary Technical Content, 7 Jun 17

From: ,
Sent: Wednesday, June 07, 2017 9:02 AM
To: Col USAF AMC 375 OG/OG/CC
Cc: Maj USAF AMC JA/JA; Capt USAF AFSPC AF LEGAL OP AGENCY FO/JA; Capt USAF AFSPC AF LEGAL OP AGENCY FO/JA; GS-09 USAF AMC JA/JAA; CMSgt USAF AMC 735 AMS/CCC; NH-03 USAF AFMC AFLCMC/WKD, C/KC-135 Mechanical Systems and Tech Support;
Subject: [Non-DoD Source] RE: Boeing Proprietary Info Release Request

Col ,

Boeing has reviewed the attached PDFs. We agree to their release as you've redacted in the above.

As always, Boeing's review and response does not reflect consultation with nor concurrence by any other relevant Government organizations who may hold interest in this data.

Best,

-----Original Message-----
From: Col USAF AMC 375 OG/OG/CC
Sent: Sunday, June 04, 2017 8:01 PM
To:
Cc: Maj USAF AMC JA/JA < >; Capt USAF AFSPC AF LEGAL OP AGENCY FO/JA < >; Capt USAF AFSPC AF LEGAL OP AGENCY FO/JA < >; GS-09 USAF AMC JA/JAA < >; CMSgt USAF AMC 735 AMS/CCC < >; NH-03 USAF AFMC AFLCMC/WKD, C/KC-135 Mechanical Systems and Tech Support < >
Subject: Boeing Proprietary Info Release Request

Mr. ,

Thank you for your continued help with our KC-10 investigation.

After reviewing the last set of technical order redactions, we are requesting reconsideration on the following (attached):

1) Redacted 1C-10(K)A-2-28 cover, heavily redacted task 28-71-04 pgs 201-204, showing step 17.
- We request use of step 17.

2) Redacted 1C-10(K)A-6WC-1 cover, redacted card 10LM-004.4 pg 37, and

redacted card 10LM-004.4 pg 85 showing Postflight & Combined Preflight/Postflight Gimbal Yoke nut inspection requirements.
- We request use of Postflight & Combined Preflight/Postflight Gimbal Yoke Nut inspection requirements.

We believe we will be able to submit our report to our Convening Authority as written with approval of those two items and are attempting to do so by the end of this week to finalize this process.

Thank you again and we look forward to your response.

v/r

Col

, Colonel, USAF
President, Accident Investigation Board
Commander, 375th Operations Group
Comm: ; DSN
Cell:

TO 1C-10(K)A-2-28

FORMERLY 1C-10(K)A-2-28-1
FORMERLY 1C-10(K)A-2-28-2
FORMERLY 1C-10(K)A-2-28-3

TECHNICAL MANUAL

MAINTENANCE MANUAL ORGANIZATIONAL

FUEL

USAF SERIES KC-10A AIRCRAFT

THE BOEING COMPANY
F34601-93-C-0448
Prepared Under Contract FA8222-12-D-0011
Prepared by OC-ALC/AFLCMC KC10 Weapon System Program Office

THIS CHANGE INCORPORATES URGENT PCRS 21LAMCA4QF7006U, 21LAMCA4QF7007U, AND 21LAMCA4QF7008U

BASIC AND ALL CHANGES HAVE BEEN MERGED TO MAKE THIS A COMPLETE PUBLICATION

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

01 JULY 2015

KC-10A, T/N 83-0080, 1 November 2016
U-16 CHANGE 7 15 FEBRUARY 2017

GIMBAL - MAINTENANCE PRACTICES

1. General

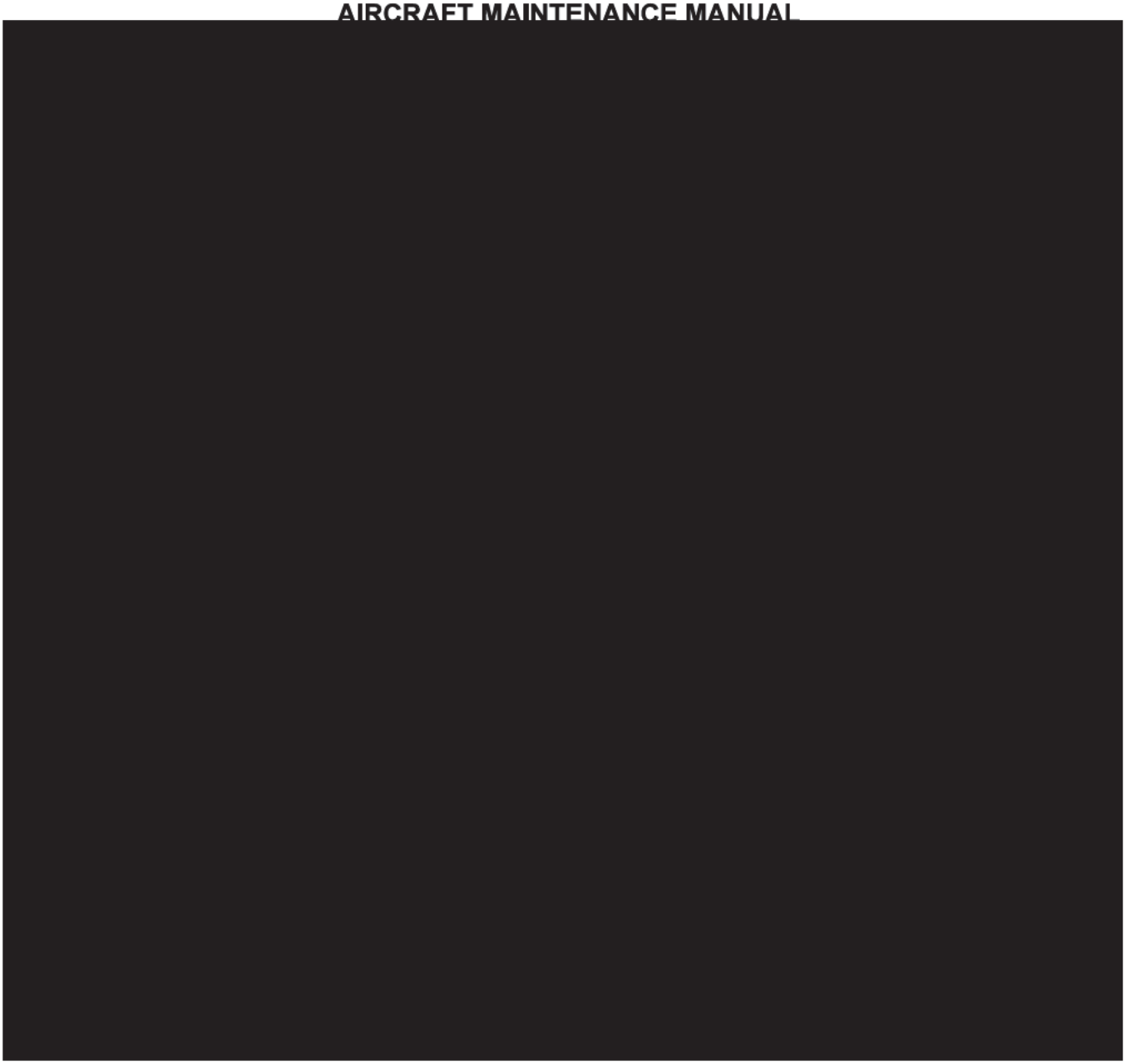
A. This maintenance practice provides instructions for removal/installation of the Aerial Refueling Boom (ARB) gimbal mechanism installed on the ARB support fitting located on the lower aft fuselage ARB support structure, and connected to the boom at the boom-gimbal pivot point by the hydraulic glands.

[redacted]

3. Removal/Installation - Gimbal

A. Remove Gimbal [redacted]

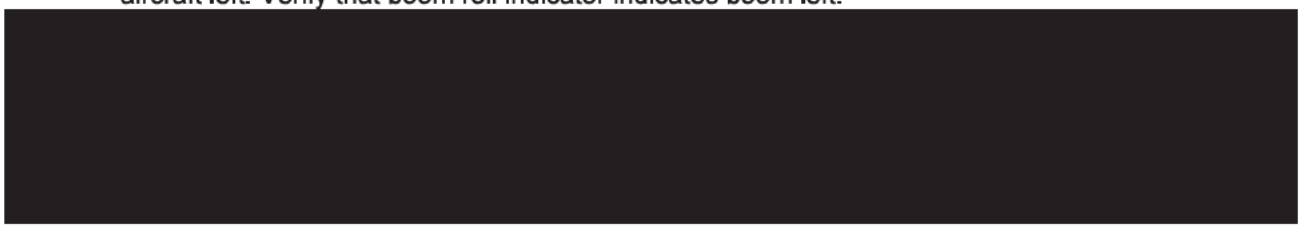
[redacted]



B. Install Gimbal

[redacted]

(17) Verify that roll position DRVT polarity is correct by lowering boom on to dolly and moving to aircraft left. Verify that boom roll indicator indicates boom left.



ONE SET
USAF KC-10A AIRCRAFT
PREFLIGHT-BASIC POST AND THRUFLIGHT INSPECTION WORK CARDS

F34601-95-C-0945
Prepared Under Contract FA8222-12-D-0011
Prepared by OC-ALC/AFLCMC KC10 Weapon System Program Office

BASIC AND ALL CHANGES HAVE BEEN MERGED TO MAKE THIS A COMLETE PUBLICATION

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

15 NOVEMBER 2003
CHANGE 39 1 MARCH 2017

PUBLICATION	CHANGE NO.	CHANGE DATE	PAGE NO.	INSP CHK	CARD NO.
TO 1C-10(K)A-6WC-1	39	1 MAR 17	37	POSTFLIGHT	10LM-004.4
	ATA CHAP	AREA ZONE 4		INSP DATE	A/C NO.

INSTRUCTION	SIGN OFF	
AREA 4 (EXTERIOR) (CONTINUED)	MECH	INSP
[redacted]		
&11. ACCESS GIMBAL YOKE NUT BY OPENING PETAL DOORS.		
A. USING MIRROR CHECK GIMBAL YOKE NUT FOR SECURITY (SAFETY WIRE INTACT WITH 2-3 THREADS VISIBLE FORWARD OF THE YOKE NUT).		
$12. CHECK AERIAL REFUELING BOOM NOZZLE CONTACT COIL (REF. MM 28-76-01) FOR CORROSION AND IMPACT DAMAGE. TREAT IF REQUIRED. 941-N001 (28-76-01)		
[redacted]		

MDC data subject to restrictive legend(s) on title page

PUBLICATION	CHANGE NO.	CHANGE DATE	PAGE NO.	INSP CHK	CARD NO.
TO 1C-10(K)A-6WC-1	39	1 MAR 17	85	COMB PRE/POST	10LM-005.4
	ATA CHAP	AREA ZONE 4		INSP DATE	A/C NO.

INSTRUCTION	SIGN OFF	
AREA 4 (EXTERIOR) (CONTINUED)	MECH	INSP

[redacted]

&13. ACCESS GIMBAL YOKE NUT BY OPENING PETAL DOORS.

A. USING MIRROR CHECK GIMBAL YOKE NUT FOR SECURITY (SAFETY WIRE INTACT WITH 2-3 THREADS VISIBLE FORWARD OF THE YOKE NUT).

14. CHECK AERIAL REFUELING BOOM FLIGHT CONTROLS (REF. MM 28-73-00) FOR FOREIGN OBJECT OR IMPACT DAMAGE. 900-J005 (28-73-00)

MDC data subject to restrictive legend(s) on title page

U10. Correspondence from AIB Legal Advisor and Boeing re: Technical Content Release Clarification, dated 19 and 22 Jun 17

From:
To: Capt USAF AFLOA (US)
Cc: Col USAF 375 OG (US);
Subject: RE: Technical Content Release Clarification
Date: Thursday, June 22, 2017 11:42:24 AM
Attachments: Redact Attch to 19 Jun 17 email from Capt to Mr. _Redacted....pdf

---

Capt. :

We have addressed your request regarding the pdf you sent on 19 June. We've attached a redacted version here that deletes some proprietary descriptions of our technology on p.5 that we can't agree to release. In addition, we request that p. 6 of the PDF not be released.

Also, thank you for sending over the TOMA with the list of TO's. We have reviewed our records, and it doesn't appear that there's anything on that list that we haven't previously reviewed.

As before, our review does not reflect consultation with, or the views of, any government entity that may hold an interest in this data.

Please let me know if you have any questions.

Thanks in advance,

-----Original Message-----
From: Capt USAF AFLOA (US)
Sent: Monday, June 19, 2017 2:09 PM
To:
Cc: Col USAF 375 OG (US)
Subject: Technical Content Release Clarification

Mr. ,

Per our phone conversation attached are a few pages from our draft report that contain technical content excerpts that do not appear to be specifically addressed in your prior responses to our release requests. Please advise on Boeing's position regarding each item.

In addition, to ensure that nothing has been missed I have attached my email to our Technical Order Management Agent (TOMA) with the complete list of TO's that the AIB had initially requested. Many of those requested items were either addressed by your prior responses or rendered moot during the editing process, but I do not want anything in our report that you have not previously been asked to review.

V/r,

, Capt, USAF
Attorney, Aviation & Admiralty Law Branch
Air Force Claims & Tort Litigation Division

Joint Base Andrews, MD

BROKEN BOOM HOIST CABLE

Disconnect ..... INITIATE (If Applicable)

WILL BROKEN CABLE DAMAGE BOOM OR RECEIVER AIRCRAFT

YES

Discontinue boom air refueling except in an emergency.

NO

Continue mission as dictated by operational necessity.

Stow the boom using the following procedures.

Inform the pilot when ready to stow the boom and coordinate the following prior to attempting boom stowage procedures.

NOTE

- *Increase airspeed as required (300 KIAS or higher) to stow the boom.*
- *The boom may not fly to stowed position above 20,000 feet or while the aircraft is in a turn.*

ELEVATION POSN Sw ..... STOW

Fly the boom to the stowed position and hold it in the stowed position until latched.

CAUTION

Avoid applying abrupt up commands after placing the ELEVATION POSN switch in STOW.

Flight Control Stick ..... NEUTRAL

BOOM LATCHED

YES

NOTE

Repeated attempts may be required.

Complete the Boom Post AR Checklist.

END

NO

Refer to LANDING WITH BOOM IN TRAIL Checklist.

END

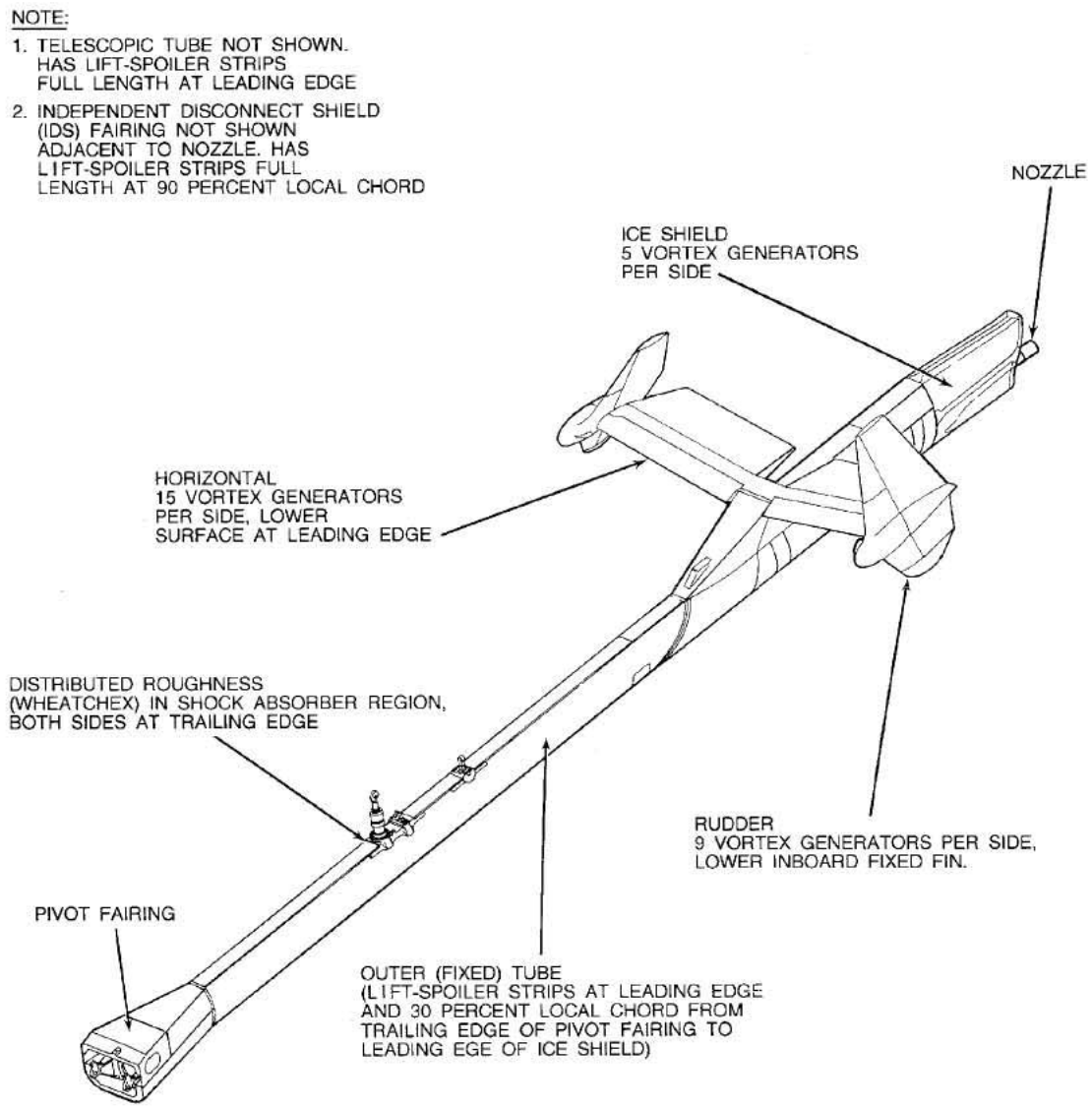


Figure 1. Boom Aerodynamic "Add-On" Fixes

28-71-00-990-801 (Sheet 1 of 1)

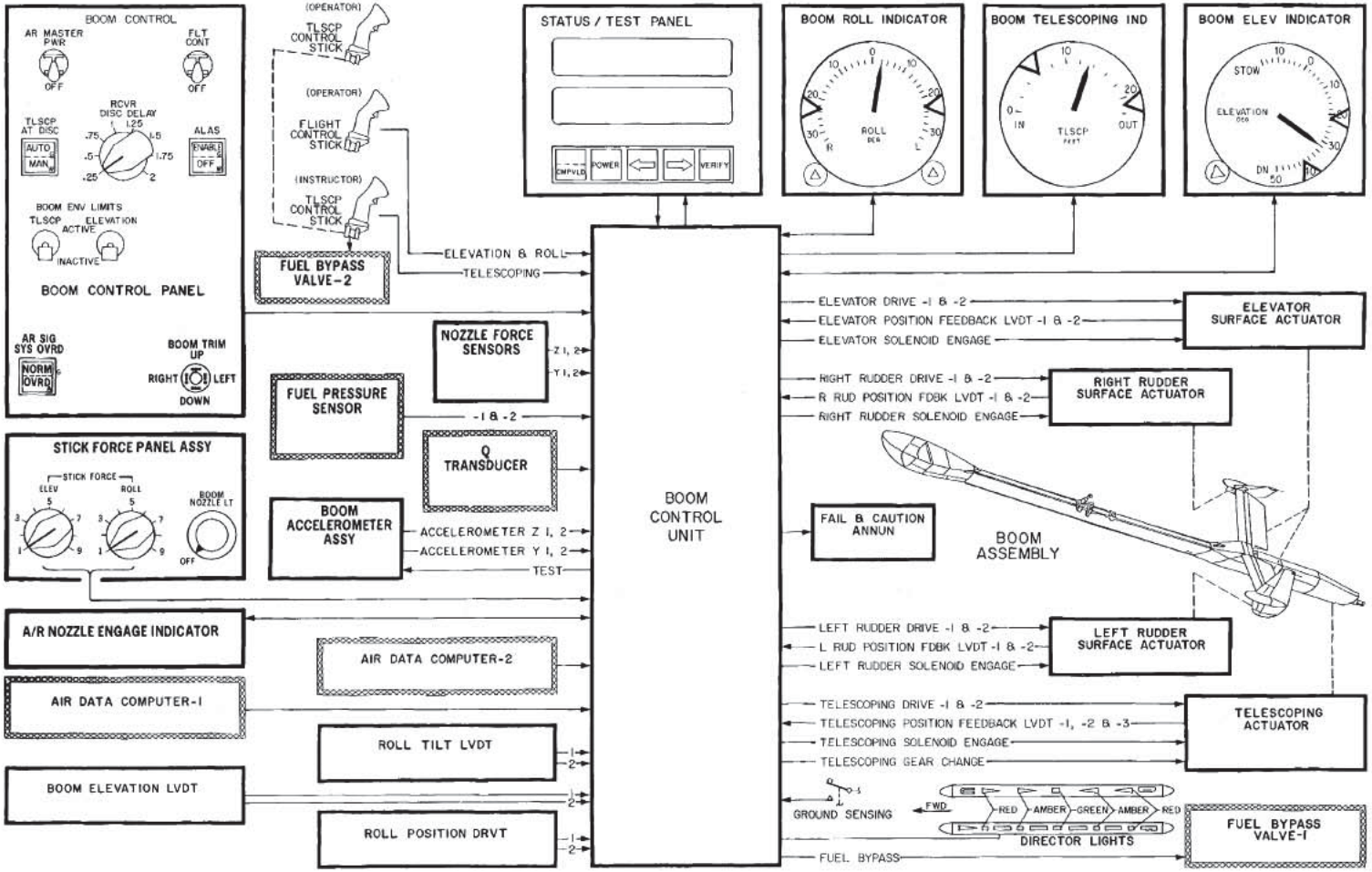
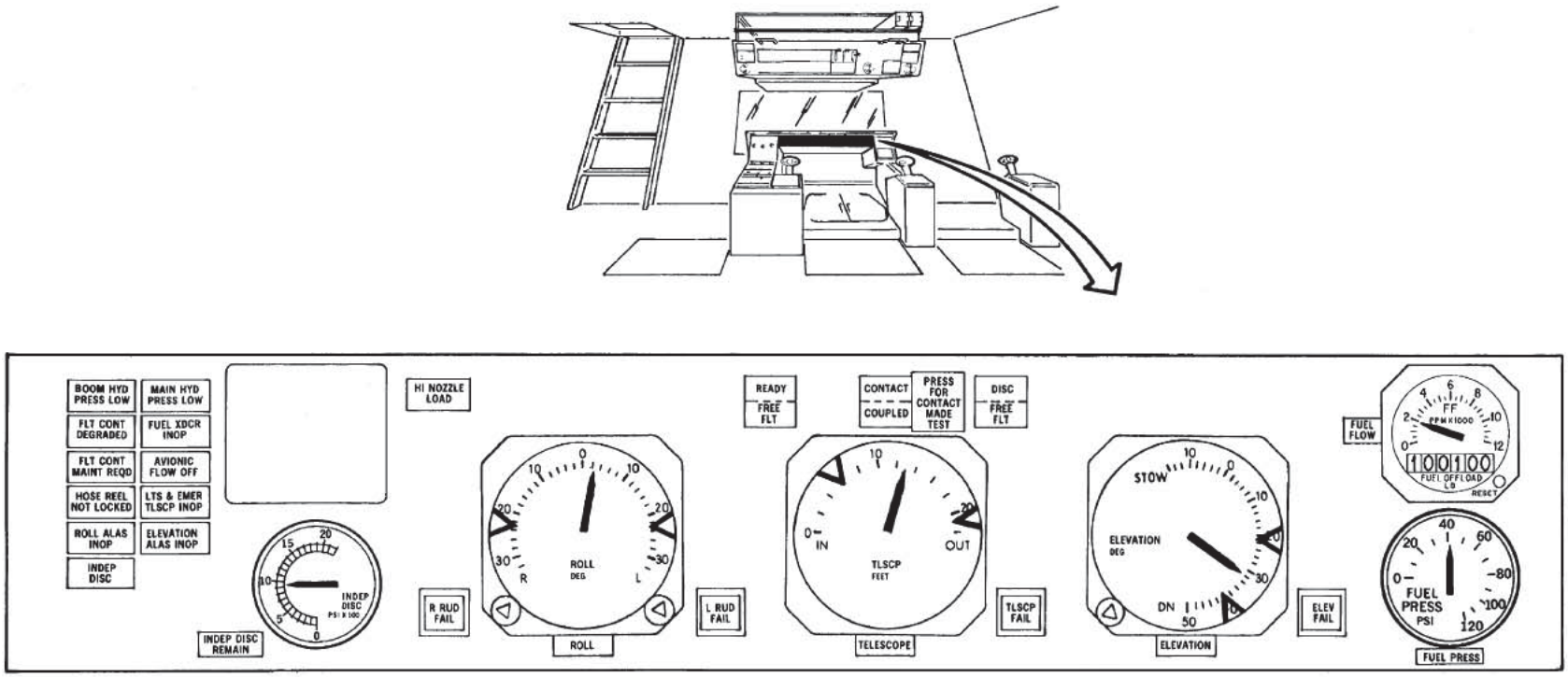


Figure 4. Boom Control System - Schematic
28-70-00-990-804 (Sheet 1 of 1)

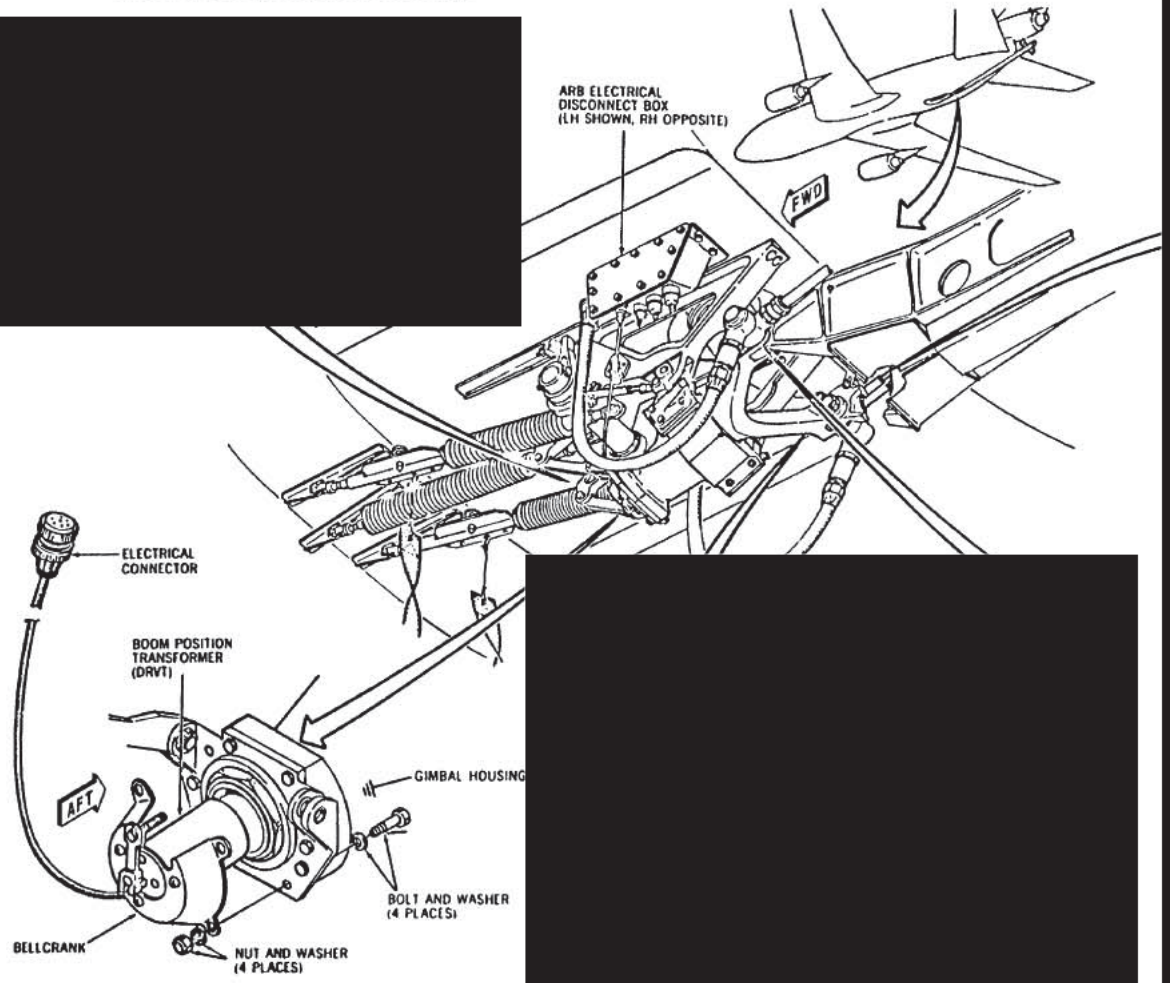
KC-10A, T/N 83-0080, 1 November 2016
U-27



S100459548V2

Figure 1. ARO Instrument Panels
28-70-00-990-801 (Sheet 1 of 1)

[redacted]



[redacted]

Figure 201. ARB Gimbal - Removal/Installation
28-71-04-990-801 (Sheet 1 of 1)

[redacted]

TAB V

WITNESS TESTIMONY AND STATEMENTS

V1. VERBATIM TESTIMONY OF MP V-1.1

V2. VERBATIM TESTIMONY OF MCP V-2.1

V3. VERBATIM TESTIMONY OF MFE V-3.1

V4. VERBATIM TESTIMONY OF MB V-4.1

V5. VERBATIM TESTIMONY OF EBO V-5.1

V6. SUMMARIZED TESTIMONY OF IBO V-6.1

V7. SUMMARIZED TESTIMONY OF IBO 2nd INTERVIEW V-7.1

V8. VERBATIM TESTIMONY OF IP V-8.1

V9. VERBATIM TESTIMONY OF IBO2 ..... V-9.1

V10. VERBATIM TESTIMONY OF MM1 ..... V-10.1

V11. VERBATIM TESTIMONY OF MM2 ..... V-11.1

V12. SUMMARIZED TESTIMONY OF MM2 2nd INTERVIEW V-12.1

V13. VERBATIM TESTIMONY OF MM3 ..... V-13.1

V14. VERBATIM TESTIMONY OF MM3 2nd INTERVIEW V-14.1

V15. VERBATIM TESTIMONY OF MM4 ..... V-15.1

V16. VERBATIM TESTIMONY OF MM8 ..... V-16.1

V17. SUMMARIZED TESTIMONY OF MM9 ..... V-17.1

V18. SUMMARIZED TESTIMONY OF MM9 2nd INTERVIEW V-18.1

V19. VERBATIM TESTIMONY OF MM10 ..... V-19.1

V20. SUMMARIZED TESTIMONY OF MM11 ..... V-20.1

V21. SUMMARIZED TESTIMONY OF MM12 ..... V-21.1

V22. SUMMARIZED TESTIMONY OF MM13 ..... V-22.1

V23. SUMMARIZED TESTIMONY OF MM14 ..... V-23.1

V24. SUMMARIZED TESTIMONY OF MM15 ..... V-24.1

VERBATIM TESTIMONY OF CAPTAIN MP

My name is Colonel [BP], we are investigating the accident involving a KC-10, tail number 83-0080, that occurred on 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the Safety Investigation Board will be kept confidential, if you were so advised, it can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes.

PRESIDENT: Thank you. I must inform you that the interview is being recorded and that you may not use your own recording devices during the interview.

Do you consent to this interview being recorded?

WITNESS: Yes.

PRESIDENT: Your testimony in this investigation will be under oath, at this time, I will administer the oath, please raise your right hand:

PRESIDENT: Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, nothing but the truth, so help you God?

WITNESS: I do.

PRESIDENT: Thank you. Today's date is 24 January 2017, the time is now 0905 local Pacific time. This interview is being conducted in building 31, room 55, on Travis Air Force Base. The persons present are the witness, Captain [MP], the legal advisor, the pilot advisor, the medical advisor, the weather advisor, the boom advisor, the recorder, and via telephone, Capt [MP]'s Area Defense Counsel, Captain [Mountain Home ADC]. I am Colonel [BP], the Board President.

The witness has been sworn.

As we previously discussed, you previously made an unprivileged statement -- any previous unprivileged statement you made to the Safety Board, so for instance your 72 hour, 14 day history. Do you wish to adopt that is part of your sworn testimony today?

WITNESS: Yes, sir.

PRESIDENT: Okay.

QUESTIONS BY BOARD PRESIDENT:

Q1. Please state your first and last name.

A1. [MP].

Q2. What unit are you assigned to and what is your duty title?

A2. The 9th ARS, I'm the Bravo Flight Commander and KC-10 Aircraft Commander.

Q3. How long have you been a KC-10 pilot?

A3. I've been a KC-10 pilot, mission ready, since December 2015.

QUESTIONS BY LEGAL ADVISOR:

Q4. Just briefly. You said your unit is the 9 ARS, what does ARS stand for?

A4. Air Refueling Squadron.

LEGAL ADVISOR: Thank you.

QUESTIONS BY BOARD PRESIDENT:

Q5. Okay. So we will start questions. How this will go, is I will ask some questions from a sheet here. Anything you answer may spark another question, and anybody here at the table with us, can answer -- or can ask questions as well. And obviously, your Area Defense Counsel can chime in anytime that she feels that she needs to.

All right. Were you on the mishap aircraft on the sortie that flew on 1 November 2016?

A5. I was.

Q6. What was your crew position, and primary focus during the sortie?

A6. My crew position was as a mission pilot. I was getting an upgrade, qualification for large formation lead, so I was flying with another instructor pilot who was supervising that.

Q7. Okay. Was 83-0080 your original aircraft, that day?

A7. Uh, when we alerted that morning, that was the aircraft that we had, yes, sir.

Q8. Okay. Were you aware of any issues with 83-0080 from a mission the day prior? That could be Ops, maintenance, safety?

A8. I was not.

Q9. Okay. Who on the flight crew checked the maintenance forms and was anyone on the flight crew aware of any boom control issues prior to the mishap?

A9. Captain [MCP], the Aircraft Commander for the mission checked the forms. He did not tell me about anything -- any issues with the boom. He debriefed me on what he saw, but there was nothing related to the boom.

Q10. Okay. Are you aware or do you know if a maintainer crew chief informed the crew -- anybody on the crew of any issues with the boom?

A10. No. During our galley rally when we asked the engineer, our flight engineer, what is going on with the jet, and asked the boom what was going on with the jet, there were no glaring issues.

Q11. Do you know, were there any issues just in general with the aircraft during preflight?

A11. During the preflight we had a -- I think, one navigation instrument out. The ADF was out, but our MEL allowed us to take it. I can't remember anything else. MEL is Minimum Equipment List.

QUESTIONS BY LEGAL ADVISOR:

Q12. You said ADF as well, what is that referring to?

A12. Uh, what does ADF stand for?

PILOT MEMBER: Auto Direction Finder, I can't remember exactly.

BOARD PRESIDENT: It's a navigational reading, ground navigational reading. That's the receiver on the aircraft.

QUESTIONS BY BOARD PRESIDENT:

Q13. All right. Can you describe the weather during the flight?

A13. Uh, we had wet runways getting out of there, and winds were calm, like 210 at 6, I believe, so nothing crazy. The skies were clear for the most part, scattered clouds.

Q14. And then during the uh -- as you were setting up from pre-contact, any turbulence, or any clouds, or anything significant?

A14. There were some low-level clouds, but the area we were operating in to give gas to the F-15s was clear, no turbulence.

Q15. What were your immediate actions after you heard the boom was acting erratically?

A15. After we initially asked him if he could get it under control, if he could stow it, and then the airplane up front, we kind of started doing a yawing motion, about plus or minus 100 to 200 feet, I'd say 5 to 10 degrees heading change. So, I was focused on making -- I was flying at the time. We were about to kick off the autopilot to just hand fly it, but it kind of calmed down upfront, and then we -- once our boom told us he could not get the boom under control -- our boom operator told us he couldn't get the boom under control, I cleared off the fighters and told them we were hard broke. And then, the cable snapped in there as well sometime, so we knew we cannot give them gas.

Q16. Okay. So, so when you noticed that yawing and the heading changes, can you remember about how long that was before, down? Did it --and, so second to that, did it do that calm, do that calm, or was it consistent calm and it was over?

A16. It was pretty consistent until the cable snapped. Once the cable snapped it calm down, and then we didn't really have those issues for the rest of the flight.

Q17. Okay. Do you know about how long that was? It would be a guess, but…

A17. Like 50 seconds, a minute somewhere in that range, it was pretty quick.

QUESTIONS BY BOOM ADVISOR:

Q18. So, the whole time on autopilot you remained -- you kept the autopilot on during the whole situation?

A18. Yes.

BOOM ADVISOR: Roger.

QUESTIONS BY BOARD PRESIDENT:

Q19. Any special maneuvering of the aircraft once the boom issues were identified? You said you left it on autopilot.

A19. Yeah. We left it on the autopilot, we got feedback from the boom that anytime we turned or descended, the boom was erratic again. So, we slowed to our min maneuvering

airspeed, we were very heavy that day because the fighters I think wanted 130,000 pounds or something like that, so our weight was like in the four hundreds, low fours. Uh, so we -- our min maneuver, I believe, was like 270 knots, somewhere in there. He said anytime we sped up it got worse, so we tried to slow down to reduce any aerodynamic forces over it. We kept turns to about 5 to 10 degrees of bank to -- we had to turn for vectors to get over to Mountain Home, so we tried to mitigate the forces there by turning very slowly. We did initiate a descent to try and get down, because we were very close to Mountain home, and I think we only made it 1500 feet into the descent before the boom told us he thought the boom was going to hit the airplane again. So, we leveled off, we still had to fuel dump quite a bit. And then tried to figure out a way to step it down, but by the time we were done fuel dumping, the boom had separated. We didn't step it down anymore.

Q20. Okay. Any changes in configuration prior to, you know, providing sequence but nothing on top?

A20. No.

Q21. So, the investigation board, we have reviewed a video that was taken by the flight engineer, of a segment of the boom back there. Are you aware of any other pictures or was there any other videos exists, aside from that that you are aware of?

A21. Not that I'm aware of.

Q22. Okay. Have you seen the boom act in this manner before, on any aircraft?

A22. I have not. I have never seen the boom do this.

Q23. Okay. Was the HF radio used at any time prior to -- prior to during pre-contact?

A23. No.

BOARD PRESIDENT: Those were my questions. We'll go around the table now. Any medical specifics, or…

QUESTIONS BY BOOM ADVISOR:

Q24. When you felt, I think you said 5 to 10 degrees, and then also you lost altitude? Or did you gain or lose altitude, you said 100 to 200 feet?

A24. We gained about 200 feet, and then we leveled -- the autopilot brought us back down, but the nose was doing like a sine wave kind of, it was just -- it was going up and down, and left to right. I don't -- almost like a figure 8, I guess, kind of thing.

Q25. Did you hear anything as far as audibly, even with your -- you know, one ear out, one headset ear on? Did you hear any banging noise, or anything of that nature?

A25. Uh, no we didn't hear any banging, just when the cable broke. We definitely heard the cable snap.

Q26. You actually heard the cable snap?

A26. Yes. Yes I felt it.

Q27. Could you describe the noise?

A27. It was more like a -- like a shudder of the airplane, I guess. I don't know if it was the actual cable, maybe, or it was just the airplane reacting to the cable. But, we felt it and definitely heard a noise from the tail of the airplane. I don't know how to necessarily describe it, sorry.

Q28. So, normally sitting up front, in the cockpit, if there is a hard contact in the back of the air refueling operator's position, you can feel that? Did you feel anything similar to that degree of impact, if you will, when the contact was made with the receiver, did you feel any of that at all? Just by comparison of -- just seat feeling as a pilot?

A28. Uh, when the cable snapped? Yeah, it was similar. I guess I could say it was similar to that.

Q29. And, when the boom was moving erratically based off of what the boom operator told you via the radio interphone, did you feel anything in that movement when he said it was

going 30 degrees from center, left to right, did you feel anything comparable to what you had felt the past?

A29. No.

QUESTIONS BY PILOT ADVISOR:

Q30. When exactly did you lose hydraulics?

A30. We had hydraulics -- so, while he was -- the boom operator was trying to figure out what was going on, we send the engineer back to assist him because he wasn't quite sure what checklists he needed to get into now because he had multiple issues. And, I think we also upfront didn't quite have the full SA -- situational awareness on what was going on. We felt it obviously, but the difference between what was happening and the definition of erratic kind of seemed -- we didn't think it was moving as abruptly as what he was saying, and then when he was trying to describe to us how it was still attached to the airplane, that was hard to conceptualize over an interphone. So, when the engineer went back to help him, I checked the panel to make sure that we still had hydraulics, and we did have hydraulics in system two at that time. We lost hydraulics very closely to when -- we lost hydraulics system two very closely to when the boom separated from the airplane. So, we had it for most of the time.

Q31. Okay. On the order of like 5 to 10 minutes, do you have any sort of time?

A31. Uh, yeah I think probably at least 10 to 15 minutes we probably had hydraulics still.

BOARD PRESIDENT: Any other questions? Okay

Are there any matters we've addressed so far that you wish to clarify?

WITNESS: No.

BOARD PRESIDENT: Are there any additional matters that we have not addressed that you think are important?

WITNESS: No.

BOARD PRESIDENT: Is there anything else that you wish to add to your testimony?

WITNESS: Not at this time

BOOM ADVISOR: I think I have one add-on question, sorry.

BOARD PRESIDENT: Okay. Sorry, the boom advisor has one more question.

QUESTIONS BY BOOM ADVISOR:

Q32. How many crewmembers were on the airplane at that point in time? And maybe it has been clarified, but you were getting your certification as a lead for large ship formation and there was an instructor pilot on board as well?

A32. Yes.

Q33. So, it was five crew members on board at the time?

A33. There was four total crew members. So, --

Q34. He was in the right seat acting as a --

A34. He was in the right seat and I was in the left seat. So the instructor pilot was in the right seat, I was in the left seat, and then we had an evaluator engineer, and a mission boom.

BOOM ADVISOR: Roger.

BOARD PRESIDENT: Captain [Mountain Home ADC], do you have any questions?

MOUNTAIN HOME ADC: No, sir.

BOARD PRESIDENT: That concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this accident investigation board prior to public release of the final report. Thank you for your time and cooperation, you are dismissed.

WITNESS: Thank you, sir.

VERBATIM TESTIMONY OF CAPTAIN MCP

My name is Colonel [BP]. We're investigating an accident involving a KC-10, tail number 83-0080 that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This Accident Investigation Board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you may have given before the Safety Investigation Board will kept confidential, if you were so advised, and can only be used for accident prevention purposes. This Board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public. Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes, sir.

BOARD PRESIDENT: Okay. I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent with this interview being recorded?

WITNESS: Yes, sir.

BOARD PRESIDENT: Your testimony in this investigation will be under oath, and at this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony that you are about to give in the matter now under investigation shall be the truth, the whole truth and nothing but the truth so help you God?

WITNESS: Yes, sir.

BOARD PRESIDENT: All right. Thank you. You can lower your hand.

Today's date is the 27th of January, 2017. The time now is 0803 local Pacific. This interview is being conducted in Building 31, Room 55 on Travis Air Force Base. The persons present are the witness, Captain [MCP], his area defense counsel Captain [Travis ADC], the legal advisor, the pilot advisor, the recorder and the boom advisor.

I'm Colonel [BP], the Board president. The witness has been sworn.

You previously gave 72-hour 14-day reports to the Safety Board. Do you wish to adopt that as part of this testimony?

WITNESS: How is it for you?

BOARD PRESIDENT: Well, I'm asking because you guys just had the conversation, and I was only half listening.

WITNESS: Yes, sir. That's fine. It's adopted, yes.

BOARD PRESIDENT: Okay. Thanks.

Q1: Please state your first and last name.

A1: [MCP].

Q2: What unit are you assigned to, and what's your duty title?

A2: 9th Air Refueling Squadron, Flight Commander Instructor, Aircraft Commander.

Q3: And are you willing to answer any questions today?

A3: No, sir.

BOARD PRESIDENT: So, that will conclude this interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this Accident Investigation Board prior to public release of the final report.

Thank you for your time and cooperation. You're dismissed.

VERBATIM TESTIMONY OF STAFF SERGEANT MFE

My name is Colonel [BP], we are investigating the accident involved being a KC-10, tail number 83-0080, that occurred 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for the purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the Safety Investigation Board will be kept confidential, if you were so advised, and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes.

PRESIDENT: I must inform you that the interview is being recorded and that you may not use your own recording device during the interview.

Do you consent to this interview being recorded?

WITNESS: Yes.

PRESIDENT: Your testimony in this investigation will be under oath, at this time, I will administer the oath, please raise your right hand:

PRESIDENT: Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, nothing but the truth, so help you God?

WITNESS: Yes.

PRESIDENT: Okay. Good, thanks, you can lower hand. Today's date is 23 January, the time now is 1303 local Pacific, this interview is being conducted in building 31, room 55, on Travis Air Force Base. The persons present are the witness, Technical Sergeant [MFE].

WITNESS: Staff Sergeant.

PRESIDENT: Staff Sergeant, all right, sorry, I tried to promote you. The legal advisor, the pilot advisor, the medical advisor, the maintenance advisor is not here, the engineering advisor, the recorder and the boom advisor. I am Colonel [BP], the Board President.

The witness has been sworn.

You previously made a 72 hour statement -- 72 hour report, to the medical advisor on the Safety Investigation Board, do you wish to adopt that is part of your sworn testimony today? That is the report that he was talking about.

WITNESS: Sure. If I don't, am I going to have to fill out a new one?

MEDICAL ADVISOR: It is not necessary.

WITNESS: Sure, why not?

PRESIDENT: Okay.

QUESTIONS BY BOARD PRESIDENT:

Q1. Please state your first and last name.

A1. [MFE].

Q2. What unit are you assigned to?

A2. The 9th Air Refueling Squadron.

Q3. What is your duty title?

A3. KC-10 Flight Engineer.

Q4. How long have you been a Flight Engineer?

A4. About seven years.

Q5. Okay. I will go through a series of questions regarding the mishap. These are not necessarily in order so they might jump around a little bit, and then just be aware that throughout this process if somebody thinks of something that they want to ask that sparks your response, or the question itself sparks something in them, they will just kind of jump in. Just please identify yourself as you do so.

Were you on the mishap aircraft on a sortie that flew on 1 November 2016?

A5. If that was the date, yes. I don't remember the date.

Q6. Okay. So that's the date that the boom mishap occurred?

A6. Yes.

Q7. Okay. You were the flight engineer and your primary focus would have been just primary flight engineer responsibilities?

A7. Yes.

Q8. Okay. During the incident with the boom, were you the individual that took the video?

A8. Um, yes.

Q9. There was a video taken that -- and we probably could have pulled that up. But, did you take a video that day?

A9. Yeah.

Q10. Okay. So we will assume that that is the same video that we have referenced in the files. Where did that video fit into the timeline of the sortie?

A10. Um, of the sortie, I can't remember. I know it was -- the video was take right -- um, I would say, about the time that the boom actually started to stabilize before it fell off the jet.

Q11. Okay. So, towards the end of the --

A11. The malfunction, before it fell off the jet.

Q12. -- Malfunction, okay.

QUESTIONS BY THE BOOM ADVISOR:

Q13. So, you say it fell off the jet, had it already separated? Or did it separate from the gimbal and hanging or was it still connected, but it had stabilized?

A13. It looks like it was separated from the gimbal, but it might've been connected by a couple of cables, maybe a hydraulic line or something like that. But, it looks like it was separated from the gimbal.

Q14. Alright. So, it separated but stable, but not connected to the airplane from what you could tell from your vantage point?

A14. Well, it was still connected --

Q15. But not by the gimbal itself. But just by the wires, or hoses --

A15. Yes, that is what I -- that is what it looked like.

Q16. Like some string basically?

A16. Yes, that's what it looked like.

Q17. Do you know, as far as you can remember or recall, was the flight control switch on or off when it had stabilized? If you can't remember, you can't remember.

A17. Yeah, honestly I don't know I wasn't looking at that, I want to say that it was on.

Q18. Any surface indication lights, like red lights, any amber lights, nothing, or was it all black, on the panel -- on his panel?

A18. I think there were lights. Yeah, and I remember him saying -- talking to the pilots that there were a bunch of lights and that he was running some checklists. There were some lights.

Q19. This is -- were you back there when the lights were on? Did you go back there and lights come on in that process? Or as go down there in the ARO and you look down, oh man the lights are on, this is crazy?

A19. No, I went down there and I remember seeing some lights. That was it.

Q20. All right.

QUESTIONS BY LEGAL ADVISOR:

Q21. This is the legal advisor, jumping in just to clarify, our boom advisor referenced the ARO. What is that position on the aircraft?

A21. Air Refueling Operator. It's where the boom operator controls the boom, it's his station on the airplane.

Q22. All right. So you went from the front of the aircraft.

A22. The flight deck to the ARO, yeah.

QUESTIONS BY ENGINEERING ADVISOR:

Q23. When you said that the -- separated from the gimbal, the gimbal was still attached to the boom, but the gimbal separated from the aircraft, correct?

A23. I don't know if it had separated -- I don't know if it was still attached to the aircraft, or if it was attached to the boom, or if it had separated. I couldn't see it that good enough.

Q24. Okay.

A24. I just knew that it was still attached to the plane from some lines it looked like.

QUESTIONS BY BOARD PRESIDENT:

Q25. But not physically, beyond those lines?

A25. It was an inside -- it didn't look like it was inside the gimbal.

Q26. Okay. Are you aware when the boom separated from the aircraft, um, prior to that did anybody indicate anything else coming off aircraft?

A26. No.

Q27. Okay. What were your immediate actions after you heard the boom was acting erratically?

A27. Um, I can't remember exactly. Like, I was just -- I wasn't exactly sure what the boom operator meant by that. Um, so the pilots asked me to go back and take a look at it, and so I went down there and it look like it was just uncontrollable. It was flying all over the place, and making these loud banging sounds. I thought it was actually hitting the side of the empennage, but it wasn't because after we landed I did my inspection and there wasn't any damage to the side of the plane. But, it was just making these really loud banging sounds each time it was swing left to right.

Q28. Okay. When you first arrived at the ARO, which was previously identified, what did you first see?

A28. Well I looked out the sighting window and I saw the boom just flying left and right uncontrollably and there were a couple of lights on the boom operator's panel. He had some checklists open and he was talking to the pilots.

QUESTIONS BY BOOM ADVISOR:

Q29. This is the boom advisor real quick. Do you remember was it visible through the window as far as elevation, or was it up, as when you depicted it in the video that was referenced earlier?

A29. No, it was making this U, this swinging shape like this, so it was coming into the window in going out like this. On either side of the plane, just going left and right. Making a U-shape.

QUESTIONS BY LEGAL ADVISOR:

And this is the legal advisor, just to clarify, the witness was using his right hand sort of swinging it up and down to form a shape of a U.

QUESTIONS BY BOARD PRESIDENT:

Q30. Other than the video, are you aware of any other pictures of the boom action that might be out there?

A30. No.

Q31. During the flight?

A31. No, not during the flight. Just stuff that that farmer posted on Facebook.

QUESTIONS BY ENGINEERING ADVISOR:

Q32. This is the engineering advisor. When you went down there, did you and the boom operator discuss about what he saw happen?

A33. Um, not really. I mean, we were talking about what was going on, what the boom was doing, if that's what you mean. Like what happened before?

Q34. Correct. What -- did he say anything to you that once you put the -- once the boom started to go down after the -- to lower the boom, did he start to hear any breaking, did he allude to -- how did things begin to go bad?

A34. If I remember correctly, I think, he said that it came down normally, and then it just started swinging. It just became uncontrollable. So, came down normally and then it just got out of control.

QUESTIONS BY LEGAL ADVISOR:

Q35. This is the legal advisor, as a follow-up. When he said it just became uncontrollable, was he attempting to make any inputs, as far as controlling the boom, or prior to him ever making any stick inputs did it just start acting erratically?

A35. Yes. And I think both. I think it just started acting erratically before he made any inputs. And I'm not sure if you is trying to control it or not. I wasn't looking at his hand position. I am assuming he was trying to control it because he said he didn't have any control over the boom.

Q36. Okay. But it sounds like -- where you -- do you know if he, you know, first noticed it acting erratically when he started making inputs, or was before that time?

A36. I don't know, I can't say for sure.

LA: Okay. Thank you.

QUESTIONS BY ENGINEERING ADVISOR:

Q37. Was he making -- trying to make inputs while you were down there?

A37. I'm not sure. I want to assume that he was, because you would think that somebody would do that to try to get control of the boom. I am assuming he was trying to get control of it.

Q38. From the boom video that you took, I don't recall -- I don't know if you remember what you took, but was it free flying like that the whole time you were down there?

A38. Like just swinging?

Q39. Yeah.

A39. Yes. Until towards the end of the video when it started to stabilize.

Q40. In the airstream?

A40. Right.

QUESTIONS BY BOOM ADVISOR:

Q41. So, you started out with a U shape movement when you first go down to the air refueling operators position, then in the video it goes up to a higher elevation point?

A41. Right, and then it becomes stable.

Q42. What -- do you know how long it was doing this comparable -- I know time and space can be hard at that point. So you go back there and it's making this U shape, and then it somehow transitions from a U shape to being up at a higher elevation point, degree wise off the airplane, do you know -- do you -- do you recall what happened in between being down and doing a U to being up in that format?

A42. The time?

Q42. The time or what actually transpired between those two. Because in the video its up and high, but before that it was down and low just doing the U. It went from low to left and right to the boom being all the way up and being unstable and swinging back and forth in a smaller area of movement, if you will. Does that make sense?

A43. Kind of.

Q44. So, it was low making a U.

A44. In the beginning it was low? Or…

Q45. Yeah, when you saw it, when you let down there it was low making the U-shaped, but in the video it was high, it's not making any kind of U-shaped. It's high.

A45. Towards the end of the video it was higher and stabilized.

Q46. Okay.

A46. But in the beginning it was making that U-shaped, swinging left and right.

QUESTIONS BY ENGINEERING ADVISOR:

Q47. But your -- this is engineering advisor, your video didn't capture the U movements that you are talking about.

A47. Oh, it didn't?

Q48. Unless -- do you have another video?

A48. No. Just that one.

QUESTIONS BY BOOM ADVISOR:

Q49. Does the video that you have, you know, tape the U shape that you are speaking of? Did you record the U-shape as far as you remember?

A49. Um, I think I got like the last part of the U-shaped and then it became stabilized.

QUESTIONS BY ENGINEERING ADVISOR:

Q50. And that was all -- this is engineering advisor -- the video that we saw is all from the mirrors, that you are taking, and you noted earlier that when you went down there you saw that the boom was going into the boom window and then going -- and then disappearing. So, --

A50. Right.

Q51. -- that would indicate much exaggerated U-shaped, uncontrollable movement that the boom was doing.

A51. Okay, maybe I'm just telling you like, what I -- what I was seeing in the window compared to what was actually captured in the video.

QUESTIONS BY LEGAL ADVISOR:

Q52. This is a quick question from the legal advisor, that video that you took, did you captured on a cell phone, or how did you?

A52. Yes, my phone.

Q52. Do you still have that?

A52. Not now.

QUESTIONS BY MEDICAL ADVISOR:

Q53. This is a medical advisor, at any point during the mishap incident, did you make suggestion to the mishap boom operator as to how to, or to like, mitigate what was going on with the boom? Did you make any verbal suggestions?

A53. Yes. I told him to bring -- when I first went down there and I saw what it was doing, if I remember correctly, I'm not saying I said this or not, if I remember correctly I told him to bring the boom back up -- or bring the boom up.

Q54. How so?

A54. What's that?

Q55. How so?

A55. What do you mean, how so?

Q56. How would he have operated the boom back up?

A56. Oh, um, I'm not sure. Maybe I said, can you bring the boom back up, or bring the boom back up.

Q57. For the record, I am referencing the, I guess transcript recording, because I have -- I'm just try to get the timeline straight. At 16:41 the mishap boom states "so right now the flight controls are on and I have the dual rudder fail, the elevator fail. I could turn it off." After that statement, did you advised him to turn the flight control switch on, or off, or -- was that -- as he was going through his checklist, did he come to that on his own conclusion or did you make that suggestion to either turn it on or off?

A57. Let's see. I don't -- I can't remember whether or not I told him to turn on or off.

LEGAL ADVISOR: This is the legal advisor. What page did you just read off of?

MEDICAL ADVISOR: Oh sorry, that is, uh, N as in November, 12.

LEGAL ADVISOR: If it would refresh the witnesses memory, we can let him reference that.

MEDICAL ADVISOR: Oh sure.

QUESTIONS BY MEDICAL ADVISOR:

Q58. I guess what I'm getting to is that, so at 16:41 the mishap boom makes the statement, and then it's at 19:16 on page November 14, where the mishap boom operator states -- excuse me, if the mishap flight engineer wants me to turn the flight control switch back on, it's off right now. It's kind of settled down. Did you make that suggestion to turn it off, because what I'm inferring is that in the time that he makes the radio call to the pilot, the control seems to be on. During his checklist, did he turn it off, and then at this point did you suggest maybe to turn it back on to fly it back up to stow?

A58. I might have. I honestly don't remember.

QUESTIONS BY ENGINEERING ADVISOR:

Q59. In reference to your -- the video that you took, when you stopped recording, was that because you were being called back up to the front of the aircraft?

A59. Um-hm, yes.

QUESTIONS BY BOARD PRESIDENT:

Q60. Have you ever seen a boom act in this manner before?

A60. No.

Q61. Do you know if there HF radio was used at any time during pre-contact?

A61. No, we didn't need the HFs on that flight.

Q62. Do you recall how the boom reacted as the aircraft turned, descended, slowed down, etc., as you are heading back towards Boise, and if so where those reactions consistent or would it react differently at different times?

A62. Um, what I was in the flight deck at that time so I wouldn't have been able to see what the boom was doing.

QUESTIONS BY ENGINEERING ADVISOR:

Q63. When you saw it -- when you saw the U-shaped movement of the boom, until it was starting to level off, do you recall what the aircraft was doing at the time? Was it coming from a turn, or was it in a turn?

A63. I don't recall.

QUESTIONS BY BOOM ADVISOR:

Q64. Do you remember the transition from -- or did you visually see the transition from when the gimbal and the boom were attached to it actually detaching only being held as was referenced earlier by some lines? Did you actually witness that? The detached point or the point when it did detach?

A64. Yeah, I think I did witness.

Q65. Would you mind describing that to the best of your ability?

A65. Um, sure. It looked like the boom when it first started making that U-shaped it look like it was still attached to the gimbal, the gimbal was still attached to the plane. And, after a couple of cycles, of it just making that big U-shaped left and right and it just like ripped itself from the gimbal.

Q66. And then it was a trail as was depicted in your video?

A66. Yeah.

Q67. Would you uh -- if you could think of a time, would it be about a minute, 30 seconds, quicker than that?

A67. Honestly, I don't know. I would say maybe a couple of minutes. Yeah, it's hard to gauge the time when something like that is happening.

Q68. Definitely, definitely.

QUESTIONS BY BOARD PRESIDENT:

Q69. All right. Do you know -- do you remember who on the crew checked the maintenance forms before departure?

A69. I did and I'm pretty sure one or both of the pilots did.

Q70. Was anybody on the flight crew aware of any boom issues before departure?

A70. Um…

Q71. Any write-ups in the forms or…

A71. If I remember correctly, I want to say that there was a previous write-up in the forms, but I'm not sure if I'm getting that confused with, um, after the fact somebody said that they flew the same jet and that they had previous boom issues. So I'm not sure if I'm confusing those two. I don't know if there was that write-up, that previous write-up with the boom issue having been in there. I can't remember whether or not it was.

Q72. Okay. Did any of the maintenance team, to your knowledge, inform the crew of any issues with the boom prior to departure?

A72. No

QUESTIONS BY ENGINEERING ADVISOR:

Q73. Is that a no that they didn't or no that you don't recall?

A73. No, they didn't inform the crew about any boom issues.

BOARD PRESIDENT: any additional questions?

QUESTIONS BY PILOT ADVISOR:

Q74. What was the demeanor of the boom operator whenever you went down to his station? Was he kind of freaking out, or was he trying to -- trying to fight it, how was he acting?

A74. Um, he looked really worried, and he was just in his checklists, looking through his training checklists. He just looked really worried.

QUESTIONS BY LEGAL ADVISOR:

Q75. I know we talked about that point in the transcript where there is some discussion, turn the flight controls on or off. At any time before that, did you see the boom operator turn the flight controls off or on, or make any change to, you know, them being activated?

A75. Um, I'm not -- I can't recall, to be honest. And, I'm not sure if his -- if one of the checklists that he was running drove him to turn it on or off. But, yeah, I can't recall whether or not he did or not.

Q76. The other thing is you mentioned at the beginning of the interview that you heard, it sounded like some banging noises --

A76. Right.

Q77. -- That you thought was the boom impacting the aircraft.

A77. Right.

Q78. Um, did those banging noise correspond -- like with the boom be in any sort of position, or…

A78. Yes. Like whenever it swung left and then right, every time it swung left and right it would make this banging sound.

Q79. Okay, so --

A79. I thought it was hitting the empennage, like the side of the plane.

Q80. So, when it swung like far-off to the side, however far it would go, at the extreme sides is where you were hearing these bangs?

A80. Yes. But, it would also go up, when just go left and right it would like go up.

QUESTIONS BY BOOM ADVISOR:

Q81. Do you remember how far up -- just looking out the window, was at the height of the window when you saw it, like out visual --

A81. It would go out of view.

Q82. Out of view?

A82. It went out of view, yes.

Q83. So, just -- if I'm looking back out of the window --

A83. I would it would go as far up as possible, [inaudible] exceeding the limits.

QUESTIONS BY ENGINEERING ADVISOR:

Q84. And that was going on when you were back there?

A84. When I first went down there, yes.

QUESTIONS BY LEGAL ADVISOR:

Q85. Kind of looping back to those questions, about how many of those bangs did you hear? If you can recall.

A85. I can't recall, honestly.

Q86. Can you give me a rough estimate of how many times it swung wildly like that back and forth?

A86. Uh, maybe eight or ten times.

QUESTIONS BY BOARD PRESIDENT:

Q87. Could you hear those bangs from the flight deck?

A87. Yes, I think so.

Q88. Okay. So, do you know from the time he called its acting up, and/or you heard those bangs, to the time you got back there, do you have it estimate of how much time that would have been?

A88. From the time I left the flight deck to go to the ARO?

Q89. Well, from the time you heard those bangs -- when he was saying hey I got an issue, or whatever he said, I assume you are hearing some bangs early on after he identified it?

A90. The uh, um --

Q91. To the time you finally went back there when the pilot said why don't you go back there?

A91. Um, I can't remember it was -- it was probably really -- like maybe a minute.

Q92. Oh, so it was pretty quick? Okay.

A93. Yeah. I mean, the plane was oscillating a little bit, it was moving around abnormally and, I mean, we were all worried about it because the boom never does that, it never makes the plane move in such way, so the pilots asked me to go back there in look at it.

QUESTIONS BY BOOM ADVISOR:

Q94. Before you left your panel, did you have any lights as far as adjoining lights concerning as far as hydraulic pressure loss, or anything of that nature?

A94. Not --

Q95. From system two, or anything -- hydraulic system two on the airplane. You had no lights on your actual flight engineer's panel, upper or lower, any amber lights?

A96. No. Everything was normal, I'm sure the pilots told you about the number two system we lost fluid in there.

Q97. When you lost fluid in system two -- hydraulic system two and the two reversible motor pump picked up, I would assume. Or…

A97. Well, it's supposed to, I'm not sure if it did or not.

Q98. Because you were in the back? When you lost pressure in quantity, at that point was that due to the separation from the airplane, when they separated, as far as you can remember and recollect.

A98. I think that's what happened. Because before I went back there, everything was normal on my panel. Then when I came back, the pilot, [MP], said he looked at my hydraulic panel and everything was normal, but then after I came back up to the flight deck the number two system didn't have any pressure or fluid. And, I assume that was because the boom just ripped itself from the gimbal and severed a hydraulic line or something. That is why we lost the fluid in that system. But, there is a backup reservoir that is supposed to provide backup fluid.

Q99. The accumulator? What the accumulator gives you a little bit of --

A99. No, not the accumulator, there is a separate reservoir in the center landing gear wheel well.

Q100. Oh yeah, yeah, yeah. Did you notice any spikes in your hydraulic system and it may not be something that you looked at on your gauges, but any spikes in system two while --

A100. Pressure?

Q101. Yeah pressure spikes as the boom was swaying back and forth?

A101. I don't recall. I don't think so.

QUESTIONS BY LEGAL ADVISOR:

Q102. This is the legal advisor, I did have a question, were you able to see what the – basically what the control surfaces were doing as the boom was swinging?

A102. On the boom?

Q103. Yeah.

A103. No.

Q104. Just to cover bases, I mean, was there any extreme weather, or anything like that that you are flying through at the time?

A104. Nope, there wasn't.

QUESTIONS BY ENGINEERING ADVISOR:

Q105. Did the boom operator or yourself take any pictures other than the video that you took?

A105. No, just the video. And actually, I took some pictures after we landed of what the back look like, the gimbal and stuff like that.

Q106. Do you have those pictures?

A106. Um, not -- not now.

QUESTIONS BY BOARD PRESIDENT:

Q107. Did you give them to the safety board?

A107. Honestly, I can't remember. I know they have the video, but I don't think I gave them the pictures. But, they took pictures. Their safety -- Safety took pictures of what it looked like after we landed.

QUESTIONS BY BOOM ADVISOR:

Q108. Were you guys at flight level 240, 24,000 feet or …

A108. See, I don't remember. I think it was somewhere around mid twenties. 24 maybe, 25, that the normal altitude that we usually refuel at. Somewhere around there.

QUESTIONS BY BOARD PRESIDENT:

Any more questions?

QUESTIONS BY ENGINEERING ADVISOR:

Q109. So just to -- just to be clear, when you went down there, you believe that the boom was -- boom, gimbal was still attached to the aircraft?

A109. I think so, yes.

Q110. And, you witnessed it separate to where it was just being trailed, hung by hydraulic lines or something?

A110. Right. Yes, I think that is what happened.

LEGAL ADVISOR: If there are no other questions, Sir, I think before we close, would you like to give him a brief opportunity to try and review Tab N, and just see if there is anything else that he wants to add before we end?

BOARD PRESIDENT: Sure.

LEGAL ADVISOR: Are there any other questions from any other advisors. All right. So at this time, let's go ahead and just take a brief break.

LEGAL ADVISOR: After a brief break, all parties who were present before the break are again present. The witness had an opportunity to review the cockpit voice recorder transcript which is in Tab N, as well as a video that was referenced earlier in the interview. That will be placed into the tabs later on [Tab Z]. So at this time, we will just pick up and proceed with the final few questions.

QUESTIONS BY BOARD PRESIDENT:

Q111. All right. Are there any matters that we have address so for that you wish to clarify?

A111. No.

Q112. Are there any additional matters we have not addressed that you think are important for investigation?

A112. No.

Q113. Is anything else you wish to add to your testimony?

A113. No.

BOARD PRESIDENT: That concludes the interview. You are reminded of the official nature of this investigation, that you are not to discuss your testimony with anyone outside of this accident investigation board prior to public release of the final report. Thank you for your time and cooperation, you are dismissed. Thank you very much.

VERBATIM TESTIMONY OF SENIOR AIRMAN MB

My name is Colonel [BP], we are investigating the accident involving a KC-10, tail number 83-0080, that occurred 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the Safety Investigation Board will be kept confidential if you were so advised, and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the Safety Board and this Accident Board?

MB: Yes, sir.

BOARD PRESIDENT: I must inform you that the interview is being recorded and that you may not use your own recording device during the interview.

Do you consent to this interview being recorded?

MB: Yes, sir.

BOARD PRESIDENT: Your testimony in this investigation will be under oath, at this time, I will administer the oath, please raise your right hand:

BOARD PRESIDENT: Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, nothing but the truth, so help you God?

MB: I do.

BOARD PRESIDENT: Okay. Thank you. Today's date is 23 January 2017, the time now is 1746 local Pacific, this interview is being conducted in building 31, room 77, on Travis Air Force Base. The persons present are the witness, via telephone, Senior Airman [MB], the legal advisor, the pilot advisor, the boom advisor, the medical advisor, the maintenance advisor, the engineering advisor, the weather advisor, and the recorder. I am Colonel [BP], the Board President.

The witness has been sworn.

You previously provided an unprivileged personal history to the Safety Board. That was your 72 hour report, do you wish to adopt that is part of your sworn testimony today?

MB: Yes, that is fine.

BOARD PRESIDENT: Okay.

QUESTIONS BY BOARD PRESIDENT:

Q1. Please state your first and last name.

A1. [MB].

Q2. What unit are you assigned to?

A2. The 9th Air Refueling Squadron.

Q3. What is your duty title?

A3. In Flight Refueler.

Q4. Okay. Thank you. So, just confirm for me, that you were the Boom Operator on KC-10, tail number 83-0080, on a mission on the first of November 2016?

A4. Yes, sir.

Q5. Okay. Personally, did you have any medical concerns prior to the incident that you feel are pertinent to our investigation at this time?

A5. No, sir.

Q6. Okay. Were you on any prior flights on this aircraft that you recall?

A6. No, sir.

Q7. Okay. Prior to this sortie, were you aware of any boom control issues on this aircraft?

A7. No, sir. I was not.

Q8. Did you personally review any maintenance forms prior to the mishap sortie?

A8. Yes, sir. I did.

Q9. During the review of those forms, you did not -- you did not see any write-ups or any prior boom write-ups when you reviewed them?

A9. That is correct, Sir, I did not.

Q10. Okay. Did any maintenance personnel discuss or inform you of any issues with the boom on this aircraft prior to this sortie?

A10. No, sir.

Q11. Did you perform any boom preflight checks?

A11. Yes, sir. I did.

Q12. Okay. Did these checks indicate any abnormal readings or abnormal system operation?

A12. No, sir, they did not.

Q13. Okay. All right. We will fast-forward to the actual flight now. And, if you could just describe to me as you were preparing pre-contact, just kind of go through the -- what you were doing in the back, how the boom responded, and then we will likely open up for some questions from the rest of the board members. But, go ahead.

A13. Yes, sir. So, five minutes prior to fighters joining on us, I went to the back to run my prep for contact checklist. And, I guess I can skip forward to step 19, in between steps 19 and 20 which are lower the boom and then perform, and then perform a boom flight control check. I had lowered the boom with no indications of anything. It was pretty much centered zero and 30 degrees elevation. And then before I was able to extend the boom 12 feet to trim it and then perform a boom flight control check, the boom took off on its own to the aircraft's right, beyond 30 degrees very rapidly. Um, the -- uh, it just went so quick. It just happened so fast, the movement of the boom was probably what seemed like faster that you could fly it physically with the flight control stick, but it didn't stop. It just went to beyond the full 30 degrees right, and then shot back to the full beyond 30 degrees left, and continued this repeatedly nonstop very rapidly. Like I said, the needle -- the indication roll gauge was -- the needle was just like a -- it was like a blur. It was just bouncing off either end of the instrument. And then, initially after it started to do this, I tried to take control with the flight control stick, and fly the boom to prevent it from what seemed like it was striking the aircraft. And, nothing, like nothing seemed to work as far as the input to the flight control stick. And then the boom hoist cable snapped shortly after that, and then it seemed to get more violent, I guess, without the boom hoist cable attached. And then, it just kept doing this motion to the left and right degrees beyond 30. And it was more like a U-shaped motion so when it would come towards the center zero degrees, it was around 30 degrees, but when it would fly up it would fly towards, maybe 20 degrees or so when it was full left or right. So, it was like a giant U-shaped swing, I guess you -- you could describe it as.

Um, so this caused the boom hoist cable to snap. At this time, I'm letting my crew know that the boom is uncontrollable and flying, I use the word crazy, the boom is acting crazy. And then when the boom hoist cable snapped, I notified the crew that the boom hoist

cable snapped and then they were asking me if I could raise the boom somehow. I told them it was not possible with the boom not being in control.

A13 (cont). And then, shortly after that, the shroud for the gimbal, started to break apart, crack I guess you could say. It hadn't actually departed from the aircraft yet. And then, after that the -- I guess the gimbal was breaking at this point when the shroud was cracking, and then, um, like I said, the gimbal dislodged from its joint on the aircraft. And it didn't necessarily stop moving until the dual rudder fail and elevator fail lights came on, it kind of slowed down but it didn't, like I said that didn't stop moving.

At this point, I was, turned the flight control switch off and it, I guess the gimbal had come undone, so it was kind of just free-floating behind us attached by the, what I couldn't see at the time, but after it actually departed the aircraft, it turned out to be the hydraulic line and other electrical lines that run to the boom itself. Um, so it's kind of just trailing behind the aircraft, and it really at this point, it just out of my control. It's kind of just hanging behind the aircraft flying behind us. Just more like dragging -- I mean, dragging behind us.

And then after a while the, uh, main hydro light came on, and then I confirmed with the FE, and he said yes he issuing the same up front. Then I asked him if he wanted me to kill hydro and he confirmed yes. Then I killed the hydraulics. And, the boom is still just floating behind us attached by the hydro line.

And after a while the boom -- after the hydro light came on and I -- I'm sorry, after the hydro light came on when the boom telescope extended to full 21, or uh, like full extension. And, it's not what caused the boom to depart from the aircraft, but after I guess, the hydro pressure released the telescope and it extended all the way, is when the line severed I guess, and the boom departed the aircraft at that point.

Q14. Okay. Thank you very much for that. I'm going to ask you a couple of questions and then I will open it up here. During the, as you described the U-shaped movements left to

right of the boom, what were your -- what were your actions on the stick during that -- what were your -- were you trying to correct it using the stick?

A14. Yes, sir. Absolutely. So, when I took control of the flight control stick, I was trying to input opposite inputs that the boom was doing itself. But, it didn't -- like it was so fast that it wasn't -- it wasn't doing anything as far as like slowing it down or controlling it at all.

Q15. Okay. How about up and down? Did you attempt to raise or lower it during these U-shaped?

A15. With the flight control stick, no, sir. Like it -- um, I really -- really it was the left and right motion more than anything, even though was moving in elevation up and down, it was, I would say, more violent left and right movements. When it would get down, I wasn't looking at the gauge per say, but I wouldn't say that it was -- it was not -- it did not look to be lower than 40 degrees elevation when it would dip down. It just -- when it came to the center, it would, I would say, it was only a little bit more than 30 degrees. It looked pretty normal, I guess in the center for the short period of time that it was there.

Q16. Okay. How much travel time between left and right? How much -- how quickly do you estimate that was happening? Full left, full right?

A16. Yes, sir. It was less than half a second. Um, when I looked at the um, roll gauge, the needle was just dumping so quickly back and forth between the left and right movement. It was, honestly shorter than the less than half a second.

Q17. Okay. And then during these U-shaped movements, there were no fault lights indicated on your system, is that correct?

A17. No, Sir -- Yes, sir. That is correct. No fault lights came on at all during this movement.

Q18. Okay. And then the last question I'll have, is when was -- well I guess two-part question. When was the first time you turn the flight controls off?

A18. When I got the -- when I got the dual rudder fail and elevator fail is when I turned the flight control switch off.

Q19. Okay. Is that the only time that you turned it off, or did you turn it off, turn it on, turn it off any other point after that?

A19. No, sir. Um, at that -- after that point my -- they sent my flight engineer back to take a look at was happening and he asked me if to turn it back on, but I didn't feel comfortable as far as like turning it back on at that point just because of what it had been doing before. Um, so I didn't turn it off and turn it on, I just turned it off and left it off.

Q20. Okay. And then one more question. Let's go back to the beginning of when you started to lower it. So, it lowered normally down to normal elevation, zero zero thirty, and then started --

A20. Yes, yes, sir. So, when I lowered the boom it was -- you can get very -- it's pretty easy to eyeball when it's not at 0 and 30 just without looking at the gauges, you know what it looks like because you are center of the aircraft. And, so before I even -- before I was able to put it extend pressure on the telescope an extended 12 feet, it just took off to the right of the aircraft before I even extending it at all.

BOARD PRESIDENT: Okay. Thank you. I am going to open it up now for anybody.

QUESTIONS BY BOOM ADVISOR:

Q21. Airman [MB], this is Boom Advisor. So, how did the stick feel in your hand when you brought it down to 0 and 30? Did you put any trim and it when you first did that? Kind of a two-part question. Did you put any trim in when it first came down to zero and 30, or did it come all the way down to zero and 30 no problem, you didn't need to any trim?

A21. Right. So, I, before I even -- uh, I didn't even get to put any trim in. It came down like pretty -- it came down normal and looked to be zero and 30. And that I was going to extend

to the 12 feet and then put the -- and then trim the boom, but extending it and trimming it didn't even happen. It just took off.

Q22. Now, when you say it took off, it started swinging to the right side, boom operator's right -- boom operator's left, aircraft's right. When it that direction -- you know in a BOT they give you a stick failure, they do a hard rollover and the boom slaps your hand?

A22. Right. It did not, Sir.

Q23. You didn't. So it basically, it stayed center in your hand and no movement when the boom was flying back-and-forth?

A23. That is correct, Sir. Yes, sir. So, the stick was not moving on its own, just the boom was. So the flight control stick did not hit my hand, or put pressure against my leg, or anything like that. It was just completely normal.

QUESTIONS BY LEGAL ADVISOR:

Q24. Airman [MB], this is the legal advisor. Just a follow-up to that last question. I think Sergeant [boom advisor] referred to a BOT, is that just basically the boom operator trainer, or a simulator?

A24. That is correct, Sir. A boom operator trainer, or the BOT.

LEGAL ADVISOR: thanks. I just wanted to clarify that, I appreciate it.

WITNESS: Yes, sir.

QUESTIONS BY ENGINEERING ADVISOR:

Q25. Um, what -- if you had no feel in the stick, or no command of the stick, do you know why you waited so long to turn the flight control switch off?

A25. Uh, why I waited so long?

Q26. Yes.

A26. I just didn't have any malfunction indication. Like, the stick wasn't dead, and so it still had like the -- it's normal , I guess, feedback pressure. Uh, so like when I was trying to put

the opposite input into the stick, it just seemed like I wasn't able to keep up with actually making an impact as far as affecting the movement of the boom itself.

Q27. Correct, but when you noticed it rapidly moved to one side, and it was not following your commands, would you not have considered that an erratic boom movement, and just turned the flight control switch off than in there so that it doesn't cause any more damage?

A27. Uh, no, I would -- like I have never seen anything -- I have never seen anything like this since I've been doing this. And, uh --

Q28. So -- right, and -- and that is understandable. Do you know -- so the only time you would try to turn the flight control switch on is if only you were -- you got a fail light of some sort that illuminated?

A28. Yes, sir. Like a flight control malfunction.

Q29. Right. So you were just waiting for that, for something to come on to tell you that this is unresponsive, therefore turn off flight control switch?

A29. Um, not necessarily waiting for it, but while I was -- like while this was happening, like so quickly when the boom hoist cable snapped, it kind of sent me down, like broken boom hoist cable checklists, even though that wasn't like, um, the immediate -- the immediate factor. And that is why the following, I guess actions that I performed was turning the flight control switch off.

QUESTIONS BY MAINTENANCE ADVISOR:

Q30. Did you happen to notice what the rudders were doing while it was flying back and forth? I mean, where the rudders ever coinciding with your stick movement?

A30. No, sir. it was very hard to -- like I tried looking, I guess, at that, like the rudders, but it didn't seem like, uh, very noticeable as far as like the inputs from the flight control switch -- or stick, and what the boom was like actually doing. Like it didn't -- it was kind of hard to notice, to be honest, just because of the speed that the boom was flying.

Q31. Did you ever -- did that stick ever go limp, even after, you know, you turned the flight control off, did it lay down at all, or did it -- did it ever go where there was no feeling on it at all?

A31. No, sir. It never went limp at all.

QUESTIONS BY BOOM ADVISOR:

Q32. How long, in your recollection, from lowering the boom to getting a dual rudder failure, do you think that was?

A32. Um, really I have no idea. Uh, like I said, the boom taking off and then the boom hoist cable breaking, and then the dual rudder fail with the elevator fail lights coming on, um, if I had to guess, it would be a couple of minutes.

Q33. Also, a secondary question with that, when the lights came on had the -- had the boom and the gimbal separated from the airplane and being held, as you said earlier, by electronic -- electrical as well as hydraulic lines, did those seem to coincide with you from what you remember? Such as, when they separated did the lights come on, you got the wooper, that the audible tone in your headset, or did those things happen and then you got a separation being held on by the hydraulic line and electrical system?

A33. No, sir. I don't recall ever getting a wooper in the headset. When the dual rudder fail in the elevator fail lights came on the lights just came on and then I turned the flight control switch off.

Q34. Okay. So I just want to make sure, you got no audible tone as you would normally get with the rudder failure, or elevator failure, or telescope failure, you just got the lights by themselves, without --

A34. Yes, sir.

Q35. -- Without an adjoining audible tone?

A35. Yes, sir. There was no audible tone with the boom flight control malfunctions that were being displayed by the lights, sir.

QUESTIONS BY BOARD PRESIDENT:

Q36. We'll go backwards a little bit. When it was rapidly moving left right in that you shape, did you hear it contacting the aircraft? Or was it making a contact sound as it went back and forth?

A36. Uh, yes, sir. It -- from what it sounded like, it was striking the aircraft. And, I guess, like I didn't notice from being in the back, but probably at the same time, or not directly after that I -- the pilots upfront were asking me like what was happening because they, I guess, later told me that the, like, nose of the aircraft was pitching due to the -- due to the boom movement.

Q37. Okay.

BOARD PRESIDENT: Do you have a question? Any more questions? Give us just a second here. Go ahead legal advisor.

A37. Yes, sir.

QUESTIONS BY LEGAL ADVISOR:

Q38. Yeah. Airman [MB], this is the legal advisor, so I wanted to focus on when you actually brought the boom to that lowered position. You said it was centered and about 30 degrees down.

A38. Yes, sir.

Q39. Did you do any control inputs, press any buttons, do anything before the boom just took off?

A39. No, sir. I did not. Um, when you lower the boom, you just need to guard that flight control stick, not actually put any inputs into the flight control stick. Um, the flight control stick

was guarded, but I did not put any inputs into the flight control stick after -- or during the boom being lowered.

Q40. Okay. And when you say you are guarding the flight control stick, as that just sort of having your hand hovering nearby it, but not pressing it in any direction?

A40. Correct. Basically just having your hand around the flight control stick, but not giving it any pressure in any direction.

Q41. But -- so once it got to that roughly 30 degrees down position, that is when the boom just, without you changing any kind of, um, I guess, configuration, the boom just began that rapid movement you described to the aircraft's right?

A41. Yes, correct. So, like I said, like I said, I guess it's multiple steps when lowering the boom and then part of the next step after lowering the boom is the flight control check which is where you will fly the boom to its max roll limits, and elevation limit to make sure that it is flying properly, but that was never, um, that was never done just because before I even got the chance to extend the boom and put trim into it to possibly correct, um, anything it just took off on its own.

LEGAL ADVISOR: All right. Thank you.

QUESTIONS BY ENGINEER ADVISOR:

Q42. Once it kicked to the aircraft right, did it immediately start the U-shape pendulum effect going left to right, left to right?

A42. Yes, sir. That is correct. So, once it went -- when it went to the, uh, aircraft right the first time it did -- it did half of that U-shape, so it flew up and beyond the 30 degrees to the right, and then just came back down toward the center, zero, and then flew back up to the aircraft's left.

QUESTIONS BY MAINTENANCE ADVISOR:

Q43. How fast did you touch the stick after you saw it shooting out to the aircraft's right?

A43. So -- I mean there was a -- it was immediate before it even came back to go to the right, I mean I was already trying to put input into the flight control stick, uh, to get it back to center, but it was already going to center on its own.

QUESTIONS BY ENGINEERING ADVISOR:

Q44. When you tried -- when you tried to correct, did you um, slap the stick all the way right, or did you try go -- or did you move the stick a little bit? Um, would you say you went full travel right?

A44. Um, when it went to the --

Q45. Yeah, when it went to your left, Boomer left, which is aircraft right --

A45. Yes.

Q46. -- To try to correct it, bring it back, did you go full Boomer right, aircraft left, to try to bring it back?

A46. No -- no I did not.

Q47. And, what about when it went full air -- full Boomer right, aircraft left, what did you try to do? Did you try to go full left to bring it back?

A47. Yeah. So, at that point, yes, I was trying to get it to come back and, um, to be honest, with the gauge corresponding with what like the boom was doing, I can't tell you if I tried to like give it max left or right, but I was trying to give it opposite inputs.

QUESTIONS BY PILOT ADVISOR:

Q48. When the boom was oscillating back and forth, did it slow down toward the top of the travel, or did it just slam straight in, and then have a constant speed all the way through the rest of the arch on the other -- opposite side?

A48. So, when you say slam, do you mean like hit the aircraft to stop it, and then come back?

Q49. Yes. Or was there any time for the boom to slow down at all, or was it full speed the entire time?

A49. Yes. Right. It was full speed the entire time that's why like I think it was striking the aircraft and it sounded like it was striking the aircraft, but I -- I mean, when it flies up, uh, like beyond the maybe 20 degrees elevation, it was kind of difficult to see because it would go out of view at the height of it's travel.

QUESTIONS BY MAINTENANCE ADVISOR:

Q50. No HF radio as far as you know?

A50. Uh, yes. There are no -- no HF radios. We -- like I said, going -- I went back five minutes prior to the fighters being relatively close to us and as far as I know we were not making any HF radio calls at all.

QUESTIONS BY LEGAL ADVISOR:

Q51. Real quick, what does HF stand for?

A51. High-frequency, sir.

LEGAL ADVISOR: Thank you.

BOARD PRESIDENT: Give us just a minute here to just think for a second.

WITNESS: Yes, sir.

BOARD PRESIDENT: All right, Colonel BP , again. We have no further questions on this end. So, let me wrap it up here, so you can get back into the mission here.

So, are there any matters we've addressed so far that you wish to clarify?

WITNESS: No, sir.

BOARD PRESIDENT: Are there any additional matters that we have not addressed that you think are important?

WITNESS: No, sir.

BOARD PRESIDENT: Is there anything else that you wish to add to your testimony?

WITNESS: No, sir.

QUESTIONS BY BOARD PRESIDENT:

Q52. Okay. Two additional questions that just came up. To your knowledge are there any pictures, or video out there that might exist that might capture this event?

A52. No, sir. Not before the gimbal itself coming undone. Um -- when the uh -- when my flight engineer came back, he started to record a video, uh, but I believe his video was after the gimbal had come undone from the aircraft. So, it shows the boom trailing behind us uncontrolled -- uncontrolled. But not -- there is no video or pictures of the boom flying on its own.

BOARD PRESIDENT: All right. That concludes the interview. You are reminded of the official nature of this investigation, that you are not to discuss your testimony with anyone outside of this accident investigation board prior to public release of the final report. Thank you for your time and cooperation, and you are dismissed.

VERBATIM TESTIMONY OF TECHNICAL SERGEANT EBO

PRESIDENT: Welcome. My name is Colonel [BP]. We're investigating the accident involving a KC-10, Tail Number 83-0080 that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation conducted under AFI 51-503 is separate and apart from the safety investigation conducted under AFI 91-204. This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the safety investigation board will be kept confidential, if you were so advised, and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the safety investigation board. You may not state that you gave any particular information to the safety board under a promise of confidentiality. Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the safety board at this accident board?

WITNESS: Yes, Sir.

PRESIDENT: I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent to this interview being recorded?

WITNESS: Yes, Sir.

PRESIDENT: Your testimony in this investigation will be under oath. At this time, I will administer that oath. Please raise your right hand.

Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth, so help you God?

WITNESS: Yes, Sir.

PRESIDENT: Today is 17 January 2017. The time is now 1405 Local. This interview is being conducted in Building 31, Room 55 on Travis Air Force Base. The persons present are the witness, Technical Sergeant [EBO]; the legal advisor, the pilot advisor, the medical advisor, the maintenance advisor, the engineer advisor, the weather advisor, and the recorder. I'm Colonel [BP], the board president. The witness has been sworn.

You previously made a statement to the safety investigation board. Do you wish to adopt this as part of your sworn testimony today?

WITNESS: What does that mean?

LEGAL ADVISOR: Did you give a 72-hour or 14-day history to the...

WITNESS: I did a phone interview.

LEGAL ADVISOR: Okay.

PRESIDENT: Yeah, he wouldn't have because he was the day prior.

WITNESS: It was the day prior?

LEGAL ADVISOR: All right. So that's not applicable because we're not going to have access to any of that other stuff.

WITNESS: Okay.

Q1 (PRESIDENT): Please state and spell your first and last name.
A1 (WITNESS): [EBO].

Q2 (PRESIDENT): What unit are you assigned to?
A2 (WITNESS): 9th Air Refueling Squadron.

Q3 (PRESIDENT): What's your duty title?
A3 (WITNESS): Evaluator Boom Operator.

Q4 (PRESIDENT): How long have you been a boom operator?
A4 (WITNESS): Since 2002.

Q5 (PRESIDENT): All right, questions regarding the mishap. Were you on the mishap aircraft on a sortie that flew on 30 October 2016?
A5 (WITNESS): Yes, Sir.

Q6 (PRESIDENT): What was your crew position and/or primary focus during the sortie?
A6 (WITNESS): I was acting as a LOSA observer.

Q7 (LEGAL ADVISOR): What does LOSA mean? That's from the legal advisor.
A7 (WITNESS): The Line Operations Safety Audit from AMC.

Q8 (LEGAL ADVISOR): Okay and AMC is?
A8 (WITNESS): Air Mobility Command.

Q9 (PRESIDENT): And so in that role, just for the recording, what are you observing? What's your purpose?

A9 (WITNESS): So the purpose is just to observe crews in their normal habit patterns, in their normal duties and to report back. It's not necessarily just safety things. It's looking at the whole day, what might've happened to put the crew in a bad position or how can we do things better, so.

Q10 (PRESIDENT): Okay. Prior to the flight on 30 October, were you aware of any boom control issues with this particular aircraft?
A10 (WITNESS): No, Sir.

Q11 (PRESIDENT): Prior to the flight, did you review any maintenance forms that addressed any boom control issues?
A11 (WITNESS): No, Sir.

Q12 (PRESIDENT): Do you know if anyone else on the flight crew checked the maintenance forms and was anyone else on the flight crew aware of any boom control issues prior to the sortie?
A12 (WITNESS): They did check the maintenance forms on the jet, but I don't think they were aware, that I know of. No discussion was had about boom control issues.

Q13 (PRESIDENT): Okay. Did you operate the boom during the sortie on 30 October?
A13 (WITNESS): No, Sir.

Q14 (PRESIDENT): Did you observe anyone else operate the boom on 30 October?
A14 (WITNESS): Yes.

Q15 (PRESIDENT): And who was that?
A15 (WITNESS): Staff Sergeant [IBO].

Q16 (PRESIDENT): Describe the actions of the boom during pre-contact checks.
A16 (WITNESS): So he ran all the checklist items appropriately, got to the point of lowering the boom. So once the boom started down just pass 0 degrees, probably at roughly 15 degrees or so, the boom started to drift to the aircraft-left. At which point he recognized it and started to correct back to center with the flight control stick. Then it continued to go the opposite direction of his input. So it continued to go left, aircraft-left, as he was directing it back to the aircraft-right. And then it increased it's speed to the left at which point he put more input in. And then the boom, I don't know how to describe it, but there's no way you can duplicate how fast that boom went from left to right all the way maxed out past 32 degrees.

Q17 (PRESIDENT): So the opposite direction?
A17 (WITNESS): In the opposite direction, aircraft-right, at which point he is trying to correct to get control but had no control with the flight control stick whatsoever. None of the inputs he was putting in was doing anything.

Q18 (PRESIDENT): Okay. What steps did you observe that were taken upon noticing the boom moving to and past 30 degrees, approximately 30 degrees?

A18 (WITNESS): I think at that point the boomer was just trying to figure out what was happening because it's not we never see that at that level in any scenarios -- in our BOT scenarios. So he was trying to figure out why the boom was doing that, one, and then why the stick wasn't responding. No abnormal lights came on during the event; no warning cautions, flight control, maintenance required, like, nothing triggered. No wooper. Nothing triggered that there was an abnormal even happening back there. It just kind of got a mind of its own and went. And then I think at about the same time we both came to the conclusion, kill the flight control switch. And at which point, he reached over, killed it, and then that created a limp boom at that point, which is what it's supposed to do.

Q19 (ENGINEERING MEMBER): This is engineering advisor. At the time that you noticed that the boom was drifting to the aircraft-left to the time you killed the flight control switch, about how long?
A19 (WITNESS): It only made one full swing and by that time he started seeing it coming back into view is when he killed the flight control switch. So timewise, probably 30 seconds, 40 seconds maybe from the time that it started and he killed it.

Q20 (ENGINEERING MEMBER): And just for clarification, after the boom reached about a 15 to 20 degrees elevation, he noticed that the boom was drifting to the aircraft-left.
A20 (WITNESS): Correct.

Q21 (ENGINEERING MEMBER): He tried to correct. Was the boom unresponsive?
A21 (WITNESS): Yes. When he put input in, it didn't correct back.

Q22 (ENGINEERING MEMBER): And about how many degrees to the left did it go?
A22 (WITNESS): From what I observed 10 to 15 degrees is where it went to, at which point it kept traveling down during the time so it didn't just stop at that 15 degree elevation. It continued to travel down like it's supposed to, but it was drifting off and there's a structural limit there that we have to be careful of. So that's why he corrected. And then so I think by the time it started swinging full aircraft-right side, it was probably at 0 maybe 5 degrees.
Q22 (ENGINEERING MEMBER): Elevation?
A22 (WITNESS): So it wouldn't be -- yeah, elevation would be down. So it would have been -- I'm saying that wrong. It would have been at 30 degrees elevation and then that's when it started to swing over but it was completely unresponsive the whole time.

Q23 (ENGINEERING MEMBER): Would you ascern [sic] that the boomer never had control?
A23 (WITNESS): Yes, for sure.

Q24 (ENGINEERING MEMBER): So the swing to the aircraft-right was not because of the input that the boomer made to try to correct?
A24 (WITNESS): No.

Q25 (PRESIDENT): Okay. So after he killed the flight control switch, how did the boom react?

A25 (WITNESS): It just hung limp off to the aircraft-right, probably... might've been 10, 12 degrees aircraft-right and just kind of stopped as it was swinging down and then just sat there and then it eventually just kind of self-corrected back to center and then got into his checklists.

Q26 (PRESIDENT): Did you hear anything on the boom or any other noise during the flight when it was swinging right or left?
A26 (WITNESS): When it went full deflection to the aircraft-right, we thought we heard what sounded like a thud, like it might've hit the aircraft when it went full deflection. So after flight control switch was killed and he started working through his checklists, we had -- and actually this was after we cleaned up and got the boom stowed, we had the F-15s come up and do a visual check just to make sure on both sides -- we knew the left side wasn't necessarily what we were concerned in but we had them just go ahead and check out the whole aft end of the airplane just to make sure we didn't have any dents or, I don't know. We could see the boom. So there didn't appear to be any damage on the boom itself but we were concerned there might've been some damage somewhere else we couldn't see.

Q27 (PRESIDENT): And what did the F-15s...
A27 (WITNESS): They said everything looked clean.

Q28 (PRESIDENT): After the flight on 30 October, do you know if anything was written up or verbally conveyed to maintenance personnel regarding the boom actions?
A28 (WITNESS): Yes. So he filled out a form 97. I did review that just to make sure we had the correct information in and then he also input, into the 781s, a write-up. Took two blocks. I did not read that, specifically read that write-up, but he essentially shortened and transcribed what he had experienced on it but I didn't visually read it. So I can't say what was actually in the 781 write-up.

Q29 (PRESIDENT): Was maintenance debriefed?
A29 (WITNESS): Yes. So when we landed, maintenance showed up. I think there must've been six or seven hydro troops who came out to the airplane because we ended up doing an air divert and they directed us to go back to Travis once we were airborne. So sent the fighters back to Eielson and then we pressed direct to Travis. So once we got -- we relayed with comms that we had this issue with the boom. And so we landed, there was at least seven hydro troops showed up. So we verbally debrief them thoroughly; "Hey, this is what happened. Probably want to check the boom out, possibly the BCU. There's something wrong". And the maintenance guys that were on board did the same thing because there was one maintenance guy back there with us as well.

Q30 (LEGAL ADVISOR): And this is the legal advisor. Can you just say what a BCU is?
A30 (WITNESS): Boom Control Unit.

Q31 (PRESIDENT): Back to board president. So the maintenance on board, were they ever in the back with you observing while the boom was acting erratic?
A31 (WITNESS): Yes. Senior Airman , I believe is his name. I'm drawing a blank on the first name. He was one of the maintenance guys that were on our temporary duty. So he observed the whole thing happen from the observer seat in the back which is the far left seat.

Q32 (PRESIDENT): And do you know, did Senior Airman debrief -- was he present during the maintenance debrief?
A32 (WITNESS): Not when we were there, but I'm -- so I don't know. I can't speak to that.

Q33 (PRESIDENT): Back to the post-flight maintenance debrief. Did you personally debrief maintenance?
A33 (WITNESS): Yes.

Q34 (PRESIDENT): And if you could, describe how you described, how you remember describing this incident.
A34 (WITNESS): So Sergeant [IBO] gave his debrief and the one individual that he was talking to kind of gave him a look like, are you sure it went 32 degrees? I don't think that's possible. And then he looked at me. So I gave him the same debrief. I said, "yep, this is exactly what happened". And I told them I said, "There's definitely something wrong with this boom. It probably needs to be taken off. I don't know what your maintenance procedure is. That's not my lane". But I said that there's probably something you might want to look at. There's definitely something wrong with this thing.

Q35 (MAINTENANCE MEMBER): This is the maintenance member. Do you happen to remember any names of any of the maintainers out there?
A35 (WITNESS): No, Sir; unfortunately. We don't get to see the hydro troops a lot because they're not on the line, so.

MAINTENANCE MEMBER: I understand. I totally understand.

PRESIDENT: Okay any other questions?

MAINTENANCE MEMBER: He can look at these forms, right? I just want -- these looks like it's a fair assessment of the write-up because this is what maintenance would've been working off of. I'm showing him the aircraft forms dated the 20th through the 31st.

[Witness reviewing documents (see attachment).]

WITNESS: Yep.

MAINTENANCE MEMBER: Thank you.

Q36 (PRESIDENT): Back to the -- we'll go backward just a little bit. When you and Sergeant [IBO] decided to kill the flight control switch, what led you to think that action needed to occur?
A36 (WITNESS): I've been doing this for a long time and that was something that was drilled into us as a young boom operator back starting from 2002. So in the BOT, when we see this scenario, the boom -- so the BOT's the Boom Operator Trainer that we do for our simulated abnormals and emergency. So the scenario they give us is the boom will be sitting there and it will just kind of move slightly. I wouldn't even say maybe 2 to 3 degrees, at the most. It's just a real slight movement. You kind of see the surfaces flutter and you're not putting any input. You

run through the checklist. There is never scenario presented where that thing's coming across the window on you. So that was always drilled into us as a young boom operator that this checklist, it's not a boldfaced item, but you need to remember it as a boldfaced item. If you have any issues at any point, just remember flight control switch is what kills the brains to the boom. So just kill it and then work through your checklist.

Q37 (PILOT MEMBER): From the pilot member, a follow up question. Is there a possibility or have you noticed in the -- you know -- in your time is a boom operator how that I guess non-boldface, boldface, if you will, has left the training as far as an emphasis item?
A37 (WITNESS): Yes. I think they're still training it. I don't -- I can't speak to how often they see it now but after discussing it, as far as our event and what happened with people in the squadron, there's definitely -- you can definitely tell that some of the newer booms are not really aware of that being like a boldfaced, non-boldface item for sure.

Q38 (LEGAL ADVISOR): This is the legal advisor. So you mentioned that you and Sergeant [IBO] kind of came to the conclusion to turn off the boom control unit about the same time. Was there any communication, like, did you say anything to him or him to you about taking that action to turn it off?
A38 (WITNESS): Yes. So I basically was screaming turn the flight control switch off. And like I said, his hand was going that way. He wasn't communicating back the same thing but that's why I said I think we came to the conclusion at the same time but at that point, I was just trying to prevent the boom from doing more damage than what it possibly already did.

Q39 (ENGINEERING MEMBER): This is the engineering advisor. You were the one that verbally said -- commanded to turn off the flight control switch?
A39 (WITNESS): Yes.

Q40 (ENGINEERING MEMBER): And you mentioned earlier in the Boom Operator Training that the training engrained in the boomers that they're supposed to know that if it's not responding to stick movement, stick inputs, that means it's being unresponsive and you are to turn off the flight control switch?
A40 (WITNESS): So it's more of when it's an erratic because we have a...

Q41 (ENGINEERING MEMBER): What's deemed erratic? If it's not being responsive...
A41 (WITNESS): Right. If it's not being responsive, you have the time, if the boom -- so I guess what I'm getting at is if the boom is just sitting there at 0, 30 and 12 and you go to put input and nothing happens, more than likely the boom's just going to grab his checklist. He's got all the time in the world. It's not a time critical situation were something has to happen immediately. So I think that scenario isn't really taught; hey, if this happens, immediately turn the flight control. It's always the scenario of the erratic boom where it's moving without any command input on its own. That's where the scenario was taught; hey, kill the flight control switch. Just remember that first. But unfortunately, as an evaluator, I have to look at it on a standpoint that it's not in our checklist as a boldfaced item. So it was just an additional, hey, keep this in mind. And I don't think it's -- and I can't speak on it but it's not a requirement for that to be taught. I spent two years at the FTU --at the Flight Training Unit -- and it was never

something that was required to be taught or in the syllabus about this boldface, non-boldface item.

Q42 (LEGAL ADVISOR): And this is the legal advisor. I just wanted to circle back. I think you referred to the boom being in a 0, 30, 12 position. Could you just explain, for the recording, what that means?
A42 (WITNESS): So that's basically the prep for contact, pre-contact position that the boom's in prior to receive or closing into contact. So 0 degrees is centered up on the aircraft. 30 degrees is the elevation it sits at, elevation up and down, is where it is. And that's where we're required -- when we trim, as part of our checklist, the trim is to make sure it centered up 0 and 30 degrees on the elevation. 12 feet is the extension of the telescope which is our visual signal that were ready for air refueling.

Q43 (LEGAL ADVISOR): All right, thank you. One other thing I wanted to clarify. You referred to the boom running his checklist. Is boom just shorthand for boom operator?
A43 (WITNESS): Correct, boom operator.

LEGAL ADVISOR: Okay, thank you.

PRESIDENT: Any other questions?

Q44 (LEGAL ADVISOR): This is the legal advisor again, just while we got a little bit of dead air. I think you referred to the engineer's question you were saying about the timeline for how long it took on the 30th of October for the boom to swing all the way off to, I believe it was aircraft-right; when you're saying it took I think 20 to 30 seconds was what you estimated, is that from -- is that for it to start drifting off to the left and then complete the swing, you know, like, so where does that 20 to 30 seconds cover?
A44 (WITNESS): Yes. That would be about right. When it started to do its drift and then it increased in speed in the same direction while he was putting the opposite command into the stick. So at that point, that's when I think he realized, initially, I probably don't have control of this thing but he wasn't sure. So yes, definitely 20 to 30 seconds from that time.

LEGAL ADVISOR: Okay.

Q45 (ENGINEERING MEMBER): From engineering advisor. At that point, if it was being unresponsive and still kept on drifting and increasing in speed, why wasn't the decision made to kill the flight control switch at that time?
A45 (WITNESS): I think it just happened so fast. In that, I mean, even -- you know -- when I looked over at the maintenance guy, his face was white. And he literally looked to me said, "Did we just lose the boom". That's how fast it happened. You can't duplicate this in the airplane. The only way you could come close to duplicating what happened is if you went coupled mode and then put full force on the stick because that's when it's most sensitive, right? So if you go to contact coupled and then went full movement, you may be able to duplicate how fast that moved. But you can't, in our normal free flight mode, you can't put -- there's always a lag. So even if you take the stick and hard over, there's a delay, it takes a while, and then it starts to catch up.

You literally have to hold it there for a while for that thing to actually -- and it won't move that fast, no way.

PRESIDENT: Any other questions?

[Negative response from the board members.]

Q46 (PRESIDENT): In concluding, are there any matters that we've addressed so far that you wish to clarify?
A46 (WITNESS): No, Sir.

Q47 (PRESIDENT): Are they any additional matters that we've not address that you think are important for our investigation?
A47 (WITNESS): No, Sir.

Q48 (PRESIDENT): Is there anything else you wish to add to your testimony?
A48 (WITNESS): No, Sir.

PRESIDENT: Any other questions from the board?

[Negative response from the board members.]

PRESIDENT: This concludes the interview. You're reminded of the official nature of this investigation and that you are not to discuss your testimony with anyone else outside of the accident investigation board prior to public release of the final report. Thank you for your time and your cooperation. You're dismissed.

[Initial interview was terminated.]

PRESIDENT: All right, this is Colonel [BP], again, the board president. Today is still 17 January 2017. The time is now 1430 Local. And upon stopping the interview, Sergeant [EBO] brought up the fact that he had one more point to add. So he's still under testimony, all the members of the board are still present, and so we'll begin the recording again at this time. Continue.

WITNESS: Okay. So at the time of the event when we were lowering the boom, after the event happened the pilots had informed us -- asked us if it was possibly because they were doing an HF, high-frequency, radio call. And at which point we were not aware that there was an HF frequency call being made. The receivers were not joined on us at that time. So there wasn't an issue there with the receivers being in close proximity of the boom. I have been on plenty of HF radio call airplanes with the boom down when we do some of our air refueling tracks out here, and have never seen anything abnormal on the boom happen when it's down. But, so, that's essentially all we know as far as what was happening up front when that event happened.

PRESIDENT: Any questions from anyone based off of that information?

Q1 (MEDICAL MEMBER): This is the medical component. Of what significance would a high-frequency radio call concomitantly being made during air refueling pose?
A1 (WITNESS): So the book does talk about -- in the Dash-1, -- it talks about the possibility of it causing erratic boom movement on the boom if you're making HF calls. So that's why we have to keep receivers away from the aircraft, away from the vicinity of the boom while we're doing that.

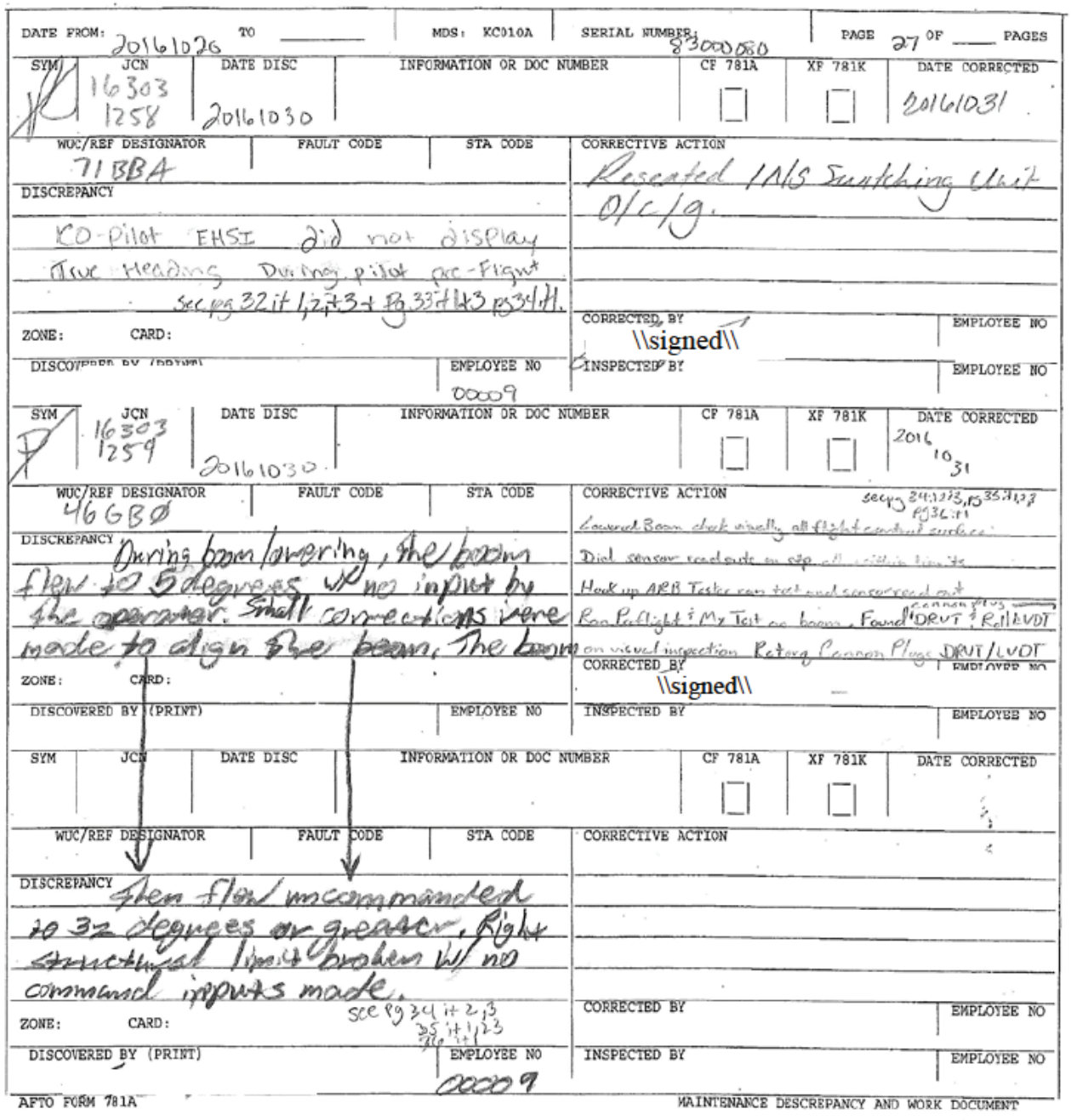
Q2 (LEGAL ADVISOR): This is the legal advisor again. You were referring to the Dash-1.
A2 (WITNESS): Correct.
Q2 (LEGAL ADVISOR): What's that's shorthand for?
A2 (WITNESS): It's the Dash-1. It's our operating procedures for the aircraft. Flight manual.

LEGAL ADVISOR: Thanks for clarifying.

PRESIDENT: Any additional questions?

[Negative response from the board members.]

PRESIDENT: Okay. This concludes the interview. You're reminded of the official nature of this investigation. You're not to discuss your testimony with anyone outside of this accident investigation board prior to public release of the final report. Thank you for your time and cooperation. Now you're dismissed, thank you.



DATE FROM: 20161026 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 27 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1258	20161030				20161031

WUC/REF DESIGNATOR: 71BBA | FAULT CODE | STA CODE

CORRECTIVE ACTION: Located 1AS Switching Unit O/C/G.

DISCREPANCY: KC-Pilot EHSI did not display True Heading During pilot pre-Flight* see pg 32 it 1,2,3 + Pg 33 it 1&3 pg 34 it 1.

ZONE: CARD: | CORRECTED BY: \\signed\\ | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO: 00009 | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1259	20161030				2016 10 31

WUC/REF DESIGNATOR: 46GBØ | FAULT CODE | STA CODE

CORRECTIVE ACTION: see pg 34 it 2,3, 35 it 1,2,3 pg 36 it 1 Lowered Boom check visually all flight control surfaces. Dial sensor read axis on stp all within limits. Hook up ARB Tester ran test and sensor read out. Ran Preflight & My Test on boom. Found Common Plugs DRVT & R/L LVDT on visual inspection. Retorq Common Plugs DRVT/LVDT

DISCREPANCY: During boom lowering, the boom flew to 5 degrees UP no input by the operator. Small corrections were made to align the boom. The boom flew to 32 degrees or greater. Right structural limit broken w/ no command inputs made. see pg 34 it 2,3 35 it 1,2,3 36 it 1

ZONE: CARD: | CORRECTED BY: \\signed\\ | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO: 00009 | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED

WUC/REF DESIGNATOR | FAULT CODE | STA CODE

CORRECTIVE ACTION

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

SUMMARIZED TESTIMONY OF SSGT IBO

SSgt IBO appeared at the investigation, was sworn, and testified substantially as follows:

I am Staff Sergeant IBO . I am stationed here at Travis Air Force Base with the 60th Operation Support Squadron. I am an Instructor Boom Operator.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

In response to Col BP 's questions I told him that I was the boom operator for a 30 October 2016 sortie flown by the mishap aircraft, KC-10 tail number 83-0080. I stated that I could not recall being aware of any boom control issues prior to the flight on 30 October 2016. I know that the entire flight crew reviews the maintenance forms, but I do not recall seeing any maintenance forms regarding existing boom control issues. I also do not recall having any discussions among the flight crew regarding any existing any problems with the boom on that aircraft. During the sortie on 30 October 2016, I operated the boom on the aircraft, and was the only person to do so. as we were lowering the boom in preparation to refuel, everything appeared standard up to the point that the boom lowered to approximately 20 degrees. As the boom lowered to approximately 20 degrees it began drifting to about 3 to 5 degrees to the aircraft's left even though I was not making any control inputs at that time. I attempted to use the flight controls to move the boom back to center. Then in approximately 1 to 2 seconds the boom swung rapidly to the right. The boom roll gauge only goes to 32 degrees, and the boom swung well past that. When the boom swung far out to the aircraft's right I heard a loud, audible bang. As the boom was moving rapidly to the right I attempted to use the flight controls to countersteer in order to keep the boom from breaking our right structural limit, but my control inputs did not do anything. TSgt EBO , a Line Operations Safety Auditor, was in the back with me and told me to turn off the flight controls, which I did. That stopped the boom from moving further, and with the flight controls off the boom slowly drifted back toward aircraft center. At that point I went to our abnormal procedure #3 checklist, which is for erratic boom controls and erratic boom movement. I ran that checklist, which involved utilizing the boom hoist cable to bring the boom up and lock it into the stowed position. I did not visually see any damage to the aircraft or boom while were in flight. We then discontinued refueling and returned to Travis Air Force Base.

After the flight on 30 October 2016, I wrote up the boom incident, including completing a Form 97. I also verbally debriefed the maintenance troops that came to meet the jet. TSgt EBO also gave the maintenance troops a virtually identical verbal debrief to the one that I had provided. When I debriefed the maintenance personnel, I told them what we had observed, but I did not request that any specific maintenance actions take place. TSgt EBO and I both performed a post-flight walkaround to visually inspected the back of the aircraft for damage. I did not see any apparent damage to the aircraft or boom during that walkaround.

I also operated the boom on the mishap aircraft during a flight on 11 October 2016. During the 11 October 2016 flight, I was instructing a trainee boom operator through their initial qualification. We used the boom for approximately an hour to perform multiple refueling

contacts. The boom responded properly to control inputs during that flight and was very stable. After about an hour of use I noticed that while the boom appeared visually centered the boom roll gauge was indicating that the boom was 8 to 10 degress to the aircraft's right. We could not get the discrepancy to cycle out so we discontinued air refueling and returned to base. I did not realize that this flight was on the same aircraft involved in the 1 November 2016 mishap until I was debriefed on it later.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 25 January 2017.

//SIGNED//

IBO , SSgt, USAF
Instructor Boom Operator

Signed and sworn before me this 25 day of January 2017.

//SIGNED//

BP , Col, USAF
Board President

SUMMARIZED TESTIMONY OF SSGT IBO

On 25 January 2017, SSgt IBO appeared at the investigation for a second interview.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me and reminded me that I was still under oath from the previous interview. He also reminded me that I should not disclose or discuss any privileged information that I had provided to the Safety Investigation Board.

In response to the boom advisors questions, I informed him that during the 11 October 2016 flight aboard KC-10, tail number 83-0080, I was instructing a trainee boom operator through their initial qualification. We used the boom for approximately an hour to perform multiple refueling contacts. The boom responded properly to control inputs during that flight, moved smoothly, and was very stable. After about an hour of use I switched seats with my student to get a couple of currency contacts. After a couple of contacts I noticed that while the boom appeared visually centered, the boom roll gauge was indicating that the boom was 8 to 10 degrees to the aircraft's right. The boom's elevation guage showed that the boom was at 30 degrees elevation, which matched what I could observe through my window. I flew the boom to where the gauge indicated zero degrees of roll, and I would estimate the boom was actually 8 to 10 degrees to the left. The boom movement was proportional to the gauge movement, however it was out of phase by 8 to 10 degrees. During that time we did not experience any surface indications, failures, surface flutter, or flight stick abnormalities. The stick also felt normal and moved smoothly when I made inputs. Once we saw the roll gauge failure, we stopped the air refueling operation. The boom was stowed using standard stowing procedures by moving the elevation position switch to stow and using the hoist cable to bring it up once it got to zero. I did not have make any stick inputs to manually center the boom, it centered itself while it was being raised. Once we were on the ground after the flight on 11 October 2016, I noted that the boom roll gauge indicated 5 degrees to the right with the boom centered and stowed. I also wrote the issue up, spoke with the crew chiefs, and spoke to Debrief. I believe we spoke with the production superintendent as well.

I was also the boom operator on KC-10, Tail number 83-0080, on a sortie out of Eielson Air Force Base on 30 October 2016. Due to the cold weather at Eielson Air Force Base, I ran the cold weather operations checklist. During the checks I had to perform a few stepback and retests to get the preflight test to pass the Status Test Panel. I can't remember what components failed during the test. I notified maintenance and they came back and did a few retests, but whichever component failed ultimately passed the test.

During the sortie on 30 October 2016, I operated the boom on the aircraft, and was the only person to do so. Approximately 15 minutes after takeoff we prepared to briefly refuel the fighters that we were flying with in order to ensure everything was functioning properly before we got too far from base. I ran the prepare for contact checklist and experienced no abnormalities as I prepared to lower the boom. As the boom lowered to approximately 20 degrees in elevation, it began drifting to about 3 to 5 degrees to the aircraft's left, even though I was not making any control inputs at that time. I thought that this may have been attributable to the plane being on the ground for several days and the trim possibily needing adjustment. I attempted to use the flight controls to move the boom back to center. Then in approximately 1 to 2 seconds the boom

swung rapidly to the aircraft's right. The boom roll gauge only goes to 32 degrees, and the boom swung well past that. When the boom swung far out to the aircraft's right I heard a loud, audible bang. As the boom was moving rapidly to the aircraft's right I attempted to counter the movement by commanding full aircraft left on the flight controls, but my control inputs did not do anything. TSgt EBO , a Line Operations Safety Audit (LOSA) observer, was in the back with me and told me to turn off the flight controls, which I did immediately. That stopped the boom from moving further, and with the flight controls off the boom slowly drifted back toward aircraft center. At that point I went to our abnormal procedure #3 checklist, which is for erratic boom controls and erratic boom movement. I ran that checklist, which involved utilizing the boom hoist cable to bring the boom up and lock it into the stowed position. I did not receive any warning lights during the incident. I also did not visually see any damage to the aircraft or boom while we were in flight. We then discontinued refueling and returned to Travis Air Force Base. After the flight on 30 October 2016, I verbally debriefed the hydraulics troops that came to meet the jet, and I believe I informed Debrief of the incident as well. On that day I was not aware of any previous writeups or the fact that this was the same aircraft that gave me issues on the 11th of October 2016.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 07 February 2017.

//SIGNED//

IBO , SSgt, USAF
Instructor Boom Operator

Signed and sworn before me this 07 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

VERBATIM TESTIMONY OF CAPTAIN IP

My name is Colonel [BP], we are investigating the accident involving a KC-10, tail number 83-0080, that occurred on 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the Safety Investigation Board will be kept confidential, if you were so advised, it can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes.

BOARD PRESIDENT: I must inform you that the interview is being recorded and that you may not use your own recording devices during the interview.

Do you consent to this interview being recorded?

WITNESS: Yes.

BOARD PRESIDENT: Your testimony in this investigation will be under oath, at this time, I will administer the oath, please raise your right hand:

BOARD PRESIDENT: Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, nothing but the truth, so help you God?

WITNESS: I do.

BOARD PRESIDENT: Thank you, you may lower your hand. Today's date is 31 January 2017, the time is now 0900 local Pacific time. This interview is being conducted in building 31, room 55, on Travis Air Force Base. The persons present are the witness, Captain [IP], the legal advisor, the pilot advisor, the weather advisor, and the recorder. I am Colonel [BP], the Board President.

The witness has been sworn.

QUESTIONS BY BOARD PRESIDENT:

Q1. Please state your first and last name.

A1. [IP].

Q2. What unit are you assigned to?

A2. 9th Air Refueling Squadron

Q3. What is your duty title?

A3. I am the Chief of Tactics Development

Q4. Ok, and how long have you been a KC-10 Instructor? Is that right?

A4. Since September 2015.

Q5. Ok, and a KC-10 pilot the whole time?

A5. My first assignment was C-12's.

Q6. Alright. So, questions regarding the mishap. Were you on a sortie on the mishap aircraft on the 30th of October 2016?

A6. I believe that's the date, yes Sir.

Q7. And, what was your crew position during the sortie?

A7. Instructor Pilot

Q8. Do you recall either before or… do you recall any issues with the… were there any issues identified by maintenance prior to departure for the aircraft, do you remember? Specifically with the boom?

A8. I don't remember anything prior to departure from Travis. We had a few other maintenance issues that were not boom related while we were up in Eielson

Q9. Okay. Do you recall any boom related issues during your flight?

A9. Yes

Q10. Okay. Can you give us a discussion on what occurred and what you witnessed up front?

A10. Sure. When we were climbing out we noted that the boom slash drogue not stowed light came on, so I sent my boom operator back to take a look. One of the levers that stows the boom, I can't remember which one, was out of the detent position, and as soon as he placed it back in the up position the light went out. Since he was back there and since we were rejoining with our receivers after departure from Eielson, we… I just left him back there to do an ops check of the boom and they were going to get a quick plug just to confirm that everything was working with our receivers before we coasted out to Japan. He notified me that there was some kind of flight control issue with the boom. He was not very specific at first when he told me. We were pretty busy up front so, communication was kind of what I needed to know at the moment, which he told me the boom was moving erratically and he wasn't comfortable doing AR.

Q11. Do you recall during the period that he said that it was moving erratically, were there were any indications up front?

A11. No, we wouldn't have any indication of that up front. At one point we did feel a… it was kind of a bang in the aircraft. And I wasn't sure what it was, sometimes that

happens when they are stowing the boom. If it's not completely centered it will bang into the aircraft, you can feel it. We did feel some kind of a mechanical banging back there, but it didn't raise any flags to me until the boom operator came up front and told me what he saw.

Q12. Okay, and that was during the time where he said it was behaving erratically… that bang?

A12. I think so.

Q13. Do you recall during the time that he was checking out the boom, were you all communicating on HF, during any of that period that you coasted out?

A13. I did make an HF call and I asked him if he thought it was related. He said "No, this is not what that would look like." HF radio calls can sometimes make the flight controls flutter and he was aware that I was making an HF call, I told him to keep the receivers away from us, which is a dash one procedure. He said "No, it was not just fluttering", it was a rapid flight control movement that was not like anything he'd before when an HF call is being made.

QUESTIONS BY PILOT ADVISOR:

Q14. From the pilot advisor, do you recall about what frequency you were using on HF?

A14. I have no idea.

Q15. Give or take? Like was it in the twelves or the fives or the sixes?

A15. I couldn't tell you. It was afternoon in Eielson. So whatever would be appropriate for there. So, probably in the one thousands range…or I guess the tens. Um, yeah the boom operator came up front and elaborated with what had happened to me and he told me that as he was lowering the boom, it slowly drifted five degrees to aircraft left, which is his right. And he said as he was trying to correct that and bring it back to center for his flight control check, it rapidly, and not in accordance with his inputs, went out of sight to

his left, aircraft right. At which point the other boom operator that was back there told him to turn the flight control stick off, and he did. They were concerned initially that it had departed the aircraft because it went out of view. Once they turned the flight control switch off, it slowly drifted to center and they hoisted it and stowed it. We coordinated a divert back to Travis.

BOARD PRESIDENT: Okay

QUESTIONS BY BOARD PRESIDENT:

Q16. Any abnormal weather during that period?

A16. Other than it being outrageously cold and causing a lot of other maintenance issues on the plane, no.

QUESTIONS BY LEGAL ADVISOR:

Q17. This is the legal advisor, were you guys using autopilot at the time he was doing that flight control check?

A17. Yes.

Q18. Ok, did anything about the booms movements or anything like that, did that cause the autopilot to deactivate or anything along those lines?

A18. [Witness provided "negative" non-verbal response]

BOARD PRESIDENT: Last chance.

QUESTIONS BY THE RECORDER:

Q19. This is the recorder, what is HF radio?

Q20. High Frequency radio, it's used for long range communications when you are not with the range of normal communications receivers.

BOARD PRESIDENT: Okay, is that it? Alright, are there any matters we've addressed so far you wish to clarify, or… discuss again?

WITNESS: No, Sir.

BOARD PRESIDENT: Any additional matters that we have not addressed, that you think are important for this investigation?

WITNESS: No Sir.

BOARD PRESIDENT: Anything else you wish to add?

WITNESS: No Sir.

BOARD PRESIDENT: Alright. That concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this accident investigation board prior to the public release of the final report. Thank you for your time and cooperation, you are dismissed.

WITNESS: Thank you, sir.

VERBATIM TESTIMONY OF STAFF SERGEANT IBO2

My name is Colonel [BP], we are investigating the accident involving a KC-10, tail number 83-0080, that occurred 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you might have given before the Safety Investigation Board will be kept confidential, if you were so advise, and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you might have given before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between the testimony you may have given to the Safety Board and this Accident Board?

Witness: Yes, sir.

BP: I must inform you that the interview is being recorded and that you may not use your own recording devices during the interview.

Do you consent to this interview being recorded?

Witness: Yes.

BP: Your testimony in this investigation will be under oath, at this time, I will administer the oath, please raise your right hand: Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, nothing but the truth, so help you God?

Witness: I do.

BP: Thank you. Today's date is 24 January 2017, the time now is 1403 local Pacific, this interview is being conducted in building 31, room 55, on Travis Air Force Base. The persons present are the witness, Staff Sergeant [IBO2], the legal advisor, the pilot advisor, the boom advisor, the medical advisor, the maintenance advisor, the engineering advisor, the weather advisor, and the recorder. I am Colonel [BP], the Board President.

The witness has been sworn.

QUESTIONS BY BOARD PRESIDENT:

Q1. Please state your first and last name.

A1. [IBO2].

Q2. Thanks. What unit are you assigned to and what is your duty title?

A2. The 9th Air Refueling Squadron. I am an Instructor Boom Operator.

Q3. How long have you been an Instructor Boom Operator?

A3. Approximately a year.

Q4. Okay. So, we will start questions now. So regarding tail number 83-0080, were you on a sortie on this aircraft on 12 October 2016?

A4. Yes, sir.

Q5. What was your crew position during that?

A5. Instructor Boom Operator

Q6. Okay. Were you actually in the seat during that sortie?

A6. Uh --

Q7. Controlling, or were you instructing?

A7. I was instructing. There was an airman there who was trying to get a proficiency sortie, which requires instructor supervision, I was providing that supervision so he could accomplish a proficiency sortie.

Q8. Okay. And, during that flight, did you recognize any issues with the boom?

A8. Yes, sir.

Q9. Okay. Can you describe those?

A9. When lowering the boom prior to accomplishing a flight controls check of the boom, which we do prior to any air refueling contacts that we make in flight, we lowered the boom and we observed that once the boom was lowered, it was at approximately 30 degrees elevation, the boom without any input whatsoever swung out to about 18 degrees aircraft left. It wasn't erratic, it wasn't fast, it was very, very gradual, and at the same time it did that the role indicator went to about 10 degrees aircraft right. So, so the role indicator was indicating the opposite of the position of the boom. Again, 18 degrees to the aircraft left is an assumption based on me flying at their previous flight control checks, the gauge wasn't corresponding, so I can't tell you it was exactly 18, but just based on the position that's what it appeared to be.

Q10. Okay. And then, what actions did you or the boom in the seat take at the time?

A10. So, was in the actual boom seat, I was in the instructor seat. We saw what it did and we thought about it for a second, it wasn't moving erratically, it was very stable, it was just very off-center. So what we decided to do was we flew the boom back to center to see if we could control it, and it was flying normal with the flight control stick, it was responding to inputs. We stowed the boom, we lowered it again to see if maybe there was an issue with the BCU, some logic was faulty, and it did the same thing again. It was at this point that we spoke with Lieutenant Colonel upfront, we told him what happened, what was going on and what we were seeing in the back. There is no checklist that we could have ran, the only guidance

that we have regarding flight position instruments not working correctly, is in the prep for contact checklists which would say we would have to discontinue AR unless there's a fuel emergency. We were on a training sortie, so we elected to stow the boom and discontinue air refueling -- or rather we didn't even begin air refueling.

Q11. Okay. On either of those attempts after it lowered and it started to drift, then you brought it back to center, did you -- did you see again if it drifted off by itself, or did you just raise it at that point?

A11. It drifted both times that we lowered it. And it was at that point that we, we had exhausted what we were attempting to do. Again, we weren't running any specific checklists that we had, we were just trying to use our systems knowledge to kind of make the system work.

Q12. Okay. After you landed, I know it was written up in the books, but did you talk to maintenance personnel specifically about anything?

A12. We had -- when we went to debrief, went in there -- him and Lieutenant Colonel , kind of debriefed maintenance, and I was taking care of all the other post mission stuff. Putting our trip kits away, and kind of getting all our stuff ready.

Q13. Okay. Do you know, during that sortie was the HF radio used it all?

A13. I -- I don't believe so, I couldn't comment yes or no. I wouldn't believe so based on us being on a local sortie training, I don't think that we would have used it.

BOARD PRESIDENT Okay. That is the last of my questions.

QUESTIONS BY BOOM ADVISOR:

Q14. Boom advisor. So, when it came down, and when you say it stabilized at 30, and you know what you're looking for -- you are in the instructor seat that's right of the center seat, so we know what you're looking for in your window when you're looking out, so when it dropped down, you did a gauge check to see that it was at 30? Or just your normal looking at it with the student in the seat?

A14. Looking at it with a student in the seat. The boom came down, it came down very smoothly nice and centerline, and it was right as it would have stabilize normally prior to where you would have trimmed the boom, it was then that it made a gradual move out to 18, very, very slowly.

Q15. How long do you think before it got to 18?

A15. Maybe, approximately four or five seconds. It's not as if the boom swung out to 18 violently. It was very slow, moved out to 18 and just hung there.

Q16. And, as it is moving to the aircraft's left the gauge is showing going to the aircraft's right?

A16. Yes.

Q17. As they were moving -- were they moving in unison, or did it go and then a gauge went, do you remember?

A17. It was -- it was at about the same time. But, it was odd because there was a write-up in the forms that the gauge was off by approximately 8 degrees. So, initially --

Q18. When you say off, are you saying the gauges reading eight degrees off from where it should be centerline?

A18. When we showed up to the jet, in the 781s there was a write-up which stated gauge reading eight degrees to the right, from the right of what it should.

QUESTIONS BY BOARD PRESIDENT:

Q19. From the previous sortie?

A19. From the previous sortie. And, it showed, uh -- it showed that it had been corrected. So, when it came down and it started swinging out, we were like okay it looks like they didn't correct it. But, what was odd is, you are at a point when you are controlling the boom, you can kind of tell -- when it's at 10 degrees without even looking, right? When you are

making a contact, we shouldn't attempt contacts outside of 10 degrees, right, per -- that's what the book says --

BOOM ADVISOR:

Q20. The Dash One, yes.

A20. The – one says. And you can know when the boom is at 10 degrees and you can know when it's at 15 degrees. You can tell you are a little too far out.

BOOM ADVISOR:

Q21. Visually.

Q21. Visually. But what was odd to me is, is it's not as if the gauge was reading 10 degrees to the right in the boom was 10 degrees to the left. The boom was much further to the left than 10 degrees. So, it was moving in unison but it was almost exponential. For example, for every one degree the gauge was showing to the right, it was two degrees to the left.

Q22. Disproportionate?

A22. Yes very disproportionate.

QUESTIONS BY ENGINEERING ADVISOR:

Q23. Two questions. Did you -- when you notice that the boom was not going to stabilize with your commands, did you turn the flight control switch off both times to stow it??

A23. Prior to raise?

Q24. Yes.

A24. We didn't turn the flight control switch off because the boom was responding to our commands. When we flew the boom to centerline, it was responding to our commands. It wasn't as if we could feel that the boom was fighting us in any way. It almost felt as if the boom was trimmed to that position. That's truly what it felt like. When you were there, you could fly the boom and it was behaving just like a normal boom but it's as soon as you released the stick it would just move over to that position.

Q25. Um, so the second question. Did you see what the rudders were doing, each time? Did you see them, that they were turned each time when you saw the boom drifting to the side?

A25. It was a night sortie, and to be honest with you I couldn't look at the rudders and tell you if they were in a position that would normally be in with the boom there.

QUESTIONS BY BOOM ADVISOR:

Q26. Any -- any stick failure -- did you feel -- because he's flying the boom at this point, did you -- you didn't take him out of the seat? Out of center seat? You stayed in the instructor seat the whole time?

A26. I stayed in the instructor seat.

Q27. Looking at his hand, and you being in the instructor seat, did you see anything in his hand that showed that he may have had any kind of stick -- you didn't have a lights or anything on your panels, but he didn't have a hard stick over or anything -- you know in a BOT when you do a [demonstrates control stick slapping boom operator's hand], you didn't feel or see anything when you're looking at this whole process?

A27. There was none of that. And even from the instructor seat, using my left hand, I wanted to feel how the boom felt. I wanted to feel if it was fighting him, if I would try and fly to the right, if the boom was fighting to the left, and it wasn't. There was no stick shaker, there was no limp stick, the boom flight control stick felt like it does any normal day.

Q28. How long -- when you released your hand and let him release his hand, and he guarded the stick, at this point in time I suspect he was guarding the flight control stick, how long before you let it go did it start to move over to the aircraft's left, you're right?

A28. Instantly.

Q29. Instantly. So, soon as you let it go of your counterforce to keep it center. So to keep it center, you had to put forced to your left, aircraft right to keep it in the center position?

A29. Yes, sir.

Q30. But when you let it go -- did you try using trim at any point in time to turn it back to center?

A30. We did, and I trimmed it all the way to the aircraft right to see what would happen. And, you could tell that the boom was trimming minutely, but it wasn't going to trim it the entire way over.

Q31. What was the max that you witnessed on your gauge as well as in which you see visually out of your window, you suspect to be degrees first in the gauge and in degrees next in the actual boom?

A31. Degrees was 10. That's where when it initially went out to about 18 degrees to answer your second question. 18 to 20 degrees is what it looked to be at in the gauge was staying at 10. It never went past 10, it was always right at about 10.

Q32. So during your stowage -- our storage procedures you gotta come to zero to stow it because you got a fit it into the, um, into the gimbal hole on the empennage of the airplane and tail cone. Did you have to center it or did you -- when you went to your boom position indicator, from refuel to stow, did it -- did every -- and it's dark outside, did it fly up center or did you have to keep it in the center?

A32. We manually flew the boom to centerline and kept it in centerline as we initiated the stowage procedures, because we didn't want -- we didn't know at which point if we had turned the flight control switch off, we didn't know what was going to happen. Right? We didn't know if the boom was going to stay at that position and possibly not stow in centerline so we maintained a positive stick pressure to hold the boom in centerline as we raised it up.

Q33. As an instructor, had you thought at any point in time when the movement of the boom was not in conjunction or corresponding with your stick position, hand position for the flight control stick, to think to run the erratic boom movement checklists?

A33. I did not think to run that checklist due to the boom not in my opinion making erratic movements. It was very, very predictable and we were able to control the position of the boom. If at any point the boom had made quick movements in any direction, or had not corresponded with what we were intending the boom to do I would have ran that checklist. But, because we were able to control it I didn't feel like that checklist would have benefited us in this situation.

Q34. Have you ever seen, outside of the boom operator trainer during training with Flight Safety, or Pinnacle now, have you ever seen erratic boom movement in the airplane?

A34. Negative.

Q35. So you're basing that knowledge of erratic boom movement is based off of what you've see within the control environment of the boom operator training?

A35. Yes, sir.

QUESTIONS BY PILOT ADVISOR:

Q36. After you brought the switch to refuel, came down to 30 degrees was it after that point that it started drifting or did it drift during the descending sequence?

A36. It was right at 30 degrees. The boom came down centered, and then right when it got to about 30 degrees elevation is when it started its movement out to the aircraft left.

QUESTIONS BY LEGAL ADVISOR:

Q38. You mentioned that you attempted that sort of boom cycle, you know, raising and lowering it twice. Did it perform the same way both times?

A39. The same exact way both times.

QUESTIONS BY ENGINEERING ADVISOR:

Q39. At no time you turned off the flight control switch?

A39. Uh, when we stowed the boom, I believe, you would have to talk to as well, I believe we -- when we flew it to center, we cycled the flight control switch once in the

duration of us doing this. I believe we might have, you would have to talk with him to have him back me up on that, but I think, I think we did.

Q40. What was the reason for doing that?

A40. Uh, well we have multiple checklists. Every flight control position failure checklist that we have, step one is cycling the flight control switch. That is step one. So just using our knowledge of, hey if this can clear out these malfunctions maybe somehow it will clear out this. Through my experience in the jet, there are a lot of things that the jet does that are kind of unexplainable that fix themselves, and we were trying to fix this problem just based on the parameters that we were seeing.

QUESTIONS BY BOOM ADVISOR:

Q41. When you were in the process of stowing the boom, you went from refuel to stow on the boom position indicator, and as it is flying up did you notice your role indication gauge, if it was now corresponding at all, or was it still off as you're going to the corrective action to bring it to center and you are stowing it, do you remember your gauge reading for role?

A41. It was zero. When it was in the stowed position, when the boom is raised and it is out of sight, the role gauge remained at zero for the duration of the stowing procedure.

Q42. Even from the beginning at 30 as you rose it up and you are putting the counterforce in to your left, aircraft right, it came back to center?

A42. Yes.

Q43. It moved as it --

A43. Yes. It was completely opposite.

Q44. So, it just -- okay. It was inverted to what it did at first?

A44. Exactly.

Q45. Okay.

A45. It was inverted throughout the duration of the flight. The gauge was inverted flying to the aircraft right about 10 degrees, and the boom was aircraft left around 18 to 20 degrees.

BOOM ADVISOR: And let it be noted that the boom advisor was showing two hands of hands coming back in unison to be in sync with the zero of the airplane.

QUESTIONS BY PILOT ADVISOR:

Q46. Did you all take any pictures or any video to show to maintenance?

A46. We did not. It would have been so hard to see. I have tried so many times to take pictures back there at night to show maintenance issues, and every picture or video that I have ever taken, it just doesn't, it doesn't do it justice. We were hoping that maintenance would take our word for it on what it was doing, especially based on the prior write-up that it had experienced.

QUESTIONS BY ENGINEERING ADVISOR:

Q47. The boom, the boomer and the pilot are the ones that debriefed maintenance?

A47. Yeah, and I believe the flight engineer as well.

Q48. Flight engineer? Do you recall if they told you how that interaction went?

A48. I do not recall.

QUESTIONS BY LEGAL ADVISOR:

Q49. You mentioned that the boom moved pretty slowly when it went out to that deviation. I mean, did you hear any sort of audible noises that indicated, you know, like clinking, clanking, anything like that?

A49. No noises whatsoever. No abnormal noises at all.

QUESTIONS BY ENGINEERING ADVISOR:

Q50. When you were helping the boom with the flight control stick, you didn't feel as if the boom was trying to fight you to go to either side?

A50. Not at all. Not at all. It was, it was very -- it was very, very controllable. Like I said, it was as if the boom was trimmed to that position. It was very odd.

QUESTIONS BY MAINTENANCE ADVISOR:

Q51. Did you -- did you hear later at all that the gimbal nut had spun? Did you hear that from anyone afterwards?

A51. We had heard -- there was -- the rumor mill was spinning up when, when everything happened. So, we had heard with the gimbal fitting, that something had gone wrong with the gimbal fitting and there was an inspection that was being conducted here on all of them. But, I wasn't honestly holding too much stock on anything I was hearing because I have experienced this before where something happens everybody points fingers, and everybody is an expert. So, I --

MAINTENANCE ADVISOR:

Q52. On this one here, I will say that the safety wire was broken, is what the form kept saying after the flight. So…

A52. Um-hm.

QUESTIONS BY ENGINEERING ADVISOR:

Q53. Not in reference to the incident sortie, but after your, um, after your sortie on the twelfth, was it? Did you hear that the boom gimbal assembly had problems with it?

A53. None. None. We don't typically receive any kind of back brief on a jet that we flown on. If it has a maintenance issue that we write up we are not really in the loop at all regarding the corrective action, unless we happen to fly that tail again.

QUESTIONS BY MAINTENANCE ADVISOR:

Q54. So, if you were going to fly that airplane again, like two and a half weeks later, would you remember that tail, do you think? From that being such an odd situation?

A54. I don't, I don't think so. Uh, we fly on so many different aircraft, and I'm not the type of person to keep -- I know some boom operators do and I know a lot of -- majority of pilots do, keep a log on exactly which tails they fly on for hours purposes, or for logging, but I am…

Q55. But you had seen the eight degree write up in the forms prior to going back there to operate the boom, this time?

A55. Initially, when we stepped to the jet and we checked the forms.

QUESTIONS BY BOOM ADVISOR:

Q56. At no point from your instructor seat did you see any indications on your panel of a malfunction? Whether it be in roll, elevation, surface failure, no checklist other than the one checklist, I think you ran-- did you -- did you end up running a checklist for something, I believe you said earlier?

A56. We didn't end up running --

Q57. You just cycled the flight control switch?

A57. We cycled the flight control switch, just using basic knowledge. To answer your though, we did not see anything, no audible tones, no lights that would've indicated any sort of position failure or failure on our enunciator panel that we have, there was zero indication.

Q58. In all -- boom advisor -- and everything done on your status test panel check prior to take off --

A58. Yes.

Q59. You did that, or Airman did that?

A59. Me and Airman did it together in the back.

Q60. Together. And all of the lights tested, when you tested, everything was fine?

A60. Everything tested normal, normal. And, we even -- when we were -- the reason that I especially went back there with him to run that test was due to us seeing the write up in the 781s about the roll gauge being off. We both saw that and that's a big, that's a big red flag to us.

You know, were seeing one of our gauges is reading incorrectly, we want to make sure that it is working right.

Q61. And was current and qualified? At that point he was going along an M10, or proficiency sortie only? Or was he non-current on contacts?

A61. Um, I -- he was going to get a proficiency sortie, I believe, was the goal of this. Um, it might have been contacts and a proficiency sortie. Uh, but my role was just to facilitate him getting either one of those. I can't speak exactly accurately on what it was exactly that he needed that day.

QUESTIONS BY ENGINEERING ADVISOR:

Q62. You said this is the first time you ever experienced the boom behave that way?

A63. Yes, sir.

Q64. At any time in your past sorties or experience, have you ever notice the boom, um, drift off un-commanded, but you still regain control and continued with the sortie?

A64. No, never. This was my first time ever experiencing the boom not working as advertised.

Q65. So, what drove you to go ahead and knock it off if you felt that you had control of the boom when you were on the stick?

A65. Uh, a couple things. One, our role gauge wasn't working effectively which our checklist would cause us to knock it off at that point, being that our gauge doesn't work. And two, we felt as if we had enough control over the boom to stow it, but we did not feel comfortable with a boom that when -- without input was flying to 18 degrees, to make a contact.

Q66. You said you were -- you had been in the instructor role for a year now?

A66. Uh, at this -- right -- currently, a year. At that point, eight months, nine months.

Q67. What has been taught about -- what is considered erratic?

A67. To be honest with you, not really much. I don't think much -- a lot of our training has talked about much about erratic boom movement and what exactly erratic would be. I think it's just assumed in our community, erratic would be the boom moving quickly in an axis that you didn't input a command in.

Q68. What is taught about being un-commanded? Is there -- is there a clear understanding about what un-commanded, or not responding type verbiage? Does everybody have the same understanding on that when people are being trained on the boom?

A68. I believe so. If you are not making a command to the boom, and the boom is moving in a direction other than what is desired, then I believe that would be deemed un-commanded.

Q69. And, are you guys taught to go ahead and knock it off? So if, for example, if role gauge was reading correctly, but your -- the boom was still drifting off un-commanded, would you have continued with the sortie --

A70. No.

Q71. -- Or would you have called it off?

A71. I would have called it off. I wouldn't have felt comfortable in a sortie trying to make contact with another aircraft in any environment, night or day, when the boom wasn't working exactly as it's supposed to be working. Because, in my head what I'm thinking is, okay now it's stable, right, like it's moving with my control inputs. But, what if the receiver is five feet from the contact position, and it decides not to behave stably, that's not a position I want to put myself in.

BOARD PRESIDENT: Any more questions?

QUESTIONS BY BOARD PRESIDENT:

Q72. Okay, the last one. You may have answered this, had -- did you either before, or after this sortie, talk to any of the previous -- the crew from the day prior that flew this plane, about the write up and what they experienced?

A72. I did not. I spoke with, um, [EBO], in my squadron, he said that he had spoke with, I believe it was [IBO] that had wrote it up initially, that the eight degrees off write up. And I was talking to the guys in the squadron about it, and what we experienced and how odd it was and [EBO] heard it and was like, oh [IBO] over at the FTU, was the one that flew the jet previously and experienced and eight degrees off. But, I never spoke with [IBO] about it.

BOARD PRESIDENT: Okay, okay.

QUESTIONS BY LEGAL ADVISOR:

Q73. Sergeant [IBO2], what's the FTU?

A73. The formal training unit. KC-10 formal training unit.

BOARD PRESIDENT: Any other questions? All right, thank you..

Are there any matters we've addressed, or any additional matters that we have not addressed, that you think are - that you would like to clarify, or any additional information that you want to bring up that you think is important to us?

WITNESS: No, I think that is all of it.

BOARD PRESIDENT: All right. That concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this accident investigation board prior to the public release of the final report. Thank you for your time and cooperation, you are dismissed.

VERBATIM TESTIMONY OF STAFF SERGEANT MM1

PRESIDENT: My name is Colonel [BP]. We're investigating the accident involving a KC-10, Tail Number 83-0080, that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation conducted under Air Force Instruction 51-503 is separate and apart from the safety investigation conducted under Air Force Instruction 91-204. This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you gave before the safety investigation board will be kept confidential, if you were so advised, and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the safety investigation board. You may not state that you gave any particular information to the safety board under a promise of confidentiality. Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between your testimony before the safety board and this accident board?

WITNESS: Yes.

PRESIDENT: I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent to this interview being recorded?

WITNESS: Yes.

PRESIDENT: Your testimony in this investigation will be under oath. At this time, I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth, so help you God?

WITNESS: I do.

PRESIDENT: Okay, thank you. Today's date is 20 January. The time is now is 1402 Local. The interview is being conducted in Building 31, Room 55 on Travis Air Force Base. The persons present are the witness, [MM1]; the legal advisor, the pilot advisor, the medical advisor, the maintenance advisor, the engineering advisor, the weather advisor, and the recorder. I am Colonel [BP], the board president. The witness has been sworn.

PRESIDENT: Did he give a previous medical?

MEDICAL MEMBER: Yes.

PRESIDENT: Okay. So you previously made a statement to the safety investigation board via the -- what is that?

MEDICAL MEMBER: The 72-hour, 14-day history.

PRESIDENT: Yeah, the 72-hour, 14-hour history. Do you wish to adopt that as part of your testimony today?

WITNESS: Yes.

Q1 (PRESIDENT): Okay. Please state your first and last name.
A1 (WITNESS): [MM1].

Q2 (PRESIDENT): What unit are you assigned to?
A2 (WITNESS): 60th MXS.

Q3 (PRESIDENT): And what's your duty title?
A3 (WITNESS): Hydraulics Craftsman.

PRESIDENT: Okay. At this point I'm going to turn the interview over to [MM] who will conduct the questions.

Q4 (MAINTENANCE MEMBER): Good afternoon. I'm going to start off with just the first write-up. So I've got this very first write-up. It says…do you recall working a write-up on aircraft 3080 for a roll gauge showing 8 degrees when the boom is centered at 0 degrees? Do you remember working that write-up on the 11th?
A4 (WITNESS): On the 11th of October?
Q4 (MAINTENANCE MEMBER): Yes, Sir.
A4 (WITNESS): Yes.

Q5 (MAINTENANCE MEMBER): Do you remember what turn around fault isolation or "Taffy" or system knowledge you used to determine the Dual Rotary Voltage Transducer or Transformer -- the DRVT -- needed adjusting. Do you remember what you use to...
A5 (WITNESS): The Taffy, 28 Taffy, and the sensor readouts.

Q6 (MAINTENANCE MEMBER): Would this be the Taffy -- again this is Taffy 28-70. Would this be the Taffy you would've utilized to get to that point, I guess, for adjustment or do you know which number?
A6 (WITNESS): It would be -- I used the sensor readouts itself. That's another page.
Q7 (MAINTENANCE MEMBER): Okay. I'll find it. Okay and what method or Tech Data did you utilize to adjust the DRVT or Dual Rotary Voltage Transducer and can you walk us through how that is done?
A7 (WITNESS): The Taffy, basically, it says you can use -- I forget the wording exactly -- but it says you can adjust it to whatever parameters, basically, that it gives you and you check it with a preflight.

Q8 (MAINTENANCE MEMBER): So what equipment would you have used? So you're saying -- would you have used the...
A8 (WITNESS): What tools exactly?
Q8 (MAINTENANCE MEMBER): Like an ARB. So did you use the STP, ARB; what'd you use --
A8 (WITNESS): We used the STP.

Q9 (LEGAL ADVISOR): And can you just tell us just real briefly, what's an STP?
A9 (WITNESS): Status test panel.

Q10 (MAINTENANCE MEMBER): So a 28-72-05, would this be the one, the maintenance manual you used for adjusting the roll position or you would use the one for that?
A10 (WITNESS): The sensory, that's the taffy. That's what we use.

Q11 (MAINTENANCE MEMBER): Okay. We're going to need to get that. So again, I just want to walk through. At that point, did you lower -- this is maintenance member still -- did you lower the boom to do all that?
A11 (WITNESS): No.

Q12 (MAINTENANCE MEMBER): So it's up and stowed?
A12 (WITNESS): Yes.

Q13 (MAINTENANCE MEMBER): Using the STP?
A13 (WITNESS): Correct.

Q14 (MAINTENANCE MEMBER): To get voltage reading off the DRVT?
A14 (WITNESS): Correct because it says it has to be stowed and retracted to make any adjustments.

Q15 (ENGINEERING MEMBER): This is the engineering advisor. About how many inches or feet of gap do you have to make that adjustment?
A15 (WITNESS): What do you mean?
Q15 (ENGINEERING MEMBER): When you go to make an adjustment on the DRVT.
A15 (WITNESS): How much to get my hands in there?
Q15 (ENGINEERING MEMBER): How much room?
A15 (WITNESS): Probably a good foot. It's enough space. You just lower the petal door and make your adjustments from there.

Q16 (MAINTENANCE MEMBER): On this arm [indicating DRVT bell crank arm], is that correct? This is maintenance member again. On the arm of this DRVT, so you would be adjusting the internal?
A16 (WITNESS): Yeah, the center portion.

Q17 (MAINTENANCE MEMBER): So we're showing just the center shaft of the DRVT is what you'd be rotating while this [indicating DRVT bell crank arm] stays in place?
A17 (WITNESS): Correct.

Q18 (MAINTENANCE MEMBER): Okay. Were you able to see -- this is still maintenance member. Were you able to see if this pin [indicating DRVT roll indicator pin] was actually in the tangs up there? Were you able to see that from that gap that you had?
A18 (WITNESS): Yes.

Q19 (MAINTENANCE MEMBER): Did you happen to run any sort of aircraft history prior to working this write-up or during working this write-up?
A19 (WITNESS): No, I did not.

Q20 (MAINTENANCE MEMBER): Okay. The same aircraft flew that next day, on October 12th, and had a similar write-up. Are you aware that it had a similar write-up the next day?
A20 (WITNESS): Yes.

Q21 (MAINTENANCE MEMBER): Did you work that write-up or were you at the debrief once it came down or did you get turnover from someone else on the same aircraft?
A21 (WITNESS): No, Sir; I got turnover.
Q21 (MAINTENANCE MEMBER): Turnover?
A21 (WITNESS): Yes.

Q22 (MAINTENANCE MEMBER): The turnover people that gave it to you, did they know that it was a repeat type write-up, that it was the day before?
A22 (WITNESS): Yes.

Q23 (MAINTENANCE MEMBER): Okay. The hydraulic turnover log, which I have here, big green book; does show that you worked it again and stated, "Dropped boom. Gimbal still requires R-square roll tilt. Linear Variable Differential Transducer -- LVDT -- brackets already moved". Can you tell us what Taffy they used or if you know what they used to lead to the replacement of the gimbal at that point?
A23 (WITNESS): Well, it's my knowledge, prior experience, whenever the safety wire is broken, like, we can't repair that on the gimbal itself. So we replace the gimbal.

Q24 (MAINTENANCE MEMBER): So the safety wire -- we're talking the safety wire from the gimbal nut to the yoke, was broken?
A24 (WITNESS): Yes.

Q25 (ENGINEERING MEMBER): This is engineering advisor. Did you yourself visually inspect it and verify that the safety wire was broken or were you told that it was broken?
A25 (WITNESS): They told me, and once I got to the actual job site, I verified.
Q26 (ENGINEERING MEMBER): And can you clarify, who is "they" that told you it was broken?
A26 (WITNESS): It would have to be our prior shift. I believe it was [MM2]'s shift. I don't know exactly everyone on there but that was the turnover.

Q27 (MAINTENANCE MEMBER): And you feel you would have seen that safety wire broke the day before if that safety wire was broke when you were adjusting the DRVT?

A27 (WITNESS): Correct. Any time I, you know, inspect the DRVT I always check that.

Q28 (MAINTENANCE MEMBER): What steps of the gimbal replacement were you part of? It's hard to read in these turnover logs. This is maintenance member again. I'm just trying to figure out which parts you were a part of.
A28 (WITNESS): It's kind of foggy but unless the roll tilt, removing the roll tilt LVDTs is part of it, that would be about it. But other than that, I didn't have any part of it. I just removed the boom; our shift just removed the boom.

Q29 (MAINTENANCE MEMBER): So you guys did -- you dropped it. You dropped the boom?
A29 (WITNESS): Correct.

Q30 (MAINTENANCE MEMBER): And what form of dropping the boom did you use? Did you use -- could you tell me what equipment was used to drop the boom?
A30 (WITNESS): The trailer, the bullets for removing the pins, AR nozzle tester, SPR adapter, petal doorkeepers.

Q31 (MAINTENANCE MEMBER): Was there a cable used? I guess which cable was used? was it on a cable?
A31 (WITNESS): Yes.

Q32 (MAINTENANCE MEMBER): Which one? Do you know? I mean, you're talking the one for the stand itself?
A32 (WITNESS): Well, the cable is connected to the boom itself when you lower it. So you're not actually -- it's not connected to a cable. It's connected to the trailer itself.

Q33 (MAINTENANCE MEMBER): But from the aircraft to the boom, did you use your own cable or you didn't use the aircraft cable or what did you use to lower it on to the stand?
A33 (WITNESS): It lowers on its own cable.

Q34 (ENGINEERING MEMBER): The hoist cable?

Q34 (MAINTENANCE MEMBER): You're talking the hoist cable itself?
A34 (WITNESS): Yes.

Q35 (ENGINEERING MEMBER): Or not the winch cable?
A35 (WITNESS): Yes, the one that's connected to the winch itself.

Q36 (MAINTENANCE MEMBER): So did you ever swap cables out to the one that is this particular length for the stand?
A36 (WITNESS): No, well it connects to the stand itself. You put the turn arms connected to that end and then it just lowers down with the cable itself. You don't use a boom cable or anything like that unless you draining it. We did use a boom cable when we drained it but when we were lowering it, it's lowered by its cable.

Q37 (ENGINEERING MEMBER): Its own boom hoist cable.
A37 (WITNESS): The boom hoist cable, yes.

Q38 (MAINTENANCE MEMBER): So you weren't part of putting it back up?
A38 (WITNESS): No, Sir.

Q39 (MAINTENANCE MEMBER): And then later on, on 17 October, in the turnover log -- this is maintenance member again -- it does state that you wrote up that the A-check work cards were complied with. Did you accomplish those work cards yourself while it was in A-check?
A39 (WITNESS): No.

Q40 (MAINTENANCE MEMBER): If you wrote complied with?
A40 (WITNESS): No, my Airmen.

Q41 (MAINTENANCE MEMBER): And was there any findings or discrepancies during that A check for boom findings?
A41 (WITNESS): No.

Q42 (MAINTENANCE MEMBER): What Airmen would that have been that actually did the inspection?
A42 (WITNESS): I really don't recall. I mean, I could tell you who was on my shift but it could be either , could be Sergeant .

Q43 (MAINTENANCE MEMBER): Okay. Do you recall working on aircraft 3080's boom area any time after 17 October; that you remember?
A43 (WITNESS): No. I believe it was the 30th when they had the write-up where it was uncontrolled flight controls. We did the debrief. I just did a quick walk around because it was the end of shift to see if there was any damage or anything like that.

Q44 (ENGINEERING MEMBER): This is the engineering advisor. Can you detail that walk around that you did?
A44 (WITNESS): I inspected the preload bungies, the side of the aircraft, basically, the skin. It's a visual inspection. I looked at the DRVT, checked the sensor readouts, made sure nothing flagged or anything like that on the STP, the status test panel.

Q45 (ENGINEERING MEMBER): So you had the panels open, you inspected the bungies forward of the gimbal assembly?
A45 (WITNESS): Correct.

Q46 (ENGINEERING MEMBER): And you saw no issues there. You stated that you checked out -- you did a reading of the DRVT at that time?
A46 (WITNESS): Yes.

Q47 (ENGINEERING MEMBER): Did you visually inspect pin placement?
A47 (WITNESS): Yes.

Q48 (ENGINEERING MEMBER): And was it...
A48 (WITNESS): Everything was intact.
Q48 (ENGINEERING MEMBER): Everything was intact?
A48 (WITNESS): Yes.

Q49 (MAINTENANCE MEMBER): And still -- this is maintenance member -- still the safety wire from the nut to the yoke as far as you can see too?
A49 (WITNESS): Yes.

Q50 (MAINTENANCE MEMBER): Who else might've been looking at that? You said there's a lot of people. I mean, your whole team was out there. Who else was doing that inspection?
A50 (WITNESS): I was mainly looking at the DRVT itself. Everyone else was looking around the aircraft seeing if they could find anything. And that would be Sergeant was there, Airman was there, I believe Sergeant was on our shift.

Q51 (MAINTENANCE MEMBER): But you yourself saw the pin still engaged in the -- this maintenance member again -- saw the pin still engaged in those two tangs?
A51 (WITNESS): Yes.

Q52 (MAINTENANCE MEMBER): And the safety wire not broke?
A52 (WITNESS): Correct.

Q53 (ENGINEERING MEMBER): This is engineering advisor. Did you do your inspection when it was daytime or nighttime?
A53 (WITNESS): It was during the day.

Q54 (ENGINEERING MEMBER): During the day. And do you know who would've inspected the A-frame, the part of the aircraft structure that hangs down where the gimbal torque tube and fittings -- you know -- the gimbal fittings attach to; do you know who inspected that area?
A54 (WITNESS): No.

Q55 (MAINTENANCE MEMBER): Have you ever had problems -- this is maintenance member again. Have you ever had problems adjusting this -- just trying to get a good feel of how hard that is to adjust.
A55 (WITNESS): It's pretty sensitive but not really like impossible to figure out, you know?

LEGAL ADVISOR: And this is the legal advisor. When the maintenance member is referring to "this"...

MAINTENANCE MEMBER: I'm sorry.

LEGAL ADVISOR: If you could just specify.

Q56 (MAINTENANCE MEMBER): The DRVT or Dual Rotary Transducer -- Voltage Transducer again. So because we've just been trying to do this ourselves as far as putting an internal hex-head wrench on the shaft. And as long as this is staying in its place like it's supposed to, it's pretty easy to turn once you loosen this nut, once you loosen the lower nut on the bell crank arm?
A56 (WITNESS): Correct.

Q57 (ENGINEERING MEMBER): This is engineering advisor once you have it at the proper reading, do you keep the Allen wrench engaged while you tighten that bolt, the bottom bolt so that it --
A57 (WITNESS): Typically I don't.

Q58 (ENGINEERING MEMBER): So you take out the --
A58 (WITNESS): Remove it and then torque it down.

Q59 (ENGINEERING MEMBER): Then you torque it down, the bottom bolt?
A59 (WITNESS): Correct.

Q60 (ENGINEERING MEMBER): Do you check out the reading again to make sure that it wasn't displaced?
A60 (WITNESS): That it didn't move? Yes.

Q61 (MAINTENANCE MEMBER): On the ARB, which is the Air Refueling Boom Tester?
A61 (WITNESS): On the status test panel.
Q61 (MAINTENANCE MEMBER): On the status test panel?
A61 (WITNESS): Yes.

Q62 (ENGINEERING MEMBER): This is engineering advisor. In the checkout and adjustment of the DRVT, does the Tech Data state to use the air refueling boom box or the status test panel?
A62 (WITNESS): It does, but it also says you could use the sensor readouts as an alternative.

Q63 (MAINTENANCE MEMBER): Can you show me that in this Tech Data? I'm just trying to find it in this Tech Data and this is the adjust...
A63 (WITNESS): I want to say it's in the Taffy itself.

Q64 (MAINTENANCE MEMBER): The Taffy for?
A64 (WITNESS): The 28 Taffy.

MAINTENANCE MEMBER: If you can get that to us, that would be...

WITNESS: Yes, I can look for it.

Q65 (MAINTENANCE MEMBER): So I just want to restate. So you knew it was a repeat -- or the second write-up was very similar to the first one. So probably the hydraulic shop knew at that point that that was a similar write-up, I'm guessing?

A65 (WITNESS): Yes.

Q66 (MAINTENANCE MEMBER): And then once you -- you say the third time we've had a boom write-up on the 30th when you were out there -- maintenance member again -- you would know that it's had this issue two times before?
A66 (WITNESS): Right. I didn't know at that point when we had the debrief but once we went in and ran the history, I figured that out.

Q67 (MAINTENANCE MEMBER): So the oncoming shift, whoever you were turning that over to probably should've known that it had been happening.
A67 (WITNESS): Right.

MAINTENANCE MEMBER: You have anything else?

Q68 (ENGINEERING MEMBER): Yes, this is engineering advisor. You said you were not part of the gimbal installation?
A68 (WITNESS): Yes, I wasn't.

Q69 (MAINTENANCE MEMBER): You weren't. Do you know who installed the DRVT?
A69 (WITNESS): I'm not sure. It would have to be our -- because I worked with one day shift, we have four different team. So it would have to be the second day shift, but I'm not too sure who was on that team exactly or who was out installing the gimbal in the boom.

Q70 (PILOT MEMBER): From the pilot member. Whenever you're doing the inspection of the DRVT after that initial debrief with the crew on the 30th, what did you use to actually look back there? Did you pull the panels down or did you use a mirror? How did you do it?
A70 (WITNESS): A mirror. I use my phone as well. I actually have a picture of the DRVT itself.

PILOT MEMBER: You think there's a possibility --

Q71 (MAINTENANCE MEMBER): On which night?
A71 (WITNESS): On the 30th.

Q72 (MAINTENANCE MEMBER): On the 30th. You have a picture of the pin?
A72 (WITNESS): Yes.

MAINTENANCE MEMBER: Yeah, we definitely need that.

PILOT MEMBER: Can we get that?

Q73 (ENGINEERING MEMBER): This is engineering advisor. What drove you to take that picture?
A73 (WITNESS): Well, it's hard to see with a mirror itself, you know what I mean, so.

ENGINEERING MEMBER: No, we can relate.

PRESIDENT: Who did the work the night, and said it was difficult?

MAINTENANCE MEMBER: That was the next shift. That was Sergeant [MM2].

PRESIDENT: Yeah, primarily.

Q74 (MAINTENANCE MEMBER): You said that's the night of the 30th?
A74 (WITNESS): Yes.

Q75 (MAINTENANCE MEMBER): Before any work?
A75 (WITNESS): Correct.

Q76 (LEGAL ADVISOR): And this is the legal advisor. So as far as those photos, did you personally take the photographs that you're referring to?
A76 (WITNESS): I did.

Q77 (LEGAL ADVISOR): Okay. At the conclusion of the interview, can we get copies of those for possible inclusion in the report?
A77 (WITNESS): Yes.

LEGAL ADVISOR: All right, thank you

Q78 (ENGINEERING MEMBER): Is it just one picture?
A78 (WITNESS): It's three.

MAINTENANCE MEMBER: Yeah, we'll get these pictures from you. That'll be helpful. Any other questions? I don't have any more right this minute.

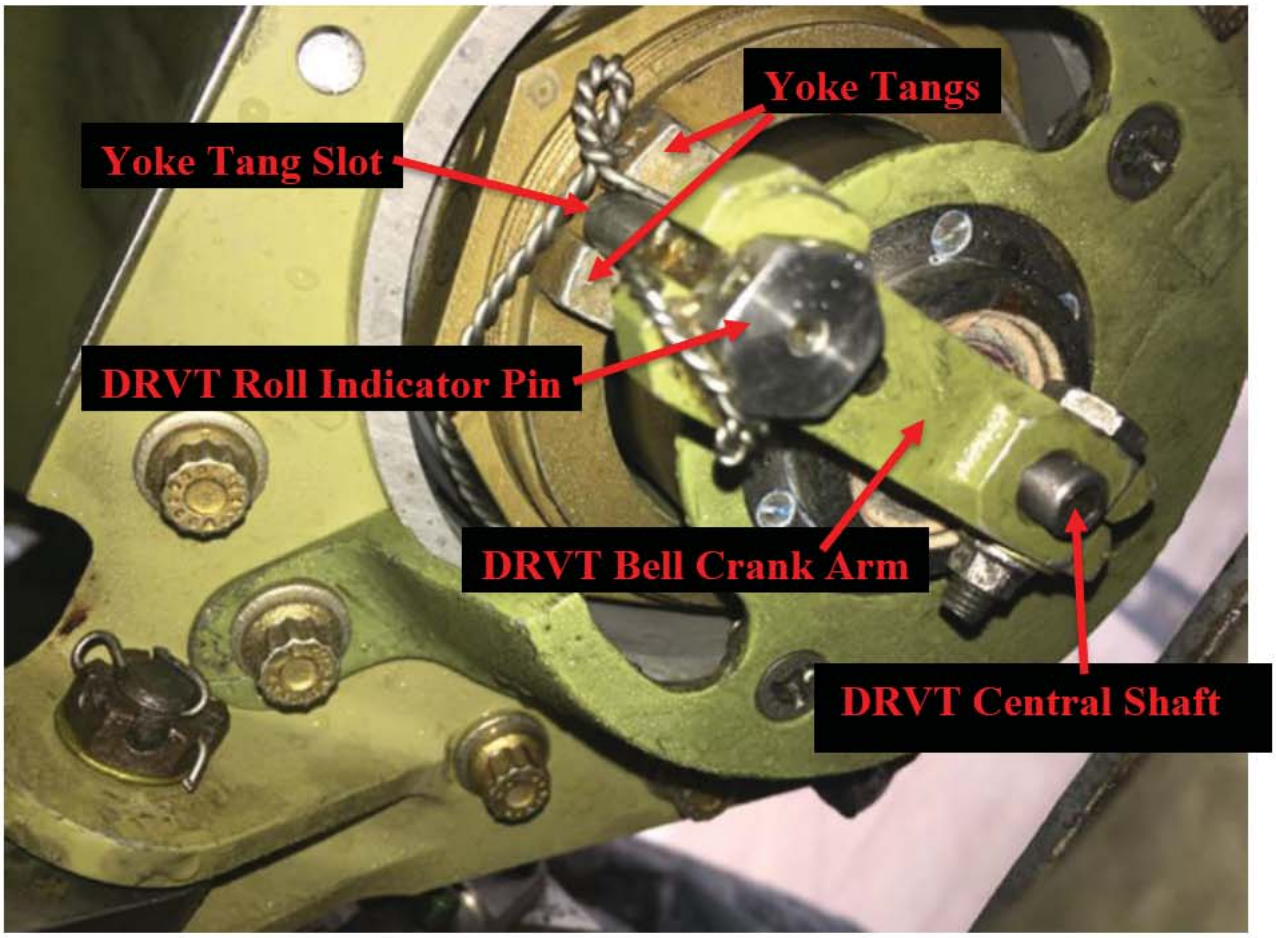
Q79 (PRESIDENT): Are there any matters that we've addressed so far that you wish to clarify?
A79 (WITNESS): No

Q80 (PRESIDENT): Are they any additional matters that we've not address that you think are important for this investigation?
A80 (WITNESS): No.

Q81 (PRESIDENT): Is there anything you wish to add to your testimony?
A81 (WITNESS): No.

PRESIDENT: Okay. That concludes the interview. You're reminded of the official nature of this investigation and that you are not to discuss your testimony with anyone else outside of this accident investigation board prior to public release of the final report. Thank you for your time and cooperation. You are dismissed.

[redacted]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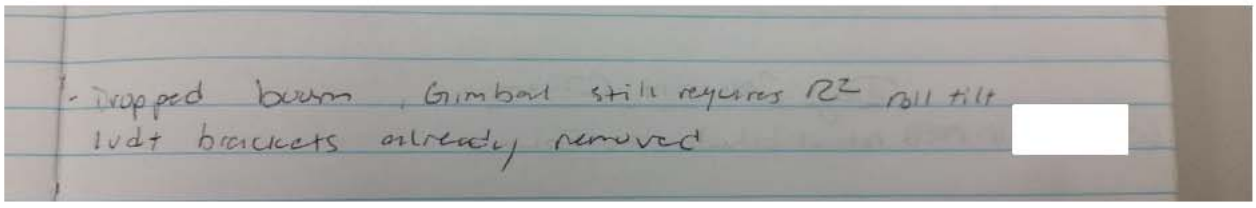
DRVT Bell Crank Arm
DRVT Central Shaft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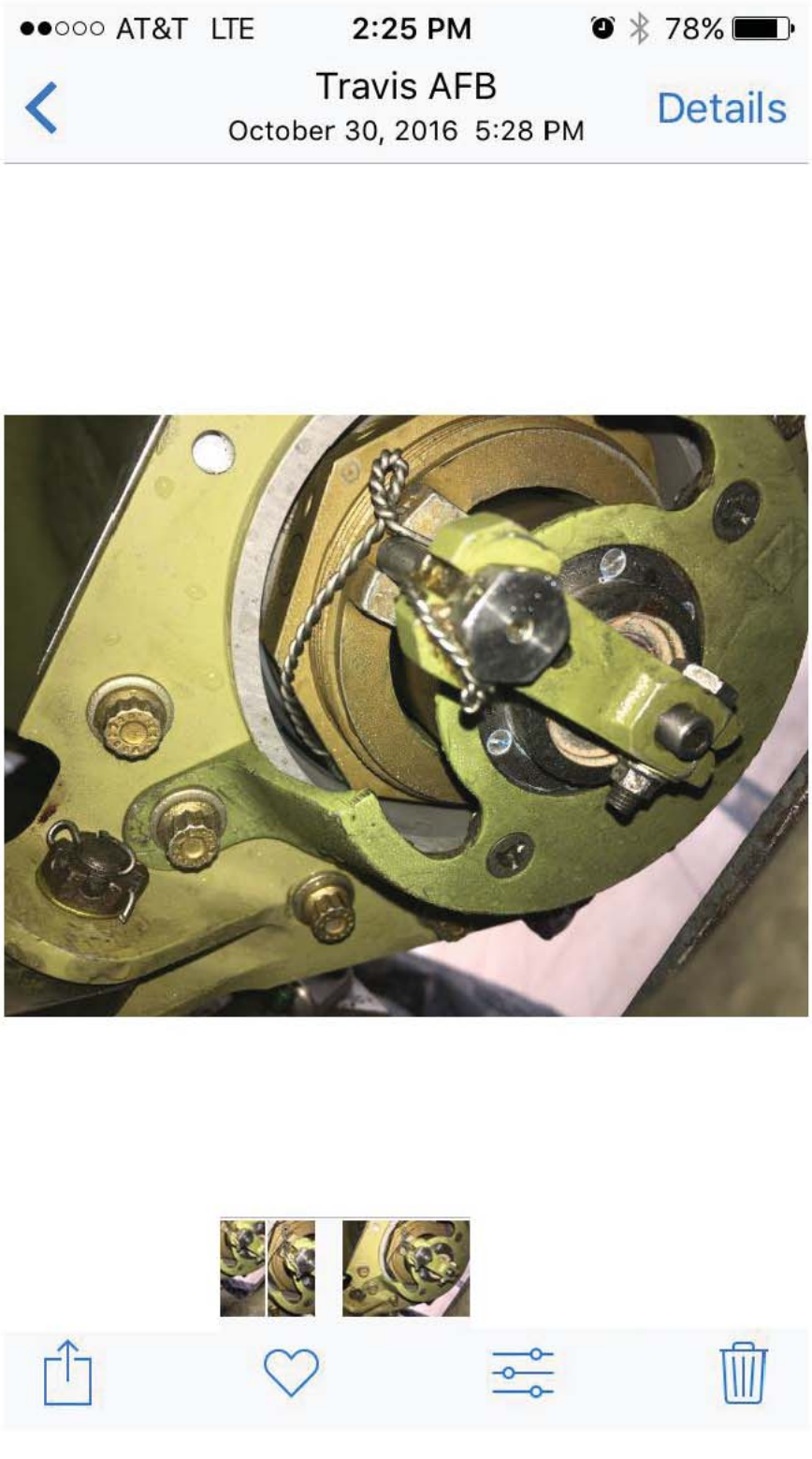
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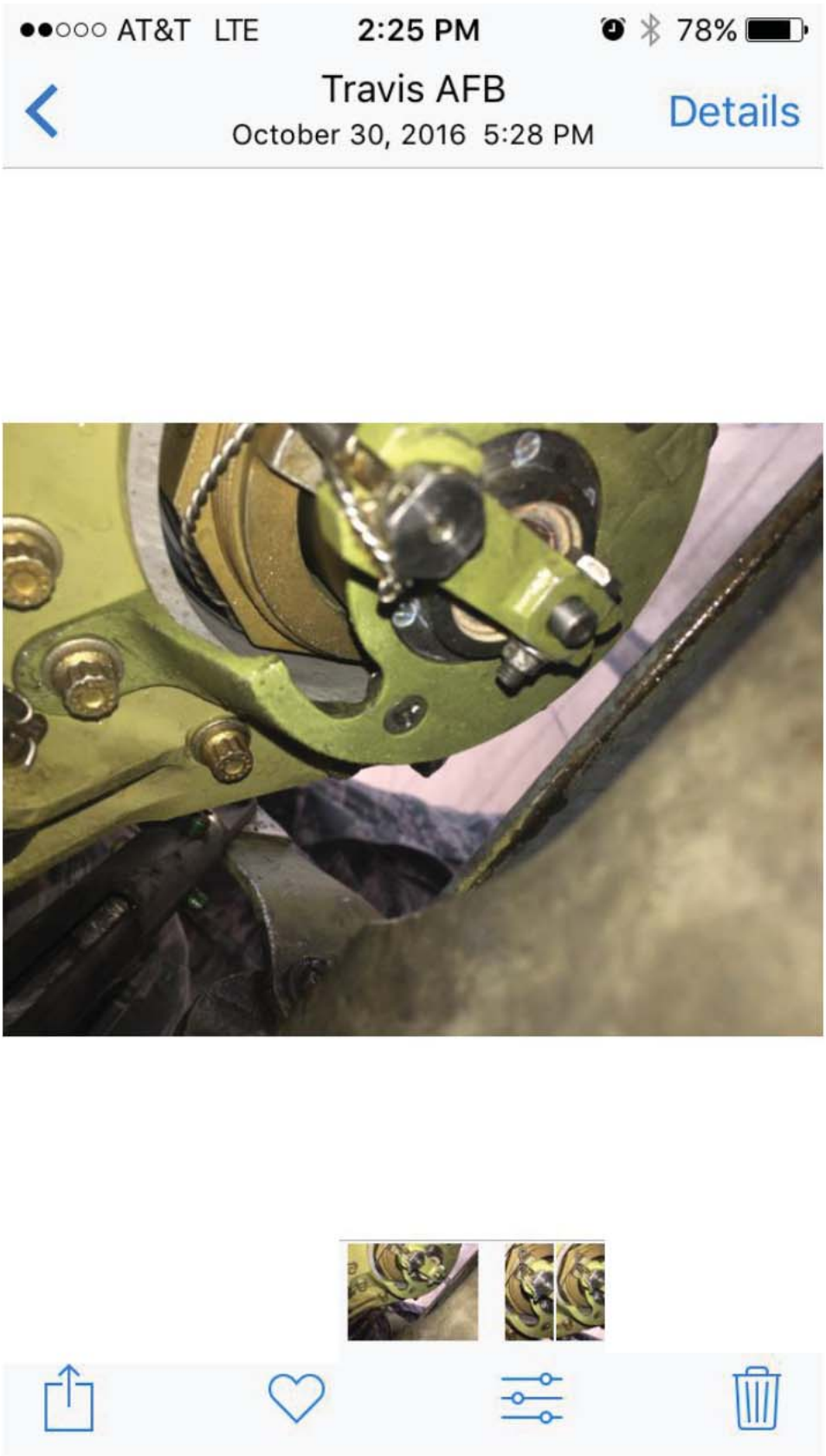
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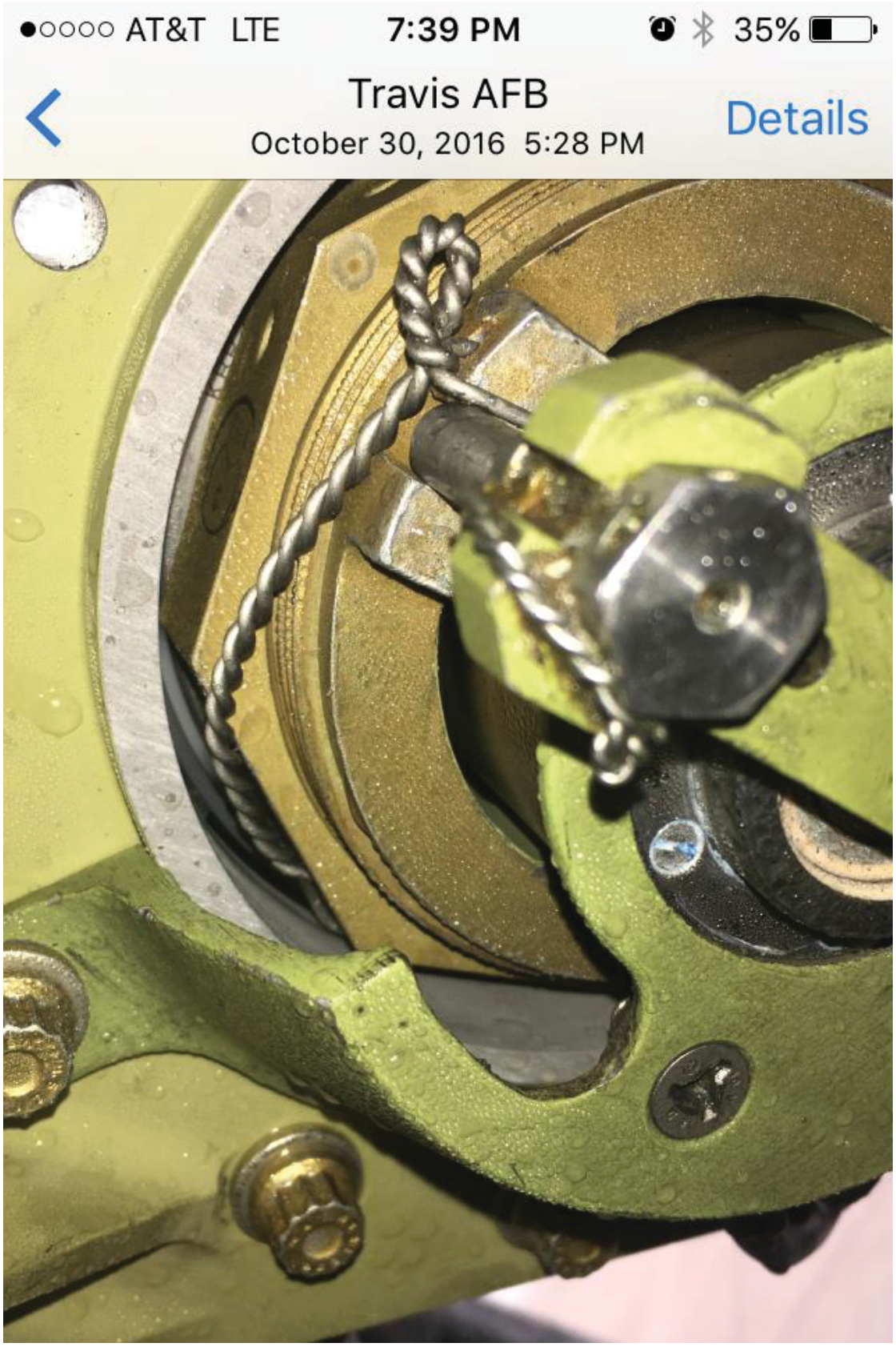
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VERBATIM TESTIMONY OF STAFF SERGEANT MM2

PRESIDENT: My name is Colonel [BP]. We are investigating the accident involving a KC-10, Tail No. 83-0080, that occurred on 1 November 2016, near Mountain Home Air Force Base, Idaho. This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204. This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident; to prepare a publicly releasable report; and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings; and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you may have given before the safety investigation board will be kept confidential if you were so advised and could be only -- and could be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the safety investigation board.
You may not state you gave any particular information to the safety board under a promise of confidentiality. Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public.

Do you understand the difference between any testimony you gave before the safety board and this accident board?

WITNESS: Yeah. I just don't reference it back and forth.

PRESIDENT: Sure. Okay.

I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent to this interview being recorded?

WITNESS: I consent.

PRESIDENT: Okay. Your testimony in this investigation will be under oath. At this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony are you about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth, so help you God?

WITNESS: I do.

PRESIDENT: All right. Thank you.

Today is the 24th of January 2017. The time now is 1156 local Pacific. This interview is being conducted in Building 31, Room 55 on Travis Air Force Base.

The persons present are the witness, Staff Sergeant [MM2]; the legal advisor; the pilot advisor; the boom advisor; the medical advisor; the maintenance advisor; the engineering advisor; the weather advisor; and the recorder. I'm Colonel [BP], the board president. The

witness has been sworn.

Do you give a 7214?

(LEGAL ADVISOR): No, sir.

PRESIDENT: Okay.

Q1 (PRESIDENT): Please state your first and last name.
A1 (WITNESS): My name is [MM2].

Q2 (PRESIDENT): Okay. What unit are you assigned to and what's your duty title?
A2 (WITNESS): 60th MXS and hydraulic specialist.

Q3 (PRESIDENT): Okay. And how long have you been hydro specialist?
A3 (WITNESS): Uh, career-wise or just here?

Q4 (PRESIDENT): Just here, I guess.
A4 (WITNESS): Uhm, coming on two years.

PRESIDENT: Okay. And at this point I'm going to turn the question over to the maintenance advisor.

CMSGT (MAINTENANCE ADVISOR): Okay. Welcome.

Q5 (CMSGT MAINTENANCE ADVISOR): What is your man number?
A5 (WITNESS): [witness responds].

Q6 (CMSGT MAINTENANCE ADVISOR): And how long you been working KC-10 hydraulics?
A6 (WITNESS): Two years.

Q7 (CMSGT MAINTENANCE ADVISOR): Two years.
A7 (WITNESS): Yes, sir.

Q8 (CMSGT MAINTENANCE ADVISOR): Did you come off tankers, or what did you do?
A8 (WITNESS): Yes, sir. I worked 135s at Mildenhall for four years.

Q9 (CMSGT MAINTENANCE ADVISOR): In October 2016, were you working dayshift or night shift?
A9 (WITNESS): I was working night shift.

Q10 (CMSGT MAINTENANCE ADVISOR): Night shift.
Do you recall working a boom write up on Aircraft 3080 for "Boom roll gauge shows 8 degrees when boom is centered" or one for the "Boom was 4 to 5 degrees to the left and roll

gauge was showing 11 to 12 degrees to the right"? Do you remember working either one of those?
A10 (WITNESS): Uhm, I remember working it because of -- they found a broken safety wire on the -- on the nut on the back of the gimbal for the roll of issues.

CMSGT (MAINTENANCE ADVISOR): All right. I have to go to this book because I -- I want to make sure I have the time right. And lawyers --

CAPT (LEGAL ADVISOR): Describe the book.

CMSGT (MAINTENANCE ADVISOR): I will. Yeah, once I get to it. Totally.

Q11 (CMSGT MAINTENANCE ADVISOR): So maintenance advisor is showing the hydraulic log; and I'm showing the left side "Nights 2016 October 12."
A11 (WITNESS): Okay.

Q12 (CMSGT MAINTENANCE ADVISOR): Where the boom write up is this: It says "Boom roll gauge shows 8 degrees right when boom is center."
A12 (WITNESS): Yes, sir.

Q13 (CMSGT MAINTENANCE ADVISOR): And I -- I -- can you just verify that's your writing. Right? Because you have the nicest writing in this book I think.
A13 (WITNESS): I think so.

WITNESS: Yes, sir. It is my writing.

Q14 (CMSGT MAINTENANCE ADVISOR): Okay. Just want to verify. And so on this write up -- in this write up I did get that you say you -- you tried adjusting the DRVT but had no luck with anything.
A14 (WITNESS): Yeah.

Q15 (CMSGT MAINTENANCE ADVISOR): And so the whole write up says "Tried adjusting DRVT, had no luck with anything. Lowered boom. Removed bathtub panel, petal doors, keepers, installed everything written up on -- on hand panel and truck." Can you explain this statement and what tasks you were working on at that point?
A15 (WITNESS): I wouldn't know the task off the top of my head; but when we was out there troubleshooting, trying to figure it out and everything, I know we had Sergeant up in the ARO, I believe, on that date.

Q16 (LEGAL ADVISOR): And this is the legal advisor, what's the ARO?
A16 (WITNESS): I guess basically the boomer station. That's all I know it as.

Q17 (CAPT LEGAL ADVISOR): Okay. It's where the boomer sits in the back of the aircraft?
A17 (WITNESS): It's a air refueling office maybe. Operators… I mean, that's where they do their business. Right?

Q18 (LEGAL ADVISOR): Okay. So but just to clarify, it's the -- where the boom operator sits --
A18 (WITNESS): Yes.

Q19 (CMSGT MAINTENANCE ADVISOR) -- up in the back of the aircraft?
A19 (WITNESS): That's definitely where it's at.

Q20 (LEGAL ADVISOR): Thank you. Okay.
A20 (WITNESS): Uhm, he was looking on the gauge as we adjust -- or tried to make adjustments to see if anything would hold or anything, like when it would say it's stowed, if it was actually at zero itself or whatever.

Q21 (CMSGT MAINTENANCE ADVISOR): So Sergeant was in the ARO --
A21 (WITNESS): Yeah.

Q22 (CMSGT MAINTENANCE ADVISOR) -- the boomer station, if you will; and you were outside?
A22 (WITNESS): Yes, sir.

Q23 (CMSGT MAINTENANCE ADVISOR): Or --
A23 (WITNESS): It was me and a couple of the other new kids.

Q24 (CMSGT MAINTENANCE ADVISOR): So who was actually trying to turn the -- the screw, I guess?
A24 (WITNESS): I think it was .

Q25 (CMSGT MAINTENANCE ADVISOR): Okay. And so when you say you had no luck at anything, like, I mean, what -- what would -- what do you think you would be trying there to say that?
A25 (WITNESS): Just no luck. I mean, any -- anything that Sergeant was suggesting to us and everything, it was like, "Oh, well, it's not staying at there." It would -- well, basically it would want to fall back over and everything. It was, like, real loose and everything. So as soon as -- as soon as somebody would let go of it, from my understanding, it would just kind of move freely. And then that's when we found out, like, by our dayshift counterparts that the gimbal safety wire broke and that would give it its erratic stuff --

Q26 (CMSGT MAINTENANCE ADVISOR): For the following dayshift or the dayshift prior?
A26 (WITNESS): Dayshift that was coming on --

Q27 (CMSGT MAINTENANCE ADVISOR): Oh.
A27 (WITNESS) -- to us -- or following us.

Q28 (CMSGT MAINTENANCE ADVISOR): Did -- had they worked the day before or

not? No? Was that -- you know, if that was a Friday or a Monday?
A28 (WITNESS): I can't remember that far back, honestly.

Q29 (CMSGT MAINTENANCE ADVISOR): So the shift that comes on, you guys are fighting the pin staying in place. And then the shift comes on and says "Hey, safety --
A29 (WITNESS): Then we --

Q30 (CMSGT MAINTENANCE ADVISOR) -- wire is broke"?
A30 (WITNESS): Yeah, we found -- yeah. We found the safety wire broke.

Q31 (CMSGT MAINTENANCE ADVISOR): Which then changes obviously the --
A31 (WITNESS): The entire gimbal.

Q32 (CMSGT MAINTENANCE ADVISOR): The entire --
A32 (WITNESS): And we already ordered a new DRVT as well; so everything just got swapped over when we got the new gimbal.

Q33 (CMSGT MAINTENANCE ADVISOR): Did you work it after that night, after you got off that night and turned it back over to dayshift, they said the safety wire is broke, did you work it the following night too?
A33 (WITNESS): I can't recall because I -- I don't remember if it was my Friday or anything.

CMSGT (MAINTENANCE ADVISOR): Okay.

Q34 (CAPT LEGAL ADVISOR): And this is the legal advisor, just circling back, do you know what DRVT stands for?
A34 (WITNESS): Uhm, digital -- ah, digital reading something.

Q35 (CMSGT MAINTENANCE): How about dual rotary voltage transducer?
A35 (WITNESS): Sure. Let's -- let's go with that too. I don't know.

Q36 (CAPT LEGAL ADVISOR): Okay. Okay. Thanks.
A36 (WITNESS): A lot of it is -- those acronyms get thrown at me so that's what I remember most.

Q37 (CAPT LEGAL ADVISOR): Understood, but that was the component that you are referring to?
A37 (WITNESS): Yes, sir.

Q38 (CIV ENGINEERING ADVISOR): This is the engineering advisor. When you're -- who was it, Sergeant you said was actually the one trying to turn the --
A38 (WITNESS): Airman.

Q39 (CIV ENGINEERING ADVISOR): Airman?
A39 (WITNESS): .

Q40 (CIV ENGINEERING ADVISOR): Was actually the one trying to turn the pin --
A40 (WITNESS): Yeah.

Q41 (CIV ENGINEERING ADVISOR) -- to try and adjust it?
A41 (WITNESS): Uh-huh.

Q42 (CIV ENGINEERING ADVISOR): And you said that it kept on slipping off?
A42 (WITNESS): Yeah.

Q43 (CIV ENGINEERING ADVISOR): Did he check for pin engagement into the yoke tang slot at that time?
A43 (WITNESS): You are going to have to --

Q44 (CIV ENGINEERING ADVISOR): Okay. So this pin right here -- and for the record I'm showing a -- the DRVT.
A44 (WITNESS): Uh-huh.

Q45 (CIV ENGINEERING ADVISOR): And I'm motioning that the pin goes into the tang of the yoke.
A45 (WITNESS): Oh yeah, yeah.

Q46 (CIV ENGINEERING ADVISOR): It's in the slot. Did he check to see that it was engaged?
A46 (WITNESS): Yeah. It seemed like it was barely just holding on. Like it -- I would assume that it just wore out with the broken gimbal. I would assume all the movement from everything would actually start tearing away at the weaker components. So I would -- that's why I would think it wouldn't stay within there. So when we would make our adjustments, it could kind of want to fall out.

Q47 (CIV ENGINEERING ADVISOR): So he -- he actually physically see this thing fall out like this [demonstrating DRVT roll indicator pin and bell crank arm pivoting out from between yoke tangs], just slip away?
A47 (WITNESS): Yeah.

Q48 (CIV ENGINEERING ADVISOR): The whole --
A48 (WITNESS): To my knowledge.

Q49 (CIV ENGINEERING ADVISOR): The whole arm?
A49 (WITNESS): Now you got to understand, I'm down on a ladder, you know, looking at -- up --

Q50 (CIV ENGINEERING ADVISOR): Uh-huh.
A50 (WITNESS): -- at him, and there is only so much room you can actually work in. So a lot of it, you had to take your guy's words on it, you know.

CIV (ENGINEERING ADVISOR): Okay.

CAPT (LEGAL ADVISOR): Well, before you go on, so this is the legal advisor. When the engineering advisor said "like this," he was just allowing the --

CIV (ENGINEERING ADVISOR): The pin to fall freely.

CAPT (LEGAL ADVISOR): Yeah, the pin to fall freely off to the side.

Q51 (CIV ENGINEERING ADVISOR): Did -- do you recall the suggestions from Sergeant that he was stating to try and make it work?
A51 (WITNESS): No, sir. Either it's probably us screwing up -- because, you know, he can't see nothing in the boomer station -- and he would probably be like "Oh, well tighten it." "No, don't do that." "Move it the other way." That's -- that's basically the only commands that he really gave to us.

Q52 (CIV ENGINEERING ADVISOR): Was the DRVT, in fact, replaced with a new one --
A52 (WITNESS): It was --

Q53 (CIV ENGINEERING ADVISOR): -- or did you take the same one?
A53 (WITNESS): -- replaced with a new one, yes, sir.

Q54 (CMSGT MAINTENANCE ADVISOR): Okay. So then -- then obviously the aircraft goes to A-check, and then it's -- it's gone for a minute. Then October 30th the aircraft came back with another boom roll write up that -- that you worked or you signed off on the night of the 30th. Were you aware that this was the same aircraft and that it was a reoccurring write up or that this was --
A54 (WITNESS): I think I was told that it was a repeat.

Q55 (CMSGT MAINTENANCE ADVISOR): That night?

Q56 (CMSGT MAINTENANCE ADVISOR): And can you explain -- trying to understand the time line there. So the airplane came down, it wasn't schedule -- or if it was scheduled, now you're working a boom write up that's a repeat from -- from what someone has told you. Uhm, what did you do that night to -- to sign this off?
A55 (WITNESS): No. Now this is -- is this the night after the gimbal was R-squared?

Q57 (CMSGT MAINTENANCE ADVISOR): Yes, the next flight. Yeah, so this is like --
A57 (WITNESS): All right. So this is --

Q58 (CMSGT MAINTENANCE ADVISOR): -- like 19 --
A58 (WITNESS): -- after --

Q59 (CMSGT MAINTENANCE ADVISOR): -- days later; the gimbal has been

R-squared.
A59 (WITNESS): All right.

Q60 (CMSGT MAINTENANCE ADVISOR): It just came back --
A60 (WITNESS): Okay.

Q61 (CMSGT MAINTENANCE ADVISOR): -- from another sortie.
A61 (WITNESS): Okay. Again, sorry --

Q62 (CMSGT MAINTENANCE ADVISOR): No, I understand. Long time.
A62 (WITNESS): -- because all of these days kind of just run in together when I'm on --

Q63 (CMSGT MAINTENANCE ADVISOR): Uh-uh.
A63 (WITNESS): Especially working nights.

CAPT (LEGAL ADVISOR): And this is the legal advisor jumping back in. You both have said "R-squared." What's that referring to?

Q64 (CIV ENGINEERING ADVISOR): Remove and replace.
A64 (WITNESS): Remove and replace.

CAPT (LEGAL ADVISOR): Thank you.

Q65 (CMSGT MAINTENANCE ADVISOR): Darn terminology.
A65 (WITNESS): Uh-huh.

Q66 (CMSGT MAINTENANCE ADVISOR): So -- so yeah, I -- I mean, on the forms that day -- this is on the 30th -- the write-up comes back saying "During boom lowering, the boom flew to 5 degrees with no input by the operator. Small corrections were made to the -- to align the boom. The boom then flew uncommanded 32 degrees or greater. Right structural limit broken with no command inputs made."
A66 (WITNESS): Now -- now, I do remember getting my turnover from that.

Q67 (CMSGT MAINTENANCE ADVISOR): So you weren't there for a debrief?
A67 (WITNESS): I was not; no, sir.

Q68 (CMSGT MAINTENANCE ADVISOR): Okay.
A68 (WITNESS): I think Sergeant [MM1] --

Q69 (CMSGT MAINTENANCE ADVISOR): Okay.
A69 (WITNESS): -- was the man that debriefed it. Uhm, when I came in, he was telling me that aircrew heard a popping sound or whatever. So my question was "Why isn't the jet impounded then?" If it makes, you know, structure sound, I would assume that would be an impound. Again, that's above us so, you know, he kind of just shrug his shoulders and he was like, well, they just want us to work it.

Q70 (CMSGT MAINTENANCE ADVISOR): By "they," you are probably meaning Production?
A70 (WITNESS): Production, yes, sir. And went out there -- only thing I could think of that maybe could have caused it -- again, I don't have the most experience on this aircraft; and at that night I'm the only KC-10 on the shift. So I was thinking, well, maybe the ARB -- or, sorry, the BCU, which is the boom control unit --

Q71 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A71 (WITNESS): I was thinking maybe it was flagging -- like it doesn't flag itself. Like if it doesn't know -- if it's "slow in the head," I guess --

Q72 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A72 (WITNESS) -- would be the term for it, you -- you won't know any better. Right? If I don't know any better, I don't think I'm doing anything wrong. So that's -- that's how I -- that's how I assumed the BCU works. It can't fail itself. It won't say, "Oh, I'm done. I'm fried." You know?

Q73 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A73 (WITNESS): So, uh, I mentioned, like, maybe we can just swap out BCU, anything. Uhm, they were just wanting us to visually check it, make sure everything is structurally sound and everything. So again, I hook up the -- the tester -- the test set to replace the BCU and everything, uhm, and to see if we was getting any -- any sensor readout fails; anything that would say that "Hey, I'm off on this side" when it shouldn't be. Uh, I wasn't getting any -- anything to flag on it. As far as visually checking and everything, I had -- I asked one of my Production guys, Master Sergeant [MM8], he came to help me out because he has more experience on this airframe, to help me troubleshoot.

Q74 (CMSGT MAINTENANCE ADVISOR): Is he hydraulic also?
A74 (WITNESS): Yes, sir.

Q75 (CMSGT MAINTENANCE ADVISOR): Okay.
A75 (WITNESS): We lowered the boom. We visual -- we visually inspect everything. We shake the flight controls down just in case maybe the actuators are loose in the ruddervators or anything that would cause erratic movements. Only thing that we could find was really the cannon plugs. There's nothing else that was really giving us anything that says "I'm broke."

Q76 (CIV ENGINEERING ADVISOR): This is the engineering advisor. Which cannon plugs?
A76 (WITNESS): Uhm, I believe -- I believe it was one of them going to the DRVT or -- DRVT. Yeah, the dual --

(CMSGT MAINTENANCE ADVISOR): Rotary --

(CIV ENGINEERING ADVISOR): We already -- yeah. The acronym has already been spelled out so.

WITNESS: All right.

(CIV ENGINEERING ADVISOR): But thank you.

Q77 (CIV ENGINEERING ADVISOR): Engineering advisor. When you did your structural inspection, first question is, as a hydraulic troop, what's your experience in doing structural inspections?
A77 (WITNESS): Now as far as structural inspection would go, would be visually. Besides what we can physically see if -- like, if there is a big crack in the piece of metal, then they would be like, "All right. You know, Sheet Metal needs to come out here or a Metals tech needs" --

Q78 (CIV ENGINEERING ADVISOR): Uh-huh.
A78 (WITNESS): -- or NDI. Anybody needs to come out here to evaluate this.

Q79 (CIV ENGINEERING ADVISOR): "NDI" means non-destructive inspection.
A79 (WITNESS): Uhm, any one of those career fields that would have a better understanding of the metals than I would.

Q80 (CIV ENGINEERING ADVISOR): Right. So --
A80 (WITNESS): But as far as I could tell as a hydraulic troop, nothing -- nothing looked out of the ordinary.

Q81 (CIV ENGINEERING ADVISOR): Okay. And how thorough was that inspection? Did you have the -- did you have good access to everything above the gimbal assembly? The -- the structure above it? The A frame? The -- the gimbal torque area? Were you able to inspect those pretty thoroughly?
A81 (WITNESS): Uhm --

Q82 (CIV ENGINEERING ADVISOR): Or was it -- was this done on night shift?
A82 (WITNESS): It was done on night shift so.

Q83 (CIV ENGINEERING ADVISOR): So everything was done with a flashlight?
A83 (WITNESS): Yes, sir. We can -- we pulled -- pulled back the -- the petal doors, and that's pretty much it. We can look and see what we can see just by opening up the petal doors and what we can actually stick our heads in. That's -- that's about it, besides the rest of the -- rest of the boom of, again, flight controls and everything else that we deal with**.**

Q84 (CMSGT MAINTENANCE ADVISOR): This is the maintenance advisor again. So -- so you're worried enough to think that it -- that it might be impounded, and you call a production guy out to help you inspect and to try troubleshooting; but no call to the APG shop or Sheet Metal or anybody else that might have structurally been --
A84 (WITNESS): No, sir**.**

CIV (ENGINEERING ADVISOR): APG is what?

Q85 (CMSGT MAINTENANCE ADVISOR): Oh, I'm sorry. "APG" is crew chief. Let's -L just say "crew chief." All -- aircraft general -- aircraft propulsion general. It's the whole airframe, airframe, powerplant, or I guess. Crew chief. So were the crew chiefs out there when you guys were out there?
A85 (WITNESS): No, sir.

Q86 (CMSGT MAINTENANCE ADVISOR): And so how long would you figure you worked that write-up that night?
A86 (WITNESS): Uhm, definitely give it within the four hour -- anywhere between four hours to six hours.

Q87 (CIV ENGINEERING ADVISOR): This is the engineering advisor. Who -- this might have been answered on the last one, but who is the one that installed the gimbal assembly with the DRVT back on the 12th --
A87 (WITNESS): That was --

Q88 (CIV ENGINEERING ADVISOR): -- of October?
A88 (CMSGT MAINTENANCE ADVISOR): Well, Sergeant [MM9] adjusted it. We would have to figure out who -- still who --

Q89 (CIV ENGINEERING ADVISOR): Okay.
A89 (WITNESS): But who installed the actual gimbal --

Q90 (CIV ENGINEERING ADVISOR): Uh-huh.
A90 (WITNESS): Was myself, sir.

Q91 (CMSGT MAINTENANCE ADVISOR): During the nights of the 11th and 12th?
A91 (WITNESS): The nights, yes, sir.

Q92 (CIV ENGINEERING ADVISOR): So you were the one -- you connected the DRVT housing onto the gimbal?
A92 (WITNESS): Uh-huh.

Q93 (CIV ENGINEERING ADVISOR): On the night of the -- that was the 12th. Right?
A93 (CMSGT MAINTENANCE ADVISOR): It was the 11th, 12th.

Q94 (CIV ENGINEERING ADVISOR): 11th, 12th? Okay.
A94 (WITNESS): Yes, sir.

Q95 (CMSGT MAINTENANCE ADVISOR): And so that's why you know the DRVT was --
A95 (WITNESS): R-squared.

Q96 (CMSGT MAINTENANCE ADVISOR): -- replaced?
A96 (WITNESS): Yes, sir.

Q97 (CMSGT MAINTENANCE ADVISOR): And no problems installing this [indicating the DRVT assembly] to the -- to the bell crank --
A97 (WITNESS): To the --

Q98 (CMSGT MAINTENANCE ADVISOR): -- face?
A98 (WITNESS): No, sir. Didn't run into any issues.

Q99 (CMSGT MAINTENANCE ADVISOR): And when you -- I have a DRVT in hands. You would have noticed if this casing was pried open when you put it in or crooked?
A99 (WITNESS): Yes. That -- that would be something --

Q100 (CMSGT MAINTENANCE ADVISOR): You should notice?
A100 (WITNESS): Yes, sir.

Q101 (CMSGT MAINTENANCE ADVISOR): But no problems putting this in --
A101 (WITNESS): No, sir.

Q102 (CMSGT MAINTENANCE ADVISOR): -- that you remember?
A102 (WITNESS): No, sir. I was being eval'ed as well on the gimbal installed by QA.

Q103 (CMSGT MAINTENANCE ADVISOR): Do you know which QA was out there at that time?
A103 (WITNESS): Yes, sir. It was Sergeant [MM11].

Q104 (CMSGT MAINTENANCE ADVISOR): [spells name]?
A104 (WITNESS): I believe so.

Q105 (CIV ENGINEERING ADVISOR): This is the engineering advisor.
Who did the adjustment and checkout of the DRVT after your -- after you installed it?
A105 (WITNESS): I -- I would not know, sir, because by the time we were done with that, it was ready for shift change.

So --.

Q106 (CMSGT MAINTENANCE ADVISOR): So -- maintenance advisor -- so why would you have not signed that part off?
A106 (WITNESS): To be honest, I didn't even think about it. Uh, and two, that was my first gimbal R-squared; so I wanted somebody else with more experience and everything to -- to overlook everything that I did.

Q107 (CMSGT MAINTENANCE ADVISOR): And you were qualified as far as in -- in TBA --
A107 (WITNESS): In TBA --

Q108 (CMSGT MAINTENANCE ADVISOR): Which is Training Business Area?
A108 (WITNESS): -- yes.

Q109 (CMSGT MAINTENANCE ADVISOR): Okay. So back to the 30th, so – the maintenance advisor again. So you sign this off. And you are aware of repeat/recur -- you are aware of the Maintenance Group OI, or operating instruction, that states what has to be done during a repeat/recur? Are you aware of that OI?
A109 (WITNESS): Not fully; but I know a seven-level has to sign it -- sign it off.

Q110 (CMSGT MAINTENANCE ADVISOR): Right. And -- but you are a seven-level --
A110 (WITNESS): Yes, sir.
Q111 (CMSGT MAINTENANCE ADVISOR): -- I'm taking it? Okay.
A111 (WITNESS): Like a month. I've been a seven-level for a month.

Q112 (CMSGT MAINTENANCE ADVISOR): Okay. So you ran all these tests. So -- so from the forms, it does say that you found the DRVT cannon plug, which you -- which you spoke with to the -- to the engineering advisor. You also state that the roll LVDT cannon plug was found loose. Where or what is that cannon plug?
A112 (WITNESS): I think it's -- it's near the DRVT's cannon plugs if I remember right.

Q113 (CMSGT MAINTENANCE ADVISOR): So outside by the gimbal assembly itself?
A113 (WITNESS): Yeah.

Q114 (CMSGT MAINTENANCE ADVISOR): And do you know if that -- that LVDT was -- do you know what function it was -- it would be driving? Do you know if it's elevator, roll? Do you know what that LVDT --
A114 (WITNESS): Which one it was --

Q115 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A115 (WITNESS): -- exactly? No, sir. I would actually have to refer back to my tech data. Again, I'm not real savvy --

Q116 (CMSGT MAINTENANCE ADVISOR): Right.
A116 (WITNESS): -- as far as KC-10 knowledge goes.

Q117 (CMSGT MAINTENANCE ADVISOR): But yet here you are a seven-level signing off a major component on a KC-10 boom.
A117 (WITNESS): Yep.

Q118 (CMSGT MAINTENANCE ADVISOR): Uhm, wow. So I just want to go through again. So you originally had problems. Nothing was working for you -- or you guys couldn't get the original one to work. However, you found a safety wire -- or the next shift found safety wire gimbal broke loose so that led to R-squared gimbal.
A118 (WITNESS): Yes, sir.

Q119 (CMSGT MAINTENANCE ADVISOR): You then came in on that night shift and R-squared the gimbal?
A119 (WITNESS): Yes, sir.

Q120 (CMSGT MAINTENANCE ADVISOR): So you had the gimbal off. You put the DRVT in and you put this pin to -- in the tangs of the new one?
A120 (WITNESS): Yes, sir.

Q121 (CMSGT MAINTENANCE ADVISOR): And then left it to be adjusted and signed off by another shift. Right?
A121 (WITNESS): Yes, sir.

Q122 (CMSGT MAINTENANCE ADVISOR): How did you -- how did you determine where to put this bell crank arm -- or the bell crank arm of the DRVT in? Did you -- you actually installed it into the tang of the yoke?
A122 (WITNESS): If I remember right -- again, I would have to --

Q123 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A123 (WITNESS): -- see everything. Uhm, having the gimbal there, it just slides within it; and then it puts that top, I guess --

Q124 (CMSGT MAINTENANCE ADVISOR): Right.
A124 (WITNESS): -- on to the back of it.

Q125 (CMSGT MAINTENANCE ADVISOR): But not knowing a whole lot about this, I imagine -- I'm just trying to figure out how you would determine pin placement before sliding it into the tangs.
A125 (WITNESS): Again, after the boom being R-squared, the gimbal being R-squared, DRVT, it -- it would go through a whole tedious of ops checks and everything.

Q126 (CMSGT MAINTENANCE ADVISOR): So you just put it in and then left it for the next people to --
A126 (WITNESS): Yes, sir, because they couldn't -- they can't even do anything until the boom is installed.

Q127 (CMSGT MAINTENANCE ADVISOR): Right.
A127 (WITNESS): So --

Q128 (CMSGT MAINTENANCE ADVISOR): But you put it in on the ground?
A128 (WITNESS): Yes, sir.

Q129 (CMSGT MAINTENANCE ADVISOR): Okay. And then put the whole boom gimbal and DRVT and --
A129 (WITNESS): Yes.

Q130 (CMSGT MAINTENANCE ADVISOR): -- and cover plate.
A130 (WITNESS): As one assembly -- yes, sir.

Q131 (CIV ENGINEERING ADVISOR): This is the engineering advisor. And I know you are referencing a tech data to install this; but how did you know that the pin goes in -- where -- where the pin goes? Did you know by --
A131 (WITNESS): Uh, yeah. I mean, we looked at our IPBs. We looked at everything on the tech data.

Q132 (CIV ENGINEERING ADVISOR): Uh-huh.
A132 (WITNESS): Exactly on -- through what the picture shows us because they have pictures.

Q133 (CAPT LEGAL ADVISOR): And this is the legal advisor. You said IPBs? Do you --
A133 (CIV ENGINEERING ADVISOR): Illustrated parts breakdown.

CAPT (LEGAL ADVISOR): Thank you.

Q134 (CMSGT MAINTENANCE ADVISOR): Okay so -- maintenance advisor again. So you -- you put that all together. You put it up and in, and then you hand that over to dayshift.
A134 (WITNESS): Yes, sir.

Q135 (CMSGT MAINTENANCE ADVISOR): Which is Airman [MM3] and Sergeant [MM4], is who ends up signing the whole task off. I mean, I'm guessing that's the shift right after you?
A135 (WITNESS): Yes, sir.

Q136 (CMSGT MAINTENANCE ADVISOR): Okay. So they -- so they sign the entire thing off. And as far as you know, at that point it's fixed and -- and done. You don't touch it again until the 30th?
A136 (WITNESS): Yes, sir.

Q137 (CMSGT MAINTENANCE ADVISOR): And then on the 30th, you know it's a repeat slash -- at least a repeat -- a recured --
A137 (WITNESS): A recur or something --

Q138 (CMSGT MAINTENANCE ADVISOR): It's something.
A138 (WITNESS): -- like that, yes, sir.

Q139 (CMSGT MAINTENANCE ADVISOR): Right. You know it has happened before on this airplane?
A139 (WITNESS): Yeah.

Q140 (CMSGT MAINTENANCE ADVISOR): You are aware of the one time that you

worked on it. I don't know if you are aware of the day before on that one. So this is actually the third time this has happened on this airplane.
A140 (WITNESS): Yeah.

Q141 (CMSGT MAINTENANCE ADVISOR): Were you aware that it was the third time?
A141 (WITNESS): No, sir.

Q142 (CMSGT MAINTENANCE ADVISOR): So this is now the third time, and you sign it off by yourself? Okay.
A142 (WITNESS): Yes, sir. Sorry. I was giving head nods.

Q143 (CMSGT MAINTENANCE ADVISOR): And on that night, it takes off again shortly thereafter. When you were working on it, were you under any impression that the airplane was getting ready to fly? Were -- were they talking about alerting the crews or speeding you up the night of the 30th when you were --
A143 (WITNESS): Not --

Q144 (CMSGT MAINTENANCE ADVISOR): -- ops checking?
A144 (WITNESS): That I can recall; no, sir.

Q145 (CMSGT MAINTENANCE ADVISOR): So you were working at your own pace?
A145 (WITNESS): Yes, sir. They just --

Q146 (CMSGT MAINTENANCE ADVISOR): You had all night to fix it -- or all your shift to fix it?
A146 (WITNESS): Yeah.

Q147 (CMSGT MAINTENANCE ADVISOR): And you turned over nothing to dayshift because you had already signed it off?
A147 (WITNESS): Yes, sir.

CMSGT (MAINTENANCE ADVISOR): Okay. And that would -- that would coincide with what everyone else said so...

Q148 (CIV ENGINEERING ADVISOR): This is the engineering advisor.
When you were installing this, did you encounter any difficulty putting the pin in the slot?
A148 (WITNESS): No, sir; not that I can recall.

Q149 (CIV ENGINEERING ADVISOR): Did it slide in easy or --
A149 (WITNESS): It just seemed to go in without a -- without any difficulties. If anything, it's one of the easiest things to change. I mean, the gimbal is heavy; but I mean, that whole assembly, it was pretty straightforward, easy install.

Q150 (CMSGT MAINTENANCE ADVISOR): Maintenance advisor.

As you were putting up that gimbal, at that point you really -- you could see the four attachment points pretty clear?
A150 (WITNESS): Yes, sir.

Q151 (CMSGT MAINTENANCE ADVISOR): And they all appeared to be in good shape?
A151 (WITNESS): Yes, sir.

Q152 (CMSGT MAINTENANCE ADVISOR): And all those bolts went in no issues --
A152 (WITNESS): No issues.

CMSGT (MAINTENANCE ADVISOR): -- there either?

CIV (ENGINEERING ADVISOR): It was on the 12th.

CMSGT (MAINTENANCE ADVISOR): It was on the 12th. Yeah, 11 through 13?

CIV (ENGINEERING ADVISOR): Yes.

Q153 (CMSGT MAINTENANCE ADVISOR): Okay. And so when this -- this write-up on the 30th, you mentioned that you asked about a BCU...?
A153 (WITNESS): Yeah.

Q154 (CMSGT MAINTENANCE ADVISOR): …boom control unit as -- as something that might be a good thing to change, I'm guessing? And what were you told by them, being Production at that point?
A154 (WITNESS): That, that a BCU is not a good fix.

CMSGT (MAINTENANCE ADVISOR): Okay.

Q155 (CIV ENGINEERING ADVISOR): And this is the engineering advisor. What prevented you from having some structure guys come out there and do the visual inspection?
A155 (WITNESS): Again, nothing looked damaged to us. Like, everything seemed to be solid. There was no visual cracks or anything that we saw or deformities or anything so...

Q156 (CIV ENGINEERING ADVISOR): How close were you getting to the area that you were inspecting? Were you up on ladders or --
A156 (WITNESS): Yes, sir.

Q157 (CIV ENGINEERING ADVISOR): -- were you in --
A157 (WITNESS): We was on ladders.

Q158 (CIV ENGINEERING ADVISOR): Were you able to get in there pretty good?
A158 (WITNESS): Yes, sir.

Q159 (CMSGT MAINTENANCE ADVISOR): And since you had just seen the insides of that 19 days prior, you should be pretty aware of the mounting points and the --
A159 (WITNESS): Yes, sir.

Q160 (CMSGT MAINTENANCE ADVISOR): -- frame assembly that -- that could or should or might be damaged by what the flight crew called out? So as far as that night of the 30th, no one else helped you troubleshoot that part? You were -- you were being evaled on that night before. This time you did call out Master Sergeant [MM8].
A160 (WITNESS): [MM8], yes, sir.

Q161 (CMSGT MAINTENANCE ADVISOR): [MM8]. And that's it. It's just pretty much you and Sergeant [MM8] that night?
A161 (WITNESS): I had -- had one of the Airmens. I think it was --

Q162 (CMSGT MAINTENANCE ADVISOR): Okay.
A162 (WITNESS): With me still.

Q163 (CMSGT MAINTENANCE ADVISOR): But [MM1] had already given you turnover. And what did he give you turnover on? Did he say "This piece -- all this stuff was already good" or did you guys inspect the -- I'm saying "this piece." The DRVT and the front side of the gimbal. Did you inspect that also after Sergeant [MM1] had given you turnover?
A163 (WITNESS): After the second time or --

Q164 (CMSGT MAINTENANCE ADVISOR): On the 30th, yeah, on the 30th.
A164 (WITNESS): Came through?

Q165 (CMSGT MAINTENANCE ADVISOR): Because you said --
A165 (WITNESS): He said --

Q166 (CMSGT MAINTENANCE ADVISOR): -- he probably said "debrief."
A166 (WITNESS): Yes, sir. He did look behind the DRVT and everything too as well to see if the safety wire was broke or anything else crazy happened back there; and he said it looked -- looked good to him as far as that -- now he only had, like, an hour I believe --

Q167 (CMSGT MAINTENANCE ADVISOR): Right.
A167 (WITNESS): -- before he -- before we came strolling through.

Q168 (CMSGT MAINTENANCE ADVISOR): But he would be looking for -- what would he be looking for? He would probably be looking for the safety wire that had broke --
A168 (WITNESS): Yes, sir.

Q169 (CMSGT MAINTENANCE ADVISOR): -- the flight before or whatever?
A169 (WITNESS): He would be looking for the safety wire. And again like what we did --

Q170 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A170 (WITNESS): -- structure, anything that would be outside of the ordinary.

CMSGT (MAINTENANCE ADVISOR): Okay.

Q171 (CAPT PILOT ADVISOR): From the pilot advisor. You mentioned that you checked all the connections with all the sensors, the DRVTs, and all this other stuff. Is there any reason why you would go inside that -- that bell crank housing to check connections**?**
A171 (WITNESS): Not that I can think of, sir.

Q172 (CAPT PILOT ADVISOR): Okay. So the -- the DRVT cannon plug is on the -- on a forward bulkhead on the -- on the jet versus something that's actually on the gimbal assembly? Is that -- I'm just asking where --
A172 (WITNESS): And --

Q173 (CAPT PILOT ADVISOR): -- where that DRVT cannon plug is.
A173 (WITNESS): It goes up towards -- if I remember right. It goes up towards the aircraft.

Q174 (CAPT PILOT ADVISOR): So it's --
A174 (WITNESS): Like so --

Q175 (CAPT PILOT ADVISOR): -- separate from the gimbal assembly is what I'm asking?
A175 (WITNESS): Yeah. So you will have the gimbal assembly, say in front of your face. It will come -- the cannon plug comes out and up and routes up.

Q176 (CAPT PILOT ADVISOR): Okay.
A176 (WITNESS): And it would be on the aircraft left side where it comes through.

CAPT (PILOT ADVISOR): All right. Okay.

Q177 (CMSGT MAINTENANCE ADVISOR): And then how -- how soon after this -- this thing takes off do you hear that it departed --
A177 (WITNESS): The next day.

Q178 (CMSGT MAINTENANCE ADVISOR): The aircraft?
A178 (WITNESS): The next day --

Q179 (CMSGT MAINTENANCE ADVISOR): The next day?
A179 (WITNESS) -- I start walk -- I came walking in, and they told me that I needed to go to the squadron to go --

Q180 (CMSGT MAINTENANCE ADVISOR): Pee in a cup?

A180 (WITNESS): Pee in a cup and give blood.

Q181 (CMSGT MAINTENANCE ADVISOR): Yeah. Okay.
A181 (WITNESS): So that was -- that was my day. Woke up to that.

Q182 (CMSGT MAINTENANCE ADVISOR): Okay. Makes sense then. So the first time you knew it was -- it was the first time to you. This time you knew it happened before, but you were -- but it was several days later so...

Q190 (CMSGT MAINTENANCE ADVISOR): So when you guys ran the -- when you ran the tests on that final day, uhm, I say the 30th, where you say that you ran with the ARB tester, you had the ARB tester in the BCU slot --
A190 (WITNESS): Yes, sir.

Q191 (CMSGT MAINTENANCE ADVISOR): And taking readings off the laptop or taking readings off of the --

A191 (WITNESS): The laptop --

Q192 (CMSGT MAINTENANCE ADVISOR): -- or STP?
A192 (WITNESS): -- and on STP; because before -- before I even hooked up the tester, I want to do a preflight. I want to see if it flags itself or anything like that.

Q193 (CMSGT MAINTENANCE ADVISOR): Uh-huh.
A193 (WITNESS): If it does throw a flag out saying, no, the actuator is bad or --

Q194 (CMSGT MAINTENANCE ADVISOR): And no maintenance faults at all?
A194 (WITNESS): No maintenance faults, no, sir.

CMSGT (MAINTENANCE ADVISOR): Okay.

Q195 (CIV ENGINEERING ADVISOR): This is the engineering advisor.
Did you really -- did you actually use the ARB tester, or did you just use the status test panel box that goes into the BCU and then --
A195 (WITNESS): Uhm --

Q196 (CIV ENGINEERING ADVISOR): How did you really -- how did you get your readings?
A196 (WITNESS): Through the -- well, did it through the STP a couple of times; and then I did it with the actual laptop of the tester.

Q197 (CMSGT MAINTENANCE ADVISOR): With the BCU out of its mount?
A197 (WITNESS): Yes, sir. With -- with the test set --

Q198 (CMSGT MAINTENANCE ADVISOR): Okay.
A198 (WITNESS): -- inside the BCU slot.

CMSGT (MAINTENANCE ADVISOR): Right.

Q199 (CIV ENGINEERING ADVISOR): And those readings that you received, were they --
A199 (WITNESS): Nothing.

Q200 (CIV ENGINEERING ADVISOR): -- comparable to each other?
A200 (WITNESS): Uhm, everything was -- according to the laptop, if I remember right, everything was in limits within -- on the sensor readouts and everything; and it's the same thing that -- I mean, one is voltage and --

Q201 (CIV ENGINEERING ADVISOR): The other is degrees.
A201 (WITNESS): Yeah. So I mean -- but, according to them, they -- they -- were -- they were good.

Q202 (CAPT PILOT ADVISOR): From the pilot advisor. Is there any reason why

somebody would have messed around in the gimbal assembly after you signed it off, between the time you signed it off and the time the jet -- that a crew stepped to the jet?
A202 (WITNESS): Not -- not that I would be aware of.

CAPT (PILOT ADVISOR): All right.

Q203 (CIV ENGINEERING ADVISOR): But you -- you -- this is the engineering advisor. After you installed it back on the 12th, you weren't the one that adjusted it?
A203 (WITNESS): That's correct.

CMSGT (MAINTENANCE ADVISOR): That's Sergeant [MM9]. I -- I have no other questions.

Q204 (CIV ENGINEERING ADVISOR): Did you -- engineering advisor.
Do you have any -- did you take any pictures?
A204 (WITNESS): No, sir.

Q205 (CIV ENGINEERING ADVISOR): Or video of anything?
A205 (WITNESS): No, sir.

Q206 (CIV ENGINEERING ADVISOR): Of your maintenance?
A206 (WITNESS): No, sir.

Q207 (CIV ENGINEERING ADVISOR): Okay.
A207 (WITNESS): No.

CMSGT (MAINTENANCE ADVISOR): So flashlights and mirrors -- maintenance advisor.

Q208 (CMSGT MAINTENANCE ADVISOR): Flashlights and mirrors is pretty much what you used to inspect around up in there that night --
A208 (WITNESS): Yes, sir.

Q208 (CMSGT MAINTENANCE ADVISOR): -- of the 30th? And it was night shift? Okay. Okay.

CMSGT (MAINTENANCE ADVISOR): You got nothing else?

CIV (ENGINEERING ADVISOR): No.

Q209 (CIV ENGINEERING ADVISOR): I just wanted to confirm that when you did your structural inspection that it was nothing more than a flashlight and a mirror. You didn't use a ten -- ten-powered magnifying glass or anything like that?
A209 (WITNESS): No, sir. No, sir.

PRESIDENT: Any more questions?

Q210 (CMSGT MAINTENANCE ADVISOR): I do, I just have one -- maintenance advisor. So Sergeant was with you troubleshooting the first time. How much experience does Sergeant have on -- on KC-10s, do you know?
A210 (WITNESS): Maybe a year more than me.

Q211 (CMSGT MAINTENANCE ADVISOR): Okay.
A211 (WITNESS): We were -- we were stationed together at Mildenhall.

Q212 (CMSGT MAINTENANCE ADVISOR): Both 135 techs?
A212 (WITNESS): [nods head indicating affirmative]

(CMSGT MAINTENANCE ADVISOR): Okay. Thank you.

PRESIDENT: Okay.

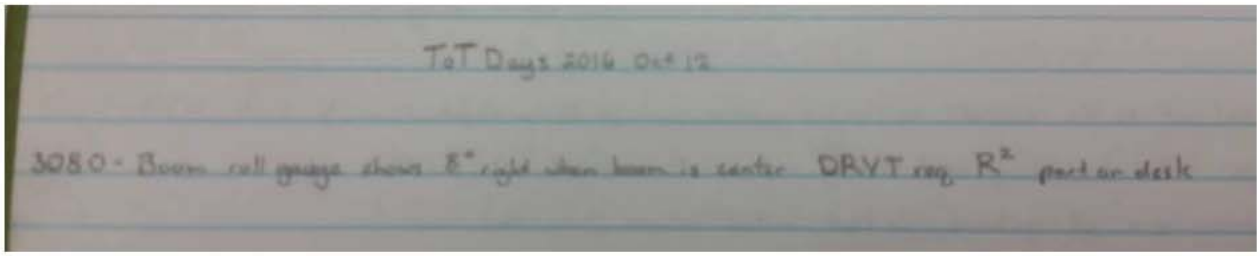
Q213 (PRESIDENT): Are there any matters that we've addressed that you wish to clarify?
A213 (WITNESS): No.

Q214 (PRESIDENT): Okay. Are there any additional matters not addressed that you think are important for this investigation?
A214 (WITNESS): No, sir.

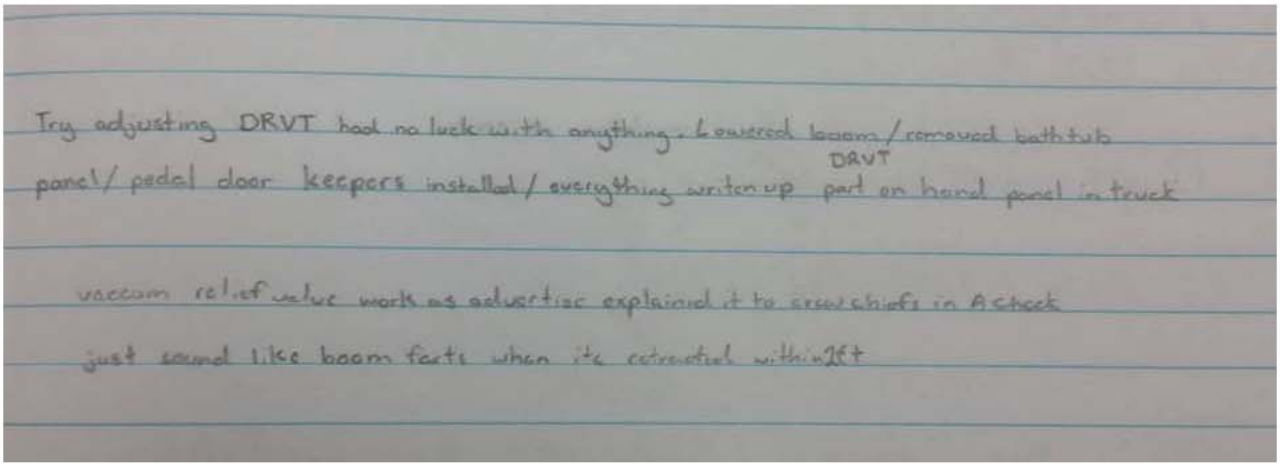
Q215 (PRESIDENT): Anything else you wish to add to your testimony?
A215 (WITNESS): No, sir.

PRESIDENT: Okay. That concludes the interview. You are reminded of the official nature of this investigation, and you are not to discuss your testimony with anyone outside this accident investigation board prior to public release of the final report. Thank you for your time and cooperation. You are dismissed. Thank you very much.

Items referenced during MM2's testimony

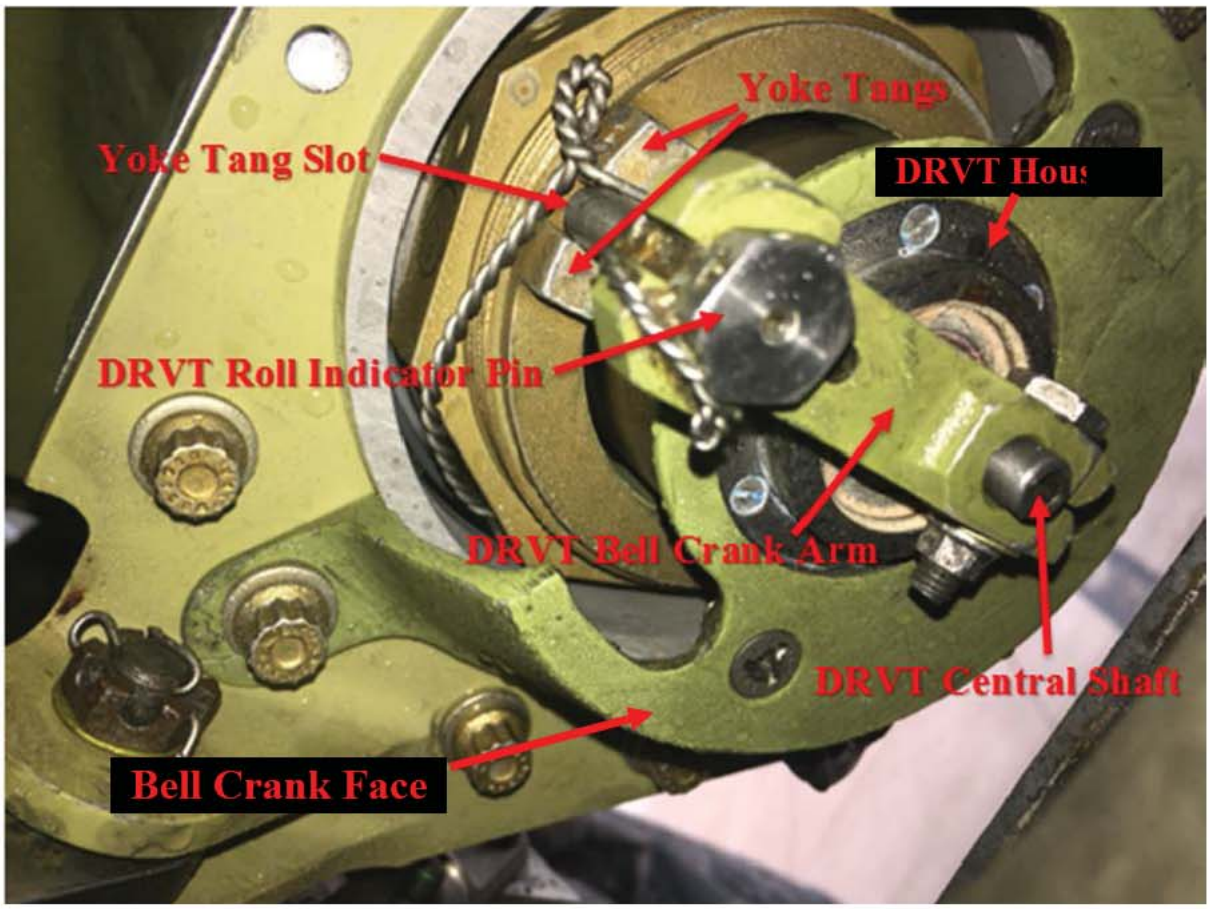

ToT Days 2016 Oct 12

3080 - Boom roll gauge shows 8° right when boom is center DRVT req. R² part on desk

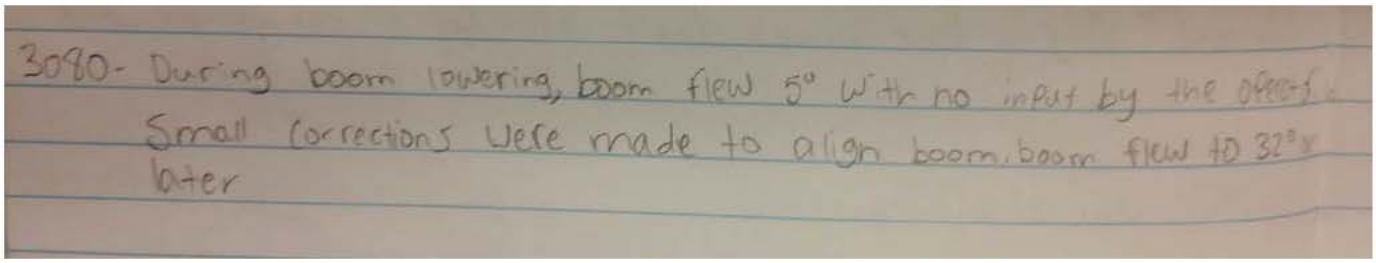

Try adjusting DRVT had no luck with anything. Lowered boom / removed bathtub panel / pedal door keepers installed / everything written up DRVT part on hand panel in truck

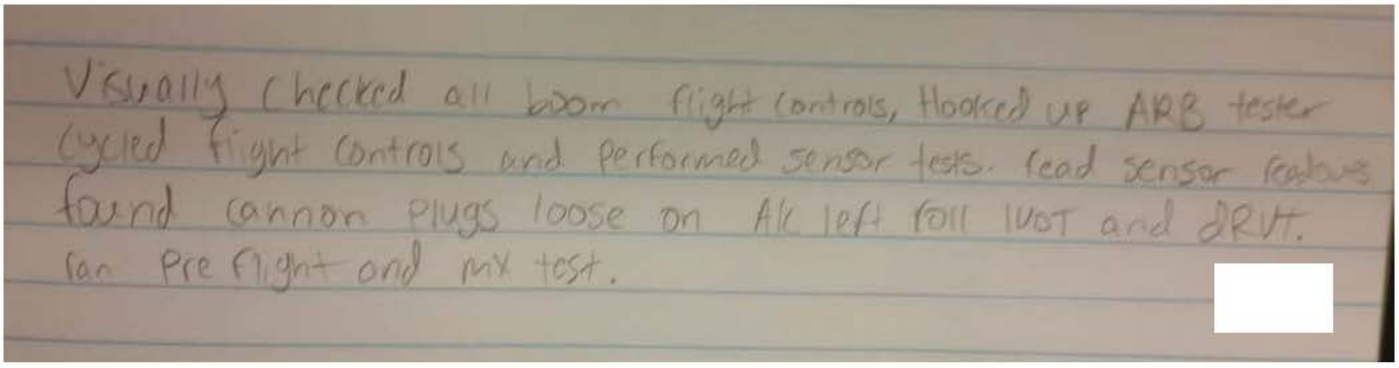
vaccum relief valve works as advertised explained it to crew chiefs in A check

just sound like boom farts when it's retracted within 2ft



Items referenced during MM2's testimony


3080- During boom lowering, boom flew 5° with no input by the operator. Small corrections were made to align boom. boom flew to 32° later


Visually checked all boom flight controls, Hooked up ARB tester cycled flight controls and performed sensor tests. read sensor readings found cannon plugs loose on AIL left roll INOT and DRIFT. ran Pre flight and MX test.

SUMMARIZED TESTIMONY OF SSGT MM2 PART II

SSgt MM2 appeared at the investigation for a second interview, and testified substantially as follows:

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me and reminded me that I was still under oath from the previous interview.

During shift turnover on 30 October 2016, SSgt MM1 informed me that the aircrew mentioned a boom striking the aircraft during a flight earlier in the day. I performed a visual inspection and did not notice any damaged or missing hardware. I did notice two loose cannon plugs and tightened them. When I asked why the jet was not impounded, no one seemed to know why. To the best of my recollection, the turnover brief was performed in the shop. I did not pass the info along to my production superintendent because I thought they would already be aware of the incident. Before signing off the 30 October 2016 job, the gimbal assembly area was inspected by both MSgt MM8 and myself, and the only components that we noticed in need of adjustment or repair were the two loose cannon plugs.

On 12 October 2016, I installed the Dual Rotary Voltage Transducer (DRVT) to the gimbal assembly on a bench. I received a new DRVT from supply and do not recall any damage or defects to the DRVT that I received. After installation of the DRVT to the gimbal assembly, I installed the gimbal assembly to the aircraft. During both of these procedures, I referenced the technical orders that show how to perform those tasks. The installation of the DRVT to the gimbal assembly was straight forward and I had no issues. I had no issues with parts not fitting together or binding during the DRVT installation. I did not attempt to pry on the DRVT case. I also did not have to apply any prying or excessive tightening force to any parts. As far as I can recall, all the hardware that was supposed to be installed, was installed. To the best of my knowledge, no one noticed any missing or loose hardware after my initial installation. To my knowledge, during the installation of the DRVT to the gimbal assembly, neither I nor any of the Airmen working with me did anything that would leave tool marks or scratches on the exterior of the DRVT case.

After reviewing a photgraph, (attachment 1) due to the shadows and the angle, I cannot determine whether a screw is missing from the hole in the lower right portion of the picture. and were assisting me with the install. I was being evaluated by SSgt MM11 for the majority of the installation. SSgt MM4 and SrA MM3 signed off my work. I am not aware of any of these individuals noticing any missing hardware or needing to add any missing hardware to the DRVT. Based upon the fact that my shift ended before the boom was installed on the aircraft, I did not adjust the DRVT or perform a function check of the DRVT.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 5 February 2017.

MM2 , SSgt, USAF
Hydraulic Specialist

Signed and sworn before me this 5th day of February 2017.

BP , Col, USAF
Board President

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VERBATIM TESTIMONY OF SENIOR AIRMAN MM3

PRESIDENT: All right. My name is Colonel [BP]. We are investigating the accident involving a KC-10, Tail No. 83-0080, that occurred on 1 November 2016, near Mountain Home Air Force Base, Idaho.

This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This accident investigation board is a legal investigation that was convened to inquire into the facts surrounding the accident; to prepare a publicly releasable report; and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings; and for other purposes.

A safety investigation was previously conducted on this accident. Any testimony you gave before the safety investigation board will be kept confidential if you were so advised and can be used only for accident prevention purposes. This board does not have access to any confidential testimony you gave before the safety investigation board. You may not state that you gave any particular information to the safety board under a promise of confidentiality. Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public. Do you understand the difference your testimony, if given, before the safety board and this accident board?

WITNESS: Yes, sir.

PRESIDENT: Okay.

I must inform you that this interview is being recorded and that you may not use your own recording device during the interview.

Do you consent to this interview being recorded?

WITNESS: Yes.

PRESIDENT: Okay. Your testimony in this investigation will be under oath. At this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony are you about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth, so help you God?

WITNESS: I do.

PRESIDENT: Okay. Thank you. You can lower your hand.

Today is the 24th of January 2017. The time now is 1123 local Pacific. This interview is being conducted in Building 31, Room 55, on Travis Air Force Base.

The persons present are the witness, Senior Airman [MM3]; the legal advisor; the pilot advisor; the boom advisor; the medical advisor; the maintenance advisor; the engineering advisor; the weather advisor; and the recorder.

I'm Colonel [BP], the board president. The witness has been sworn.

Did you give a 72 hour, 14 day notice?

CAPT (LEGAL ADVISOR): No, sir.

PRESIDENT: Okay.

Q1 (PRESIDENT): Please state your first and last name.
A1 (WITNESS): [MM3].

Q2 (PRESIDENT): What unit are you assigned to, and what is your duty title?
A2 (WITNESS): 60 MXS, hydraulic journeyman.

Q3 (PRESIDENT): Okay. And how long have you been a hydraulic journeyman?
A3 (WITNESS): It will be three years in -- actually it is three years now.

PRESIDENT: Okay. Awesome.

And at this point I'm going to turn over the line of questioning to our maintenance advisor.

Q4 (CMSGT MAINTENANCE ADVISOR): All right. Welcome. What is your man number?
A4 (WITNESS): .

Q5 (CMSGT MAINTENANCE ADVISOR): In October 2016, were you working dayshift or night shift?
A5 (WITNESS): I was working day shift.

Q6 (CMSGT MAINTENANCE ADVISOR): Dayshift. Do you recall working a boom write-up on 83-0080 for the boom being 4 to 5 degrees to the left and roll gauge was showing 11 degrees -- or 11 to 12 degrees to the right when lowered? Do you remember working that write-up?
A6 (WITNESS): Yes.

Q7 (CMSGT MAINTENANCE ADVISOR): Did you know this write-up -- this aircraft had a similar write-up the flight before?
A7 (WITNESS): I did not, no.

Q8 (CMSGT MAINTENANCE ADVISOR): The hydraulic turnover log shows that three shifts worked this write-up. And so it started -- it appears to start with a dual rotary

voltage transducer requiring adjustment, but ended up with replacement of a gimbal assembly and the dual rotary voltage transducer. Do you know what drove the gimbal and -- and DRVT to be changed at that point?
A8 (WITNESS): I do not. That was a different shift that troubleshot that.

Q9 (CMSGT MAINTENANCE ADVISOR): Okay. So on October 13th, you and Sergeant [MM4] signed off all associated write-ups for the boom -- or for the gimbal and yoke assembly swap out. Can you please walk us through what you remember from that job and your parts for the associated tasks?
A9 (WITNESS): I remember us having to raise the boom and install it and then doing an ops check, which Sergeant [MM4] was present for.

Q10 (CMSGT MAINTENANCE ADVISOR): By "ops check," what equipment were you using for your ops check?
A10 (WITNESS): Uh, it requires a preflight.

Q11 (CMSGT MAINTENANCE ADVISOR): Maintenance -- like a maintenance preflight through the -- what were you --
A11 (WITNESS): STP.

CMSGT (MAINTENANCE ADVISOR): STP?

CIV (ENGINEERING ADVISOR): Status test panel.

Q12 (CMSGT MAINTENANCE ADVISOR): Status test panel?
A12 (WITNESS): Status test panel.

Q13 (CMSGT MAINTENANCE ADVISOR): Do you remember anyone or you or Sergeant [MM4] adjusting the actual DRVT, the dual rotary voltage transmitter?
A13 (WITNESS): We had another maintenance member do that.

Q14 (CMSGT MAINTENANCE ADVISOR): Do you know who that was?
A14 (WITNESS): That was Sergeant [MM9].

Q15 (CMSGT MAINTENANCE ADVISOR): [MM9]. So you were working on the ground to raise the whole assembly?
A15 (WITNESS): Yes. We -- we installed the -- the boom.

Q16 (CMSGT MAINTENANCE ADVISOR): So the gimbal was already attached to the boom --.
A16 (WITNESS): Yes, it was.

Q17 (CMSGT MAINTENANCE ADVISOR): -- once you showed up?
A17 (WITNESS): Yes it was.

Q18 (CMSGT MAINTENANCE ADVISOR): And then you raised the boom?

A18 (WITNESS): Yes, it was.

Q19 (CMSGT MAINTENANCE ADVISOR): And what else equipment would you have used to raise the boom at that point?
A19 (WITNESS): Uh, just with the -- the hoist cable that it has.

Q20 (CMSGT MAINTENANCE ADVISOR): Okay.
A20 (WITNESS): It's -- it's all you use.

Q21 (CMSGT MAINTENANCE ADVISOR): The aircraft --
A21 (WITNESS): The one on the aircraft.

Q22 (CMSGT MAINTENANCE ADVISOR): Okay.
A22 (WITNESS): Yes. You remove the -- the one you check out and you raise it with the one that's on the aircraft.

Q23 (CMSGT MAINTENANCE ADVISOR): Okay. Did you run into any problems while raising that boom?
A23 (WITNESS): I did not, no.

Q24 (CIV ENGINEERING ADVISOR): You stated that the -- you installed the gimbal assembly when the boom was off the airplane?
A24 (WITNESS): I did not install it.

Q25 (CIV ENGINEERING ADVISOR): But it -- was that how the work was done?
A25 (WITNESS): What, when the boom was off the airplane?

Q26 (CIV ENGINEERING ADVISOR): Uh-huh.
A26 (WITNESS): Yes.

Q27 (CIV ENGINEERING ADVISOR): You installed the gimbal assembly --
A27 (WITNESS): I --

Q28 (CIV ENGINEERING ADVISOR): -- onto the boom and then you raised the boom and the gimbal assembly together to --
A28 (WITNESS): No. No. No. The -- the way it's done is you put the gimbal on first and then the boom; but I did not install the gimbal.

Q29 (CIV ENGINEERING ADVISOR): Okay.
A29 (WITNESS): That was my night shift that installed the gimbal.

Q30 (CIV ENGINEERING ADVISOR): Okay.
A30 (WITNESS): I don't think that it would be possible for you to physically put the boom on with the -- the gimbal -- or put the gimbal on with the boom on.

CMSGT (MAINTENANCE ADVISOR): Right.

CIV (ENGINEERING ADVISOR): Okay.

Q31 (CMSGT MAINTENANCE ADVISOR): So when you got there, the gimbal and yoke assembly was up. And as far as you know, the -- the DRVT was already installed --
A31 (WITNESS): Yes.

Q32 (CMSGT MAINTENANCE ADVISOR): -- also --
A32 (WITNESS): Everything was already installed. We -- I had no hand it in.

Q33 (CMSGT MAINTENANCE ADVISOR): Was this your Monday or was this your --
A33 (WITNESS): It --

Q34 (CMSGT MAINTENANCE ADVISOR): Was it a Monday?
A34 (WITNESS): It was -- we just got on 4 and 3s. So it was a Thursday. It was my Tuesday.

Q35 (CMSGT MAINTENANCE ADVISOR): So you were there the day before also?
A35 (WITNESS): I was there; but I was on a training shift, so I did not touch the plane.

Q36 (CMSGT MAINTENANCE ADVISOR): Okay.
A36 (WITNESS): We were doing -- we were on another aircraft doing training.

CMSGT (MAINTENANCE ADVISOR): Okay.

PRESIDENT: This is the pilot advisor. During your turnover when you came in to raise the boom --

CMSGT (MAINTENANCE ADVISOR): You're the --

LEGAL ADVISOR: Sir, you're the board president.

PRESIDENT: Oh, I'm sorry. I am the board president. I want to be a pilot, sorry.

Q37 (PRESIDENT): Did you get anything in that turnover, other than "It's installed and ready to go", to raise the boom? Was there any discussion on issues with it -- with installing it?
A37 (WITNESS): No. All my turnover was "It's ready" -- "The boom is ready to get installed."

PRESIDENT: Okay.

CIV (ENGINEERING ADVISOR): This is the engineering advisor.

Q38 (CIV ENGINEERING ADVISOR): So you do confirm that the DRVT, the dual rotary voltage transducer, was installed on the gimbal while the gimbal was off of the

airplane and that whole assembly was installed that way or was --
A38 (WITNESS): I -- I do not know if the -- the rotary transformer --

Q39 (CIV ENGINEERING ADVISOR): Uh-huh.
A39 (WITNESS): -- was installed once the gimbal was on or before because I did not physically do the job. But when I got there, both the gimbal and the voltage transformer were already installed, safety wired, everything was ready to -- to be signed off. And the only reason I have to sign it off was because my night shift didn't get the chance to. They -- I don't know if they rushed; but I hadn't -- like I said, I had no hand in the gimbal at all.

CIV (ENGINEERING ADVISOR): This is the engineering advisor.

Q40 (CIV ENGINEERING ADVISOR): When you said that the night shift didn't get a chance to, do you recall why?
A40 (WITNESS): I do not know, no. I've asked the question because I myself don't like to sign anything that I didn't physically do because, you know --

CMSGT (MAINTENANCE ADVISOR): Because it could be like this.

WITNESS: Yes. It could be like this.

CMSGT (MAINTENANCE ADVISOR): Yes.

WITNESS: And, you know, people could get mad, but.

Q41 (CMSGT MAINTENANCE ADVISOR): But as far as you know, Sergeant [MM9] is the one that put the --
A41 (WITNESS): No. No. No.

Q42 (CMSGT MAINTENANCE ADVISOR): Or no?
A42 (WITNESS): Sergeant [MM9] did not.

Q43 (CMSGT MAINTENANCE ADVISOR): Adjusted the DRVT that day once you put it up?
A43 (WITNESS): Once, yeah.

Q44 (CMSGT MAINTENANCE ADVISOR): Okay.
A44 (WITNESS): We -- we -- he -- he was the one that actually, physically moved it and --

Q45 (CMSGT MAINTENANCE ADVISOR): Right.
A45 (WITNESS): And.

Q46 (CMSGT MAINTENANCE ADVISOR): Okay. But you're not sure who actually installed it the day before?

A46 (WITNESS): No.

CMSGT (MAINTENANCE ADVISOR): Or the night before I should say? Okay.

CAPT (LEGAL ADVISOR): And this is the legal advisor.

Q47 (CAPT LEGAL ADVISOR): You said that the -- the -- the dual rotary voltage transducer was -- it was safety wired and everything like that. I mean, did you actually inspect it yourself?
A47 (WITNESS): I did. I have to inspect it, yes.

Q48 (CAPT LEGAL ADVISOR): Okay.
A48 (WITNESS): Because I wasn't going to sign anything that wasn't, you know -- that wasn't a hundred percent done.

Q49 (CAPT LEGAL ADVISOR): All right. And what did that inspection consist of, and did you notice any abnormalities when you did the inspection?
A49 (WITNESS): I didn't notice any abnormalities. What I did, I actually got the tools and made sure everything was tightened down and made sure the safety wire was there, the cotter keys were on and -- and that everything was done how it was supposed to, as if I would have done it.

CIV (ENGINEERING ADVISOR): This is the engineering advisor.

Q50 (CIV ENGINEERING ADVISOR): And checking for proper DRVT pin engagement into the slot of the tangs?
A50 (WITNESS): That -- I did not check that. That was [MM9] when he -- because you have to remove -- you have to actually -- to adjust it, you move it. You remove the -- the nut, and you can -- you actually have to adjust it. So --

Q51 (CIV ENGINEERING ADVISOR): Correct.
A51 (WITNESS): We did not check that.

Q52 (CIV ENGINEERING ADVISOR): Prior to you adjusting the DRVT, You have to check to make sure that the pin is inside the slot of the yoke tangs. And that way you can do your measure -- you can do your adjustment. But you didn't check to see if the pin was already in there to make sure?
A52 (WITNESS): I don't recall.

Q53 (CMSGT MAINTENANCE ADVISOR): But Sergeant [MM9] would have had to have?
A53 (WITNESS): Would have --

Q54 (CMSGT MAINTENANCE ADVISOR): For the adjustment?
A54 (WITNESS): He would have had to.

Q55 (CMSGT MAINTENANCE ADVISOR): Right.
A55 (WITNESS): Yes.

Q56 (CMSGT MAINTENANCE ADVISOR): Okay. No other difficulties you know of while putting that boom up in place?
A56 (WITNESS): No, no other difficulties.

Q57 (CMSGT MAINTENANCE ADVISOR): And you know --
A57 (WITNESS): No difficulties at all. It actually went pretty smooth.

Q58 (CMSGT MAINTENANCE ADVISOR): Did it? Okay. Yeah, because basically between you and Sergeant [MM4], you guys signed off 20 write-ups here so. Okay. But as far as the day before, you weren't -- you weren't there? Do you recall working on the Aircraft 3080 any time after that for a boom write-up?
A58 (WITNESS): I do not, no.

Q59 (CMSGT MAINTENANCE ADVISOR): Okay.
A59 (WITNESS): I -- I did not touch that airplane. Didn't know about the incident until two days before when I actually came on shift --

Q60 (CMSGT MAINTENANCE ADVISOR): Right.
A60 (WITNESS): -- and everybody was talking about it.

Q61 (CMSGT MAINTENANCE ADVISOR): So just to reaffirm then: You didn't know it was a repeat write-up?
A61 (WITNESS): No, I did not.

Q62 (CMSGT MAINTENANCE ADVISOR): And you -- you don't know why the gimbal and yoke assembly was being R-squared?
A62 (WITNESS): No. That was troubleshot by a shift prior to -- to mine.

CIV (ENGINEERING ADVISOR): This is the engineering advisor.

Q63 (CIV ENGINEERING ADVISOR): You didn't know because it wasn't translated onto maintenance documents or the -- did you read prior maintenance documents to see what was done on this aircraft before you touched it?
A63 (WITNESS): No. Because like I said, I came in that day --

Q64 (CIV ENGINEERING ADVISOR): Uh-huh.
A64 (WITNESS): And my turnover was "The boom is ready to be installed." So we -- we were finishing a task that was already started.

Q65 (CMSGT MAINTENANCE ADVISOR): So yeah -- on -- on you guys' turnover log -- I'm sure you are aware of the turnover log. So the one side is the discrepancies, and then the other side is kind of what you guys say you did that night.
A65 (WITNESS): Yeah.

Q66 (CMSGT MAINTENANCE ADVISOR): And normally when you put a -- when you put a corrective action, if you will, on the one side, you usually put your man number. Is that a standard practice, or is that required by your shift chief or is that just --
A66 (WITNESS): That's something that some people do.

Q67 (CMSGT MAINTENANCE ADVISOR): All right.
A67 (WITNESS): I don't usually do it. Uhm, but that's something that some people do do.

Q68 (CMSGT MAINTENANCE ADVISOR): Okay.
A68 (WITNESS): Yeah.

CMSGT (MAINTENANCE ADVISOR): But it's not a practice -- it's not something that your shift chief says you will do? It's -- okay. Then I -- I have no other questions for Airman [MM3] myself.

PRESIDENT: Any other questions around the table? Okay.

Q69 (PRESIDENT): Are there any matters that we've addressed so far that you wish to clarify?
A69 (WITNESS): No, sir.

Q70 (PRESIDENT): Okay. Are there any additional matters we've not addressed that you think are important to the investigation?
A70 (WITNESS): No, sir.

Q71 (PRESIDENT): Is there anything else you wish to add to your testimony?
A71 (WITNESS): I do not.

PRESIDENT: Okay. That concludes the interview. You are reminded of the official nature of this investigation and that you are not to discuss your testimony with anyone outside this accident investigation board prior to the public release of the final report. Thank you for your time and cooperation. You are dismissed.

VERBATIM TESTIMONY OF

SENIOR AIRMAN MM3 PART 2

PRESIDENT: Thank you for coming back. This is Colonel [BP]. This is a second interview with Senior Airman [MM3] at Travis Air Force Base, Building 31, Room 55. Today is the 4th of February, 0738 local Pacific time. It's myself, the board president, Senior Airman [MM3], the legal advisor, the maintenance advisor and the recorder are in the room. The witness was previously sworn and is still sworn. We just had some follow-up questions.

I will hand it over to the maintenance advisor unless somebody else has something to add.

Q1 (MAINTENANCE MEMBER): You had actually been at -- you were the one that hung the boom the night of the 13th, right, or the day of the 13th?

A1 (WITNESS): Yes, sir.

Q2 (MAINTENANCE MEMBER): And in an earlier interview you stated that the boom, the gimbal and yoke assemblies are already up and in, safety wired, all good?

A2 (WITNESS): Yes, sir.

Q3 (MAINTENANCE MEMBER): What book would you have used to raise the boom at that point? Do you know what book you would have used?

A3 (WITNESS): It would be the 28, the 1C-10K-2-28, and it's a subsection of that book. They are usually separated between 28-72-10, 22-72-01 or 78-01. To be specific, I couldn't tell you the book because I don't remember.

Q4 (MAINTENANCE MEMBER): Right. Would you use the one for just the boom install, or would you use the one for the gimbal being replaced? Which one would you actually follow?

A4 (WITNESS): Just the boom install because we were actually putting the boom on as if the gimbal was there. That's what we followed.

Q5 (MAINTENANCE MEMBER): Okay. So, this book -- the 28 said, this task is 28-71-06 for boom maintenance practices, and this is the one I'm guessing you are talking about. It talks about removal and installation of boom from aircraft?

A5 (WITNESS): Yes.

Q6 (MAINTENANCE MEMBER): Boom, gimbal mechanism and pivot point. That's the book you would have used. And QA, Quality Assurance, would be able to probably back that up because he was obviously out there with you the whole time?

A6 (WITNESS): Yes. Yes, sir.

Q7 (MAINTENANCE MEMBER): So, after you hung the boom, what type of Ops checks did you do?

A7 (WITNESS): We did the pre-flight and Sergeant [MM4] came out, and I told him we did the pre-flight, and that's pretty much what we did.

Q8 (MAINTENANCE MEMBER): So, after you brought he boom up and connected the gimbal, now how is that sitting? How is it sitting?

A8 (WITNESS): It's up and stowed.

Q9 (MAINTENANCE MEMBER): Up and stowed.

A9 (WITNESS): Up and stowed, and we ran the pre-flight, yes, sir.

Q10 (MAINTENANCE MEMBER): Okay. So, you just ran the pre-flight with it up and stowed, never actually moving the boom again at that point?

A10 (WITNESS): No.

Q11 (MAINTENANCE MEMBER): And then, as far as the forms go, the items you did sign off, I know before you had talked about you signing off a lot of other people's work; however, in here you say for the DRVT installed you used the 28-72-05, which is the boom gimbal book that also talks about the installation of the boom back to. So, I'm really trying to really figure out which book you actually utilized.

A11 (WITNESS): Usually, for the forms we try to reference to what is most specific to the component because not all the steps are contained in the install for the boom usually takes you to something else. So, that's why we signed it off with that one.

Q12 (MAINTENANCE MEMBER): So, you signed off the book that would normally be used for this --

A12 (WITNESS): Yes.

Q13 (MAINTENANCE MEMBER): **--** but you didn't actually install the the DRVT?

A13 (WITNESS): Yes, sir.

Q14 (MAINTENANCE MEMBER): Then on your boom lowered to FOM and your boom reinstalled that you and Sergeant [MM4] signed off, it was the other book, you said the other -- the boom book, I'm guessing. I'm just trying to make sure that's what you wrote here.

28-CL-1 is what you wrote here on the aircraft forms, and 781As.

A14 (WITNESS): That's the checklist. So, usually, like I said, they're not all contained, and they're all between different books, and this is -- it's different because, like I noticed in a C-5, it's one book, one paragraph, page. It continues. You go to KC-10 TO, and you have multiple page 201s because it's one book and it separates it between different sections. So, all those are one book, but they get separated into what looks like a different book.

Q15 (LEGAL ADVISOR): (legal advisor) When the witness said "all those," he pointed at some technical orders that are laying here on the table.

A15 (WITNESS): Yeah. Yes, sir.

Q16 (MAINTENANCE MEMBER): So, the checklist itself looks different than the books out of the TO.

A16 (WITNESS): The checklist, yes. It's a summarized -- I can't think of the word. It's a summarized TO that's just a checklist for raising the boom. So, it's also in the 28, in the 2-28, but they have a separate checklist. So, it's basically -- it tells you just make sure you do this, you do that just to raise the boom.

Q17 (MAINTENANCE MEMBER): So, as far as installing the boom and the gimbal, if you know that a gimbal was also replaced, would you ever go back to that book to see what would be required after you raise the boom or install a boom?

A17 (WITNESS): Yes, and all it said was install the gimbal, and then it said install boom.

Q18 (MAINTENANCE MEMBER): I am just going to show you this [See BB-25]. This is the gimbal installation book. So, if you went back to this, this shows you installing the boom.

A18 (WITNESS): Yes, sir.

Q19 (MAINTENANCE MEMBER): Can you tell me which steps you would have done there after you installed the boom? This is the 28-71-04 which is gimbal maintenance.

A19 (WITNESS): Right here. Install boom, reference page 71.

Q20 (MAINTENANCE MEMBER): And that's step 6.

A20 (WITNESS): Yes, and then everything else was already installed, so after that, the LVDT was already installed. When we got out there, they were on the gimbal. So, they were installed.

Q21 (MAINTENANCE MEMBER): And then as far as the rest of these steps, where would you have stopped, I guess?

A21 (WITNESS): Where it says "perform STP panel," and actually, we did all this, but we didn't reference it here because we referenced it to the boom TO.

Q22 (MAINTENANCE MEMBER): You're saying that was the end of the task so --

A22 (WITNESS): Yes.

Q23 (MAINTENANCE MEMBER): 17 through 21?

A23 (WITNESS): Yes, sir.

Q24 (MAINTENANCE MMEMBER): So, as far as down here on these -- this is step 10 of the 28-71-04 task. The DRVT was already installed?

A24 (WITNESS): Yes, sir.

Q25 (MAINTENANCE MEMBER): The roll electrical connector was already connected?

A25 (WITNESS): Uh-huh.

Q26 (MAINTENANCE MEMBER): What about these steps here which is 12 and 13 where it does say to rotate the shaft of the DRVT?

A26 (WITNESS): Yes, sir.

Q27 (MAINTENANCE MEMBER): You did that part or not that part? Sergeant [MM9], right?

A27 (WITNESS): Yes.

Q28 (MAINTENANCE MEMBER): Okay. What about down here like towards the end? This is step 17 of 28-71-04? Did you do this part? Can you read that? I'm just trying to -- would you have brought it back down and moved it?

A28 (WITNESS): I don't recall us lowering it back down, no, sir.

Q29 (MAINTENANCE MEMBER): Okay. And you guys were the last ones out there because you guys signed off the whole task, you and Sergeant [MM4]?

A29 (WITNESS): Yes, sir.

Q30 (MAINTENANCE MEMBER): Do you know how many of these steps Quality Assurance was out there for?

A30 (WITNESS): Just for the boom. Once we got it in and on the cable, they left because we also left and went and took lunch.

Q31 (MAINTENANCE MEMBER): Okay. But they were out there for the whole attaching it to the gimbal?

A31 (WITNESS): Yes.

Q32 (MAINTENANCE MEMBER): And on the cable?

A32 (WITNESS): Yes.

Q33 (MAINTENANCE MEMBER): Okay. So, on that, that would probably be in the book for the actual boom install. So, okay. It makes sense to me. I have no other questions.

LEGAL ADVISOR: (legal advisor) So, you mentioned you did do a pre-flight, kind of an operational check of the boom once it was installed?

A33 (WITNESS): Yes.

Q34 (LEGAL ADVISOR): Do you recall -- even if you didn't move the boom, do you recall like if the boom roll gauge was reading --

A34 (WITNESS): **C**orrectly?

Q35 (LEGAL ADVISOR): (indiscernible) to zero when you --

A35 (WITNESS): Yes, because I even told Sergeant [MM4] that it passed pre-flight. He was like oh, okay. So, everything's good. Everything's within limits because if it failed, if something is not within limits, it will fail the pre-flight immediately because it clicks all the relays and everything as soon as you start the test and he said okay.

MAINTENANCE MEMBER: I have nothing else.

PRESIDENT: Recorder, any questions**?**

RECORDER: No, sir.

PRESIDENT: Thank you for your time today. Anything you'd like to add or anything we previously discussed, Airman [MM3] that you want to bring back up?

A36 (WITNESS): No, sir.

PRESIDENT: Thank you for your time. Thank you for coming by today, and that will end the interview.

[Interview concluded]

VERBATIM TESTIMONY OF STAFF SERGEANT MM4

PRESIDENT: My name is Colonel [BP]. We're investigating an accident involving a KC-10, tail number 83-0080 that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This Accident Investigation Board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you may have given before the Safety Investigation Board will kept confidential, if you were so advised, and can be used only for accident prevention purposes. This Board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public. Do you understand the difference between any testimony you gave before the Safety Board and this Accident Board?

WITNESS: Yes, sir.

PRESIDENT: Okay. I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent to this interview being recorded?

WITNESS: Yes, sir.

PRESIDENT: Your testimony in this investigation will be under oath, and at this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony that you are about to give in the matter now under investigation shall be the truth, the whole truth and nothing but the truth so help you God?

WITNESS: Yes, I do.

PRESIDENT: All right. Thank you. You can lower your hand now.

Today's date is the 26th of January, 2017. The time now is 1145 local Pacific. This interview is being conducted in Building 31, Room 77 on Travis Air Force Base. The persons present via telephone are Staff Sergeant [MM4]. In the room are the the legal advisor, the boom advisor, our pilot advisor, a medical advisor, the maintenance advisor, the engineering advisor, our weather advisor, and the recorder.

I'm Colonel [BP], the Board president. The witness has been sworn.

Q1 (PRESIDENT): Please state your first and last name.

A1 (WITNESS): [MM4].

Q2 (PRESIDENT): What unit are you assigned to, and what's your duty title?

A2 (WITNESS): Assigned to 60th Maintenance Squadron, and I'm an aircraft hydraulic system craftsman.

Q3 (PRESIDENT): How long have you been a hydraulic system journeyman, approximate, sir?

A3 (WITNESS): I've been a hydraulic system craftsman since September of 2016.

Q4 (PRESIDENT): Okay. I'm going to hand you over now to our maintenance advisor to continue with some questions.

A4 (WITNESS): Okay, sir.

Q5 (MAINTENANCE MEMBER): Good morning, or good afternoon. Whatever time is it for you, right?

A5 (WITNESS): It's evening, sir.

Q6 (MAINTENANCE MEMBER): All right. Good evening. Hey, what is your MAN number?

A6 (WITNESS): .

Q7 (MAINTENANCE MEMBER): Okay. In October were you working dayshift or nightshift?

A7 (WITNESS): I was working dayshift, sir.

Q8 (MAINTENANCE MEMBER): Days. Do you recall working a boom write up on 3080 for the boom was about 4-5 degrees left and the roll guage was showing 11 to 12 degrees to the right?

A8 (WITNESS): I did not work it personally. I was out-processing for my deployment at the time, and towards the end of my day, which would have been 4 o'clock in the afternoon, I was asked to stay a little bit over to catch the Xs for a boom being reinstalled on 3080.

Q9 (MAINTENANCE MEMBER): Okay. Do you know why the boom and gimbal was being replaced?

A9 (WITNESS): Yes, sir, I do, because the safety wire on the gimbal nut was found broken either the previous night or a couple days before.

Q10 (MAINTENANCE MEMBER): Okay. So, on October 13th, you and Senior Airman [MM3] signed off all the associated write ups for the boom job. Can you please walk us through what exactly your parts were in that and what you looked at or did to actually sign all those off?

A10 (WITNESS): Yes, sir. I arrived to the aircraft around five o'clock in the afternoon, and the boom was already installed at that point. All panels were off. I proceeded to inspect all safety wire lines on the boom and gimbal area, all the mounting points, and proceeded to let them know that they could start paneling up at that point.

Q11 (MAINTENANCE MEMBER): So, did you --

A11 (WITNESS): And this was all by the T.O.

Q12 (MAINTENANCE MEMBER): Okay. Was quality assurance present?

A12 (WITNESS): I'm sorry? What was that?

Q13 (MAINTENANCE MEMBER): Was QA, quality assurance, were they there?

A13 (WITNESS): At that time, negative, they were not.

Q14 (MAINTENANCE MEMBER): So, did anyone that gave you turnover for you to sign off this write-up, did anyone mention of any issues or difficulties with the gimbal yoke and DRVT replacement?

A14 (WITNESS): To the best of my knowledge, everything on the gimbal replacement and DRVT replacement went smoothly.

Q15 (MAINTENANCE MEMBER): How soon after you signed these red X's off did you go TDY or temporary duty?

A15 (WITNESS): I left Travis on the 25th of October.

Q16 (MAINTENANCE MEMBER): How long have you been a KC-10 hydraulic troop?

A16 (WITNESS): I've been a KC-10 hydraulic troop for 5 1/2 years now.

Q17 (MAINTENANCE MEMBER): But just got your 7 level in September you said?

A17 (WITNESS): Yes, sir.

Q18: Okay. So, you did just a good inspection of all attachment points, I'm guessing, and electro connections. Did you happen to notice the dual rotary voltage transducer, its installation while you were looking up in there?

A18 (WITNESS): I did look at it. Everything looked to be in place when I inspected it.

Q19: So, you didn't really do any of the work but signed off all the X's?

A19 (WITNESS): I helped with some panels, sir. That's about it.

Q20: Do you know who actually installed the boom then that you were following up after?

A20 (WITNESS): That would have been Senior Airman [MM3], Airman First Class and Airman First Class and also Mr. .

Q21: Okay. Have you changed that boom and gimbal out before? Have you changed the gimbal and yoke assembly out before?

A21: Negative, sir. That was my first one.

Q22: (pilot advisor). Was there anybody on the team that changed it that had done it before that you know of?

A22: To the best of my knowledge, I cannot answer that with good confidence.

Q23: (MAINTENANCE MEMBER) But in TBA, so in the training business area, you were signed off and qualified as far as boom and gimbal?

A23: Yes, sir.

Q24: So, you've been part of one before, but never doing it yourself, or how would you have gotten qualified on it?

A24: I was a part of it, and my supervisors went through that task with me before signing me off, making sure I was proficient in the TO.

Q25(MAINTENANCE MEMBER): I have no other questions.

(LEGAL ADVISOR). I just had two things I want to clarify and circle back on some acronyms. You mentioned TO a couple times. What's that in reference to?

A25: I'm sorry. What was that?

Q26: What does TO stand for?

A26: Technical order.

Q27: All right. In addition there is some reference to you attaining a 7 level. Can you just explain briefly what that is?

A27: A 7 level is -- I am a qualified mechanic able to sign off red X's according to my job and to inspect all the parts and get in-process inspections.

Q28: All right. Thank you.

This is Colonel [BP] again, and we will close this out. I just want to make sure that -- are there any additional matters that we've not asked you about that pertain to this aircraft that you want to bring up that you think might be important for us to know?

SSGT MM4: Uh-huh. I mean, I got a question. When you guys are looking to the forms, are they the paper forms or GO-generated forms?

COL BP: Both.

SSGT MM4: Both, okay.

COL BP: Yes**.**

SSGT MM4: All right. And did I sign off all the jobs for the -- I mean, to the best of my knowledge, I know I at least signed off the boom being installed on that aircraft.

COL BP: Yeah, give me one second. We're getting the forms.

SSGT MM4: Okay.

(Maintenance advisor) I have you signing off the petal door locks, the fairings, the DRVT, then resetting all circuit breakers, raising the boom, more circuit breakers, the door locks, more circuit breakers and actually reinstalling the boom, more circuit breakers, the bottom petal doors, the side petal doors, another panel, another panel, bungee keepers, boom nozzle tester, boom flex lines. It just keeps going. You probably have like six more write-ups there that you signed off.

SSGT MM4: Okay, sir. Thank you.

COL BP: Is there anything else you wish to add to your testimony?

SSGT MM4: No, sir.

COL BP: Okay. This concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this Accident Investigation Board prior to public release of the final report. Thank you for your time and cooperation. You're dismissed.

VERBATIM TESTIMONY OF MASTER SERGEANT MM8

BOARD PRESIDENT: As you know, we're investigating an accident involving a KC-10, tail number 83-0080 that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This Accident Investigation Board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you may have given before the Safety Investigation Board will kept confidential, if you were so advised, and can only be used for accident prevention purposes. This Board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public. Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes, sir.

BOARD PRESIDENT: I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent with this interview being recorded?

WITNESS: Yes, sir

BOARD PRESIDENT: Okay. Your testimony in this investigation will be under oath, and at this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony that you are about to give in the matter now under investigation shall be the truth, the whole truth and nothing but the truth so help you God?

WITNESS: Yes, sir.

BOARD PRESIDENT: Okay. Today's date is the 26th of January, 2017. The time now is 0728 local Pacific. This interview is being conducted in Building 31, Room 55 on Travis Air Force Base. The persons present are the witness, Master Sergeant [MM8], the legal advisor, the pilot advisor, the medical advisor, the maintenance advisor, the engineering advisor, the weather advisor, the boom advisor and the recorder.

I'm Colonel [BP], the Board president. The witness has been sworn.

Do we have 7214? Okay. So, you previously gave information -- medical information -- to the Safety Investigation Board. Do you wish to adopt that as part of your testimony today?

WITNESS: Yes, sir.

Q1: Please state your first and last name.

A1: [MM8].

Q2: What unit are you assigned to, and what is your duty title?

A2: 60 MXS, production superintendent.

Q3: Okay. How long have you been there?

A3: As production super, or with 60 MXS?

Q4: With 60 MXS.

A4: Since October '15, I believe, sir.

Q5: Okay. You're been a production super for how long?

A5: Production super with 60 MXS for approximately five months now.

BOARD PRESIDENT: Okay. At this point I'm going to hand the Q & A over to our maintenance advisor.

QUESTIONS BY MAINTENANCE ADVISOR:

Q6: What specialty are you?

A6: Hydro.

Q7: You're hydro?

A7: Yes, sir.

Q8: How long have you been working KC-10 hydraulics?

A8: March 2010 is when I arrived here at Travis, sir.

Q9: In October were you working day shift or night shift?

A9: In October the first week or two I was on swings, and then at the time of the accident I was night shift to mid-shift, sir.

Q10: Okay. Do you recall any of the write-ups from aircraft 83-0080? Do you remember any of the write-ups since there was three prior to the --

A10: There was three prior, yes, sir. I do recall -- I wasn't working the previous -- not that I remember for the previous two, but I do recall something about boom being lowered, flew 5 degrees. I just knew that there was two previous write-ups, sir. I didn't go over any of the stuff recently.

Q11: So, on October 30th you went out to assist on aircraft 3080. Can you walk through what you -- while you were called out there and what you looked for or what you saw once you were out there?

A11: I wasn't called out there by the hydraulic team. I just went out there because I'm the pro super. It's my job. So, I went out there to see what they were doing. I knew about the previous write-ups. So, I know it was going to be a hot topic. Another main thing too is to ensure that these guys were going to be using the boom tester because it's a big item. Because I know they weren't finding anything previously, other than the gimbal, you know, the safety wire apparently being broken.

By the time I had already got out there, they had already called for the boom tester and all that stuff to come out.

Q12: By the boom tester you are talking the area boom tester, the ARB, as they call it?

A12: The ARB tester, yes, sir. They already called for that. Someone was at COMBS getting that. So, I said good. At the time they were going over all the preflight checks through the STP, and to my knowledge, according to those guys, day shift had already done all this too. They were just kind of going over the deal.

No defects. They were checking all the parameters in the STP as far as voltage readouts, all the sensor readouts. No defects there. Didn't find anything.

They put the BCU tester in -- the ARB tester, excuse me. Ran through all their checks. Looked through all their checks. Looked through all the parameters, voltages, all that stuff. Ran it through with a laptop. No issues. Didn't find any issues there.

They put everything back together, and I said has anybody checked just the flight controls, anything like that, just because sometimes we have worn bushings in the rudder area -- surfaces and stuff like that might cause the boom to pitch left or right. They said they weren't sure, so I had them lower the boom real quick, and I went out there and just shook them because sometimes they can be super loose. If they're super loose or something like that, we'll investigate a little more and check for worn bushings in the flight control surfaces or the actuator surface. Nothing there. Didn't find anything there.

Just from my gee whiz, knowing that the gimbal was changed, I grabbed a ladder, and I just looked up around the gimbal area. I didn't grab a mirror, so I didn't look back up at the gimbal nut because the horseshoe panel was still on, but I did feel up in there. Safety wire was still intact. The rollducer was in its slot like it was supposed to be. I just checked kind of in the general area, you know. Found a couple cannon plugs that might have been -- that were a little loose. One of them, safety wire was backed off a little bit, so I know it was loose. Re-torqued those. They re-torqued those and re-safety wired those. Other than that I didn't find any obvious defects of any kind.

QUESTIONS BY ENGINEERING ADVISOR:

Q13: do you recall which cannon plug was loose and required torqueing?

A13: I know one of them was the roll cannon plug for sure, and the other one --

Q14: The "roll" meaning the?

A14: The DRDVT or DRVT.

Q15: The dual rotary voltage transducer?

A15: Yes, sir. Now, when I say "loose," I don't mean -- I mean, it was loose enough to where -- because I grabbed all the connectors with my hand. It was loose enough to where I could move it. When I went to tighten it, I mean, it snugged up immediately.
; however, it still needed to be torqued and safety wired. It was that one, and then the aircraft left side small cannon plug. I think it went to possibly an elevation LVDT. I'm not 100 percent positive where that cannon plug -- I just noticed I grabbed everything and was touching everything, and then that one was loose too. So, I identified it and told them to safety wire that one too.

QUESTIONS BY MAINTENANCE ADVISOR:

Q16: Were you aware the flight crew reported the boom struck the aircraft?

A16: Absolutely not.

QUESTIONS BY ENGINEERING ADVISOR

Q17: Did anybody know -- any of your crew that was out there at that time know that it struck the side --

A17: We did not -- not to my knowledge or not to my recollection discuss the boom hitting the aircraft. The only thing that I know was somebody mentioned structural limits, and to me, I don't know. It could have been the 32 degrees on the gauge or something like that, but I was not made aware of the boom causing any kind of banging or nothing like that -- not at that time.

Q18: And to your knowledge, did anybody do any structural visual inspection?

A18: No, sir.

Q20: Is there a book or an inspection that you would follow for that that you know of?

A20: That's out of the realm of my technical expertise, but me being a pro super, you know, I would have called for something and left that up to whoever -- sheet metal metal's tech, NDI, to figure that out what needed to be inspected. I would have definitely recommended the gimbal mounts mounted to the aircraft, the gimbal itself maybe, where the boom hooks up to the gimbal, something along those lines.

Q21: I know this write-up wasn't on the flight exact prior, but were you aware that this is the first time the boom had come down since your earlier write-ups?

A21: I'm sorry?

Q22: I'm saying, you know, the boom wasn't flown in the flight before; however, three flights before it was flown and had very similar problems -- the problems you were talking about.

A22: Okay, yeah, I was aware of those problems prior to, and I knew that the aircraft had down once or twice prior to this, but I did not know that the boom wasn't flown or was not flown -- was or was not. I had no idea.

Q23: All right. And the final write-up was signed off just as a diagonal in the "corrected by" block by lower boom, checked visually flight controls -- basically what you just said. In accordance with your maintenance group OI, your operating instruction 21-1, do you, as a pro super, feel that should have been labeled a repeat recur write-up in the aircraft forms?

A23: Yes, sir, because it's first time, first time, first time, repeat. Next flight and repeat the next flight. I know it had a good flight, but I wasn't aware of whether or not the boom was flown or not, or I had good one or two. I think a turn or something. I mean, I'm not sure how many -- I know it's repeat, repeat, repeat and on the fourth is a recur, but I'm not sure how many fights need to fly good in between a repeat.

Q24: It's four -- four flights. Anything --

A24: So, it definitely should have been labeled --

Q25: --inside of four could be recur.

A25: -- as a recur.

Q26: Final one?

A26: Yes, sir.

Q27: Who, within your organization, determines that repeat, recur and labels them in form?

A27: I mean, in my organization it's kind of tricky because we don't -- I mean, I guess the pro super would be responsible. We don't have a debrief section per se or -- that's a tricky dynamic when you get into the pro supers between MXS and AMXS, especially now with the merge.

Q28: That's what we're trying to figure out. So, if debrief, you send a specialist to debrief, I'm guessing, and obviously, from your turnover log, your production superintendent's turnover log and from your statements, hydraulic shop was well aware that this problem had happened on this airplane?

A28: Yes. Yes, sir, absolutely.

Q29: So, I just don't know who should be calling it a repeat recur and actually then falling into the OI realm of who should be signing it off. From a production superintendent, who should be writing big red repeat or big red recur on the forms?

A29: In the past when I was pro super for a small stint in the 660th as well, it was always labeled in debrief. I mean, obviously, as pro supers we knew that, but it was stamped repeat recur in debrief. Me, as a pro super, I've never done that, stamped as. I mean, I've always been aware whether it's a repeat or recur, but never actually put it in the forms as repeat recur.

Q30: Would you say that would be debrief section? Then it's Staff Sergeant Snuffy that's working at debrief would be the one?

A30: No, sir. It would definitely be a pro super's responsibility. Absolutely.

Q31: Do you know who the pro super was for -- were you on duty the night of the debrief for this aircraft, or you came on after?

A31: I came on after the debrief. I believe it might have been days -- dayshift, and then dayshift did a little bit with the aircraft. I came in and took turnover that night.

Q32: Do you know who you took turnover from from pro super that night --

A32: I want to say it was Sergeant , possibly -- Master Sergeant . I don't remember exactly.

Q33: But as far as you know, the 660th would have sent someone also to debrief? Where is the debrief located; is it within the 60th or the 660th?

A33: In the 660th always. All the debriefs are usually in the units, if we can't catch them at the aircraft, and I wasn't sure whether or not the maintainers actually got to the debrief or not. I wasn't aware.

Q34: So, as far as the history, you knew it was there. Hydraulic shop was well aware of the issue; however, the forms didn't match. Another question I have, from the OI, it does state in this particular situation a lead tech would have been the only one that could sign it off. What exactly, or who is a lead technician?

A34: Lead technician would have been, to me, the most experienced person in the shop as far as KC-10 is concerned -- at least one individual, not per shift. It's usually one person in the shop. The lead technician is responsible for training, equipment, tools -- all that happy stuff to make sure --

Q35: Because in this OI it does say a second repeat recur discrepancy will require lead technician involvement in assisting and troubleshooting and signing off the discrepancy in the inspected by block. So, by your own OI, I'm just trying to figure out who would have -- who would that have been in your organization?

A35: For KC-10s it could have been -- shoot. Tech Sergeant wise -- It could have been was probably -- Tech Sergeant was possibly the longest as far as rank and time. He definitely wasn't the longest on the KC-10, but with rank it was either or . I think had been there a little longer, if I'm not mistaken.

Q37: Because you are an experienced hydraulic troop yourself?

A37: Somewhat, yes, sir. I mean, I've got a few years on the KC-10, but I was a section chief for a long time, an expediter, and pro super.

Q38: Okay. So, as far as the debrief, if the aircrew was to -- you said the air crew made a statement saying that it did strike on some form, right? They turned in a form or something?

A38: I've never read it, but I heard they turned in an inflight safety -- I think it's Form 97, if I'm not mistaken.

Q39: And how long do those forms take to get back to debrief or back to the office; have you seen those?

A39: I'm not aware, sir.

Q40: No?

A40: I'm not aware. Normally in the past though, I'm aware, because they mentioned that maybe one will be filled out. We will be filling out. In debrief it's discussed, talked about, you know, but being that I wasn't part of that process, I wasn't aware, and no one else that I spoke to, be it my turnover or be it any other hydraulic technicians, were aware of a 97 being filled out as well, or a pro super being --

Q41: You certainly have the rights to write repeat recur on the forms after debrief --

A41: Yes, sir.

Q42: -- as a production superintendent, as the MXS?

A42: It's a strange dynamic, but yes, sir. I mean, we're still working out the kinks as far as whose -- I mean, aircraft -- I don't own the aircraft. I don't ER the jet anymore, but absolutely, yes. It is owning the hydraulic shop and their maintenance, yes, sir. I could have wrote recur repeat on the forms, yes, sir.

Q43: But 660th is in charge of the debrief process?

A43: Yes, sir.

Q44: You wouldn't happen to know who their lead pro super is at 660th, do you?

A44: Maybe [MM10] now, Senior Master Sergeant select [MM10]. I know he is possibly taking over, if he hasn't already.

QUESTIONS BY ENGINEERING ADVISOR

Q46: Whether it struck the aircraft or not, did you know that it went to 32 degrees max?

A46: Well, it said structural -- yes. It said 32 degrees, yes, sir, and I know that's what's on the gauge. If I'm not mistaken is 32 degrees, yes, sir.

Q47: Knowing that information and knowing that you had knowledge of the prior write-ups before, would that not have caused you to to say, hey, let's just take off the boom; let's just take everything out and inspect everything rather than leave the boom on the jet?

A47: It could have. I mean, as a hydraulic guy and deploying several times and seeing multiple write-ups and things come down, it would have been a hard call, sir.

QUESTIONS BY MAINTENANCE ADVISOR

Q49: As a KC-10 hydraulic troop, this write-up, it appears very auto pilot-type -- more of an electric, compared to mechanical --

A49: Yes, sir.

Q50: Fluid is not the issue on this one here.

A50: Absolutely not.

Q51: Normally you guys tend to chase more fluid. I'm trying to get a feel of how knowledgeable do you feel you were hydraulics, or how many TBA, training business area, you know, how many items were there in your training that allow you to learn and know auto pilot write-ups better?

A51: Very minimal, if any. As far as auto pilot is concerned, it's very limited, sir, that I recall in TBA.

QUESTIONS BY ENGINEERING ADVISOR

Q52: When they're going through checking the readings on the status test panel on the ARB, are they jotting down the values that they get for each one, or is it just a verbal this is good, this is good, this is good?

A52: I'll be honest with you. The night that I was there, as far as trouble shooting is concerned, nobody jotted down the values. They looked at it and looked at the TO. The TO is right in front of them. Said yep, good; within parameters, within parameters, within parameters. That shift, that particular shift, I don't believe wrote it down. I'm not 100 percent, but I don't recall them doing that. I can't speak for the other shifts, but I've seen people do it in the past.

Q53: Do you know if they go through it -- the sequence very quickly hoping that the panel gives them a fault light, or are they actually looking at the values?

A53: No. As far as I know, they absolutely look at the values. I don't – especially because that's one of our things, and if I remember correctly, if my memory serves me correctly that night, you stop and you look at each sensor, and you bump it with a TO. It's good. Plus or minus. Plus or minus. Are we within those parameters or even close? I don't recall anybody trying to zoom through anything or cause a fault by any means that I remember.

QUESTIONS BY MAINTENANCE ADVISOR

Q54: So, if you would have known that the aircraft struck the airplane [sic] you may have called whoever, right? This is page front page or page 2 of 2-5, just the tech data, where all the AR possible inspections are, do you see one on this that you would -- that would fit an aircraft -- a boom striking itself?

BOARD PRESIDENT: What are you referencing?

MAINTENANCE ADVISOR: The 2-5, Boeing TO 2-5, page 2. This is the aircraft -- these are all aircraft inspections where normally you would give over G's, overturns, special inspections.

LEGAL ADVISOR: While the witness is reviewing that -- this is the legal advisor -- you used the term "TO". What is TO referring to?

MAINTENANCE ADVISOR: technical order.

Q54: I mean, reading the verbiage, but knowing boom strike, boom in trail check could possibly be used, but I know that that's possibly referring to hitting the ground, but other than that -- I mean, if I had to pick one, it would be that one.

MAINTENANCE ADVISOR: Okay. Thank you.

QUESTIONS BY PILOT ADVISOR

Q56: As far as the community is concerned, is there a similarity of treating the write-up from a boom structural limit versus as aircraft structural limit? So like the structural limits exceeded on the on the boom as it was before?

A56: Yes, sir.

QUESTIONS BY ENGINEERING ADVISOR

Q58: Do you know of anybody that took any pictures or video of anything?

A58: I've heard rumor of -- I don't know how true this is, but one of crew members taking a video of it detaching from the aircraft, but I've never seen it. Other than that, I don't have any pictures or videos or know of anybody that I know of anyways other than what was on Facebook as far as it laying in the field, you know.

Q59: And in your opinion, in regards to the repeat recur criteria, obviously there was a time in between flights where the boom didn't cycle, but you did not know that.

A59: I didn't. I knew it flew, but I wasn't sure whether or not the boom was used.

Q60: Right.

Q62: How come you couldn't get an answer?

A62: Everything was pretty much hush hush. To be honest with you, I didn't try a whole lot because I was kind of scared to dig into anything. This is the first time I've ever been a part of -- almost a 20-year career. Never, ever, had anything like this happen so.

Q63: Do you mind elaborating? The "hush hush" comment, what do you mean by that?

A63: I mean, when something of this gravity happens, you don't want to talk too much about it because then people start jumping to conclusions. People start, you know, it's ridiculous. So, I just don't want to start because if I contact, for instance, say PNS and ask them contacts or anything like that, for instance, I don't want to kind of bring up any (indiscernible). I just didn't want to dig too much into it. I don't know how big it was, you know? Not from my -- I just didn't want to, you know?

QUESTIONS BY MAINTENANCE ADVISOR

Q64: During that nightshift, was the aircraft on the schedule for the next day already, or do you know if it was prepping to fly?

A64: I don't recall checking the flying schedule. I'm not 100 percent, sir. I'm not 100 percent on whether or not it was supposed to fly that morning, sir.

Q65: I didn't see it in the turnover log on saying that you're prepping to fly, but for it to fly the next day, I'm just trying to figure out what the pro supers were doing.

A65: Sure. Again, prepping to fly, we don't prep. MXS does not, you know, but we do actually look at the flying schedule normally. Not every night. Sometimes it slips our mind. Usually we are made aware that, hey, this is a hot topic because we are flying in the morning. It could be red ball status.

Q66: I'm just talking. The fact that this is on a Sunday, so you don't have some of the meetings? I'm just trying to figure out --

QUESTIONS BY ENGINEERING ADVISOR

Q67: Aside from the write-ups and the forms or the log book, do you know of anybody on or team or just in maintenance in general reporting to you or to anybody else that they had any problems with installation or adjustment or just anything regarding the boom in any of those write-ups?

A67: No, sir. Like I said, up until that last night, my role was extremely limited, in it either didn't fall on my shift or it just wasn't touched during my time, but the only really part was that night where I happened to go out and check on my hydro guys and be there while they were running some of the tests and do some gee whiz inspections for myself. I don't remember anybody saying they had any trouble whatsoever with any kind of maintenance that I remember.

QUESTIONS BY MAINTENANCE ADVISOR

Q68: How many shops does an MXS pro super oversee?

A68: I can't remember the number exactly -- hydro, fuel cell, sheet metal, metals tech, inspection section, NDI, wheel and tire, 7-8. Quite a bit, sir.

QUESTIONS BY LEGAL ADVISOR

Q69: There's been a few acronyms thrown around. I just want to clean up and make clear on the record.

So, first off MXS. What does that mean?

A69: Maintenance Squadron.

Q70: Thank you. ARB?

A70: Air refueling boom.

Q71: BCU?

A71: Boom control unit.

Q72: STP?

A72: Status test panel.

Q73: DRVT?

A73: Directional roll variable transducer.

Q74: I won't make you guess. Does dual rotary voltage transducer sound right?

A74: Nailed it. Yes, sir. Sorry.

Q75: Okay. LVDT?

A75: Linear variable directional transducer?

Q76: Linear voltage differential transducer?

A76: Yeah, that's what I meant. Sorry. It's been a while. So, sorry.

Q77: I understand. NDI?

A77: Non-destructive inspection.

Q78: Okay. Don't worry. The quiz is almost over.

A78: I feel like I'm taking a WAPS test.

Q79: EPR?

A79: Performance Report.

Q80: Enlisted Performance Report?

A80: Yes, sir.

Q81: That was a softball for you.

So, let's see. You also mentioned a TBA?

A81: Training business area.

Q82: We covered technical order. And then AR?

A82: Air refueling.

Q83: And I think there was a PNS as well?

A83: Plans and scheduling.

Q84: Okay. That's all the list I got. Any others that I missed?

QUESTIONS BY PILOT ADVISOR

Q85: One real quick from the pilot advisor. Is there -- during debrief process is there a query to the crew whether or not there are boom cycles?

A85: I will be honest with you, I don't 100 percent remember, but I think so. I believe so, but I can't answer that 110 percent. I cannot. So, sorry about that.

Q86: No worries.

A86: I'm pretty sure there's contacts in debriefed.

QUESTIONS BY ENGINEERING ADVISOR

Q87: Contacts, but just boom lowering?

A87: I do not remember. I don't remember any boom lowering, stowing being debriefed, but again, I'm not 100 percent sure.

Q88: Do you know if that's written down anywhere, or is it just verbally debriefed?

A88: As far as contacts or?

Q89: Contacts, boom cycles --

A89: Yeah, I'm pretty sure the contacts are written down. I think I've seen some information like that through PNS. I'm not 100 percent how to get ahold of it, but I've been part of a couple impounds and some issues like that. I'm pretty sure I've seen that written down for sure, but as far as just cycling the lowering, raising, I can't answer that.

QUESTIONS BY BOARD PRESIDENT

Q90: Are there any matters that we addressed so far that you wish to clarify?

A91: No, sir.

Q92: Are there any additional matters that we have not discussed that you think are relative to this investigation?

A92: No, sir.

Q93: Anything else you wish to add?

A93: That's it, sir.

BOARD PRESIDENT: All right. That concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this Accident Investigation Board prior to public release of the final report.

Thank you for your time and cooperation. You are dismissed.

SUMMARIZED TESTIMONY OF SSGT MM9

SSgt MM9 appeared at the investigation via telephone, was sworn, and testified substantially as follows:

I am Staff Sergeant MM9 . I am was stationed at Travis Air Force Base with the 60th Maintenance Squadron, but am currently on terminal leave and in the process of separating from the Air Force. I am an aircraft hydraulics craftsman.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

I have been an aircraft hydraulics craftsman for about 1 year. I have been an aircraft hydraulics specialist working on KC-10 aircraft since October 2015. My first experience with KC-10 hydraulics was when the hydraulics shops on Travis Air Force Base were combined around October of 2015. Before that I was assigned to C-17's for about a year and a half, and before that I spent three years working on hydraulics in C-130's. I was assigned to day shift during October 2016.

I did help install the boom on aircraft 83-0080, but I did not install the gimbal. Once I arrived at the aircraft, the gimbal was already installed and the boom was ready to be hung. I was outside for the majority of the time, raising the boom and adjusting the Dual Rotary Voltage Transformer (DRVT). After I adjusted the DRVT, I was called to a different aircraft and then returned to pick up the Airmen working on aircraft 83-0080. I was away for a portion of the work, but helped out for majority of the time. To adjust the DRVT, SrA MM3 was up in the aircraft with the technical order that says what the sensor limits and positions are for the boom. He was getting readings up in the aircraft and relaying to me what I needed to do via our radio headsets. I used a wrench to loosen the jam nut at the end of the bell crank arm, and then I used an Allen wrench to adjust the setting of the DRVT. SrA MM3 used an e-tool to get readings and told me how to adjust the DRVT. An e-tool is a laptop computer that was used during maintenance of aircraft 83-0080. When we were taking readings the boom control unit was still in its place in its block in the back of the aircraft. Once the adjustments were completed, I tightened the jam nut down to hold the center Allen head screw in place. The top bolt that was suppose to go into the tang was already safety wired into the aircraft. I adjusted the DRVT clockwise or counterclockwise based on the readings that SrA MM3 was providing me, but I don't remember if he told me voltages or what the voltage settings were. When I tightened the jam nut back down, SrA MM3 came down from up in the aircraft, and I was called to another aircraft. I do not know what happened or what work was done between the time that I left to go to another aircraft and when I came back to aircraft 83-0080 to pick them up.

When I arrived at the aircraft we raised the boom and connected some electric and hydraulic lines before adjusting the DRVT. I am not sure whether the pin was in the tangs when I showed up for maintenance of this aircraft. I raised the boom througout the aircraft; installing the mount bolts, safety wiring the mount bolts, installing the hydraulics lines, cannon plugs and adjusting the transducer. The gimbal assembly installation was completed before my arrival of aircraft 83-0080. I do not know who mounted the DRVT to the gimbal assembly. I did not conduct

maintenance on this aircraft after the DRVT was adjusted. I did not know the reason why it was replaced until after my previous interview. I do not remember the torque value for tightening the jam nut on the bell crank arm so I would need to look at the job guide to verify. This is the first DRVT that I have adjusted and it is my second or third boom installation. I am not sure if I was signed off on the task in Training Business Area at the time, and I think that I was in training for the task. I do not know if SrA MM3 or another individual were signed off on the task. I did not sign off on the aircraft write-ups.

At the conclusion of the interview I was reminded of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without prior permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 14 February 2017.

//SIGNED//

MM9 , SSgt, USAF
Aircraft Hydrualics Craftsman

Signed and sworn before me this 14 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

SUMMARIZED TESTIMONY OF SSGT MM9

SSgt MM9 appeared at the investigation via telephone, was reminded that he was still under oath, and testified substantially as follows:

I left the mishap aircraft after adjusting the Dual Rotary Voltage Transducer (DRVT). SrA MM3 and maybe another Airman were with me during the maintenance of aircraft 83-0080. When I left the DRVT, it was adjusted and the Air Refueling Boom (ARB) was up and stowed. I adjusted it to zero on the System Test Panel (STP) or ARB tester. SrA MM3 was up in the the aircraft in the Air Refueling Operator's station (ARO); he was telling me where the DRVT needed to be and he was reading the adjustments to me based on the information from the STP and the Technical Order.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 14 February 2017.

//SIGNED//

MM9 , SSgt, USAF
Aircraft Hydrualics Craftsman

Signed and sworn before me this 14 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

VERBATIM TESTIMONY OF MASTER SERGEANT MM10

Good morning. My name is Colonel [BP]. We're investigating an accident involving a KC-10, tail number 83-0080 that occurred on 1 November 2016 near Mountain Home Air Force Base, Idaho. This investigation, conducted under Air Force Instruction 51-503, is separate and apart from the safety investigation conducted under Air Force Instruction 91-204.

This Accident Investigation Board is a legal investigation that was convened to inquire into the facts surrounding the accident, to prepare a publicly releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings and for other purposes. A safety investigation was previously conducted on this accident. Any testimony you may have given before the Safety Investigation Board will kept confidential, if you were so advised, and can only be used for accident prevention purposes. This Board does not have access to any confidential testimony you gave before the Safety Investigation Board. You may not state that you gave any particular information to the Safety Board under a promise of confidentiality.

Your sworn testimony to us may be used for any proper purpose. Additionally, your testimony can be released to the public. Do you understand the difference between your testimony before the Safety Board and this Accident Board?

WITNESS: Yes.

BOARD PRESIDENT: I must inform you that this interview is being recorded and that you may not use your own recording device during the interview. Do you consent with this interview being recorded?

WITNESS: Yes.

BOARD PRESIDENT: Your testimony in this investigation will be under oath, and at this time I will administer the oath. Please raise your right hand.

Do you solemnly swear that the testimony that you are about to give in the matter now under investigation shall be the truth, the whole truth and nothing but the truth so help you God?

WITNESS: I do.

BOARD PRESIDENT: You can lower your hand.

Today's date is the 27th of January, 2017. The time now is 1105 local Pacific. This interview is being conducted in Building 31, Room 55 on Travis Air Force Base. The persons present are the witness, Master Sergeant [MM10], the legal advisor, the maintenance advisor and the recorder.

I'm Colonel [BP], the Board president. The witness has been sworn.

Q1: Please state your first and last name.

A1: [MM10].

Q2: What unit are you assigned to, and what's your duty title?

A2: 660th AMXS, and I'm lead production superintendent.

BOARD PRESIDENT: At this point I will hand it over to the maintenance advisor.

QUESTIONS BY MAINTENANCE ADVISOR

Q3: What is your specialty?

A3: I am a 288 X2J. My IFSCS or instrument flight control or guidance and control.

Q4: In October of 2016, were you working day shift or night shift; do you know?

A4: October, what day? I'm sorry.

Q5: In October.

A5: October I was days, yes.

Q6: Days. How long have you been a pro super?

A6: Let's see -- year-and-a-half, roughly.

Q7: Okay. On aircraft 83-0080, do you remember hearing or seeing any write-ups about a boom flying out of, uncommanded?

A7: Yep. October 30th, 29th, one of those days, I came back from a TDY. There was a write-up for erratic boom movement and hydro -- we dispatched hydro to go out and look at it.

Q8: So, you were part of the debrief or you were there when it came down?

A8: I don't believe I was there when it came down because I was working Monday through Friday, and that was a Sunday, but I came in Monday and had to brief it to the group and everything.

Q9: That was before it flew again, I guess?

A9: Yeah, it flew, I think, Tuesday the 1st.

Q10: Okay. And do when you saw that write-up, were you aware that there were similar write-ups prior to?

A10: Yes, and multiple parts have been changed, yes.

Q11: What part of the debrief does AMXS have?

A11: All of it.

Q12: All of it?

A12: Yes.

Q13: So, the flight crew comes to your work center?

A13: Uh-huh.

Q14: Does a hydraulic or a specialist, if it's that part, do they usually come to your --

A14: Yes, if, being hydro is part of MXS, we will call their pro super. They will dispatch them over to debrief to come debrief it, yes.

Q15: Do they usually bring the specialty, or does the pro super show up there and --

A15: Depending on if we're out -- the pro super will show up sometimes, especially if we're in the building. If we're not in the building, we usually let our specialists handle it because they know what's going on.

Q16: Is there a requirement of who has to be there or who should be there?

A16: No.

Q17: Do you know if this write-up was deemed a repeat or a recur?

A17: I don't recall.

Q18: Do you know if there was a pro super available at the debrief on that night after that thirtieth flight?

A18: No, I don't…again, I don't believe I was here during the first debrief, so I don't believe -- I don't remember.

Q19: Were you lead pro super at that time too?

A19: I was training.

Q20: You were training?

A20: Yeah.

Q21: What determines if a write-up is a repeat or a recur?

A21: Repeat if it happens within the next or the third flight after, and recur fourth or fifth flight after the original discrepancy.

Q22: How do you determine if it's a similar discrepancy?

A22: Usually by reading the discrepancy and using knowledge, whatever. Most of the time you'll see a repeat recur it will be almost exactly identical. So, we go through and we run a, our debrief runs a history, and we look at the previous write-ups and see if they are similar.

Q23: So, the debriefer or the specialist that's there would be --

A23: They come to the pro super for that. The debrief will come to the pro super to see -- debrief is responsible for tracking that and making sure what is a repeat recur, and if they have any questions they come to us, to a pro super on shift or the lead pro to say is this a repeat recur usually.

Q24: So, when you saw the write-up on the following Monday, on that Monday morning, I guess it was, did anyone determine it was a repeat?

A24: I don't remember. I know it had history, but not histories to -- I know it had boom history. I don't recall what the history was. As far as erratic flight controls, I don't believe that was a previous write-up from what I remember. I don't recall.

QUESTIONS BY RECORDER

Q25: What is pro super?

A25: Production superintendent.

QUESTIONS BY MAINTENANCE ADVISOR

Q26: So, if MXS, the maintenance squadron, meets the airplane, do they ever not then go to your building for --

A26: MXS? They will usually go through their production superintendent who will then go through us. I guess if I understand the question right, do they not come to us sometimes?

Q27: Yeah, do they ever just take debrief at the aircraft instead of coming to --

A27: Sometimes, yes. Yes. A lot of time they will do that so they can see it in person what's going on, rather than through a writing or through the crew.

Q28: But there is no chance for the, to write down what they gathered, I guess?

A28: No.

Q29: Because then that pro super -- that pro super has their own -- do you have your own turnover log, I am guessing, AMXS pros supers?

A29: Yes.

Q30: Aircraft Maintenance Squadron?

A30: Yeah, we have our own turnover log and yeah --

Q31: And then, obviously, the 60th would have one too?

A31: Right.

Q32: So, on Monday morning do you guys have an MXG meeting every day?

A32: Yeah. We have a seven o'clock in the squadron, and then an eight o'clock for the group every day, Monday through Friday.

Q33: Okay. So, on Monday morning, if this was briefed as a repeat, or if it was determined to be a repeat, it would be briefed at the squadron and the group meeting as a repeat?

A33: If they ask about it at the group. It's not a mandatory item for us to tell them it's a repeat at the group, but yeah if it was a repeat, we will brief it in our seven o'clock at least because at that point you need a lead tech, if it's a first-time repeat -- lead tech to have eyes on it, and then from there it goes to maintenance supervision and then a third or fourth or whatever. I don't recall exactly the order, but I know the first time repeat is lead tech involvement.

Q34: So, where would you write that down? Is there anywhere that information is --

A34: Forms are stamped with a repeat recur.

Q35: I'm saying, like in your turnover log?

A35: We have a maintenance data base that we use. Any jet that lands here, debrief goes in and puts all landing write-ups in it, and then if they -- which we know gets missed a lot, there's a repeat recur tic button, and we have to go back and update it sometimes because it does get missed on that, but the big thing for us is the stamp in the forms.

Q36: In that morning meeting, is there minutes or anything taken for those meetings, or do you guys just discuss around a table, or what is the squadron meeting at seven?

A36: No minutes. Just a package that we get, and we go through yesterday's flying, today's flying, the next day's flying, the sit rip.

Q37: How long do you save those packets?

A37: We save them for a year. Whether or not they have notes on them is because -- I take the notes to the meeting, and then if we have extra packages, sometimes we just throw -- so, the notes may not be on those.

Q38: So, if there is no red stamp repeat recur, I would be led to believe that wasn't deemed a repeat recur?

A38: Right.

Q39: So, if I were to read these write-ups -- because you said the write-ups would determine if it was a repeat or recur?

A39: Well, they would go off, I guess, a work unit code initially, but as we know in maintenance, work unit codes aren't always input correctly. So, at that point if a write-up will pull say a system 46, it will come up. It may be different from after the first two digits. So, if a debriefer notices the write-ups are similar, at that point that's when they come and discuss it with us.

Q40: So, work unit codes -- when troubleshooting and not knowing exactly which specific component it is, do you guys leave like 46000, or do you guys --

A40: Again, training debriefers are usually young Airmen in there. We try to them as specific as possible, but yeah. If you don't know what it is, it's usually a 46, and that's it, or whatever system it is, yes, until we figure out the specific component.

Q41: So, you said your guidance and control by nature, right. How many years you been a guidance control troop?

A41: I've been in 15 years.

Q42: 15. So, if boom roll gauge shows 8 degrees to the right when boom is 0, does that sound similar to you as boom was 4 to 5 degrees to the left and roll gauge was 11 to 12 degrees to the right, would you deem those similar?

A42: Similar, yes.

Q43: Do you know of any other aircraft that hydraulic troops work autopilot?

A43: No, because the 135 does not -- it's all fly-by mechanical. But no, because yeah, you're right. This is an auto pilot computer on the 135. So, no, I don't know any other.

Q44: So, on the aircraft side of an auto pilot write-up, hydraulics would have what part in it?

A44: On the?

Q45: On the aircraft side instead of boom side.

A45: For the boom system?

Q46: Auto pilot. No, just for any auto pilot write-up --

A46: What would they have? They would have actuators. That's usually about it. Usually we'll troubleshoot the computer system all the way back to an actuator. I know B-1s was that way. We troubleshot all to shut off valves and everything, and then from there hydraulics would change it based on our troubleshooting.

Q47: How long has MXS, Maintenance Squadron, housed the KC-10 hydraulic troops?

A47: Since October of 2015, I think it was.

Q48: Do you know what drove that?

A48: A higher headquarters.

Q49: So, AMC?

A49: Yes.

Q50: Air Mobility Command?

A50: It's across AMC now, yes.

QUESTIONS BY BOARD PRESIDENT

Q51: When did that direction come out?

A51: When did that come out? A couple months. They had very little time to get everything up and running for October 1st.

Q52: So, last summer some time?

A52: Yeah, last summer -- two/three months because we lost a couple of our pro supers. One of our pro supers went over and set it up.

QUESTIONS BY MAINTENANCE ADVISOR

Q53: Was there a policy letter or something that came out to drive that; do you know?

A53: I don't remember.

Q54: Does AMXS have any part in the R squaring or raising, lowering or any pieces of the boom itself?

A54: Some lightings. I know E and E, electrics, will do some lighting stuff on it. Usually any time there is wire trouble shooting, electrics is involved.

Q55: But on 3080 did AMXS, Aircraft Maintenance Squadron, help troubleshoot this problem?

A55: I don't remember.

Q56: So, as far as you know, this aircraft would have been debriefed in your building and should have had or might have had a hydraulic specialist there with you if they didn't catch it at the airplane?

A56: Right.

Q57: If a flight crew writes up or does a form 97 for an incident, where does that go in your process?

A57: We do not get a copy of it.

Q58: You do not?

A58: Uh-uh.

Q59: So, they come to debrief, but then they give that to --

A59: They take it with them and turn into safety, or whoever I think it is -- wing safety. We never see a copy of it. The one for this one I did not see any until days later, and I don't -- I've been told in the past that it's proprietary. We're not supposed to actually get it is what I've been told. I have not researched that, but I have -- no, I haven't seen one since then now that I think about it.

Q60: So, does the debrief write down anything different than what's in the aircraft forms ever? So, they're just taking the verbal feedback from the flight crew?

A60: Uh-huh.

Q61: That could be a little bit different than what's written in the forms?

A61: Right.

Q62: And just the specialist that's in that room at that time is who gets that information?

A62: Yes.

Q63: If, I know that from a 97 you reported the boom possibly struck the aircraft, you as a pro super in charge of, I guess, the crew chiefs and the -- what other specialties do you actually watch at 660th?

A63: Crew chiefs, guidance and control, communication, navigation, electronics, environmental and propulsion.

Q64: So, basically everyone but hydraulics?

A64: Everyone -- hydraulics.

Q68: I just want to go down really quick just for my own -- so, debrief comes from the airplane, the crew comes to your building, 660th.

A68: Uh-uh.

Q69: Should be met by the specialists that match that write-up?

A69: Right.

Q70: The debriefer, with the help of a pro super and a specialist determine if it's a repeat recur, and if it is, it changes the path of how you sign it off?

A70: Right.

Q81: And then that's really what -- now you are working between two squadrons, it wouldn't be so much you're seeing who signed it off. So, if you have to go out and do an exceptional release on an aircraft and it's repeat and it's signed off in a corrected action block, would that raise…? I'm trying to figure how would the difference between 660th and AMXS Aircraft Maintenance Squadron and Maintenance Squadron work there?

A81: Right. If I went out there and it was stamped repeat recur and if it was signed off in the corrected by, the only way I would know if it was a lead technician is by looking up that man number. I don't know the hydro shop, so I don't know who their lead technician is without --

Q82: So, you guys have a lead technician in every career field within 660th?

A82: Yes, the funny thing about it is that's how the way the reg reads, but the lead technician was removed from the 21-101. So, who is that person?

Q83: Right. That one might be fixed in the newer --

A83: Right.

Q84: So, then they determine that it goes -- then the forms go back to the airplane while they load everything into the maintenance information system, but anywhere in the maintenance information system is there a place to put repeat recur that you know of?

A84: I don't know. That's a good question. I don't think there is. I've never worked debrief, so I'm not quite sure, and then… no, there is because -- on the 8035 it will show repeat in one of the columns. It does. So, there must be.

Q85: So, it gets loaded in there. Then if the forms are transcribed, it should show up somewhere, and then I guess you'd have to add the red color back to it.

A85: Right.

Q86: And that might chance how you attack the write-up. I'm guessing is why that's there like that?

A86: Yes.

Q87: So, they do all that. They determine if or not -- does anyone ever review after that to see if those three people that were in that meeting, or in the debrief, does anyone second guess that, I guess, or does anyone follow up on that information the next day?

A87: As far as the information they received, or the --

Q88: Whether it's a repeat, recur? Does anyone else look at that afterwards?

A88: I know in the morning meetings we will look, and if there are things that we remember, oh, this is marked as a repeat, we will address it if it is a repeat, and then we do say what was the action, and we do scrutinize it a little more closely, yes.

Q89: You said they print out a history though, right?

A89: You debrief, yes.

Q90: Who gets that history?

A90: It should go to the pro super.

Q91: So, like in this case if you're talking a boom write-up, which pro super would get that history?

A91: It would come to us because we own the aircraft.

Q92: 660th would get the --

A92: Yes, and then if we -- what we see on that then we'll contact the pro super of MXS to follow up and make sure that they know it's a repeat, and they are doing what they're supposed to be doing.

Q93: At any point if a pro super is at an airplane and they realize that their chasing the same sort of write-up, does he have the authority to make that read "repeat recur"?

A93: Yeah, I would assume. I've never had to do that, but yeah, I would assume they would. I don't see why you couldn't go back and put a repeat recur in there. Nothing says you can't.

MAINTENANCE ADVISOR: I have no other questions.

QUESTIONS BY LEGAL ADVISOR

Q94: There are a few acronyms and things like that thrown around, so I just want to go back and clean up a few of those. We talked about MXS and AMXS, but what does MXG stand for?

A94: Maintenance Group.

Q95: Okay. Thank you. And what about R squared?

A95: Remove and replace.

Q96: Thank you. What does a form 97 do?

A96: It's an usual incident in Flight, I think. It's an air crew form that's used for something they want to report to Flight Safety.

Q97: Okay. Thank you. I think you mentioned a SITREP. What does SITREP mean?

A97: It's situational report.

Q98: System 46, what's that?

A98: I believe that's the boom system. It's a number that -- there's different numbers that designate what system of aircraft, and I believe that's the boom system off the top of my head.

Q99: Okay. You referred to a 135. What's a 135?

A99: Tanker -- KC-135 aircraft.

Q100: Thank you. Let's see. I believe you also mentioned an 80-35. What was that in reference to?

MAINTENANCE ADVISOR: That's a maintenance information system screen that you shows…

A100: Yeah. I'm sorry. Yes, 80-35. Every open job on an aircraft.

Q101: Then 21-101?

A101: Is an AFI for maintenance.

Q102: Air Force Instruction.

A102: Air Force Instruction. I'm sorry.

Q103: Then finally, Dash 6 Inspection Book, can you quickly explain what that is?

A103: A Dash 6 for any kind of inspection required for like a hard landing or any unusual -- that is deemed by the TCTO, TO writers that needs further inspection.

Q104: Okay. What is a TO?

A104: Technical order. Sorry.

QUESTIONS BY BOARD PRESIDENT

Q105: Are there any matters that we addressed so far that you wish to clarify?

A105: No.

Q106: Are there any additional matters that we've not addressed that you think are important for this investigation, or is there anything else that you'd like to add to your testimony?

A106: No.

BOARD PRESIDENT: That concludes the interview. You are reminded of the official nature of this investigation, and that you are not to discuss your testimony with anyone outside of this Accident Investigation Board prior to public release of the final report.

Thank you for your time and cooperation. You're dismissed.

SUMMARIZED TESTIMONY OF SSGT MM11

SSgt MM11 appeared at the investigation, was sworn, and testified substantially as follows:

I am Staff Sergeant MM11 . I am stationed here at Travis Air Force Base with the 60th Maintenance Group. I am a quality assurance (QA) inspector.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

In response to Col BP 's questions I told him that my crew position was a quality assurance inspector. I have been a quality assurance inspector for 1 year and fourteen days. My specialty is hydraulics. I worked on KC-10's from March of 2008 until February 2016. During my air force career, I have never personally changed a gimbal assembly. On 13 October 2016, I conducted a personal evaluation on SSgt MM2 for installing the boom gimbal assembly. I went throught the procedures of the Technical Order (T.O.) 28-71-04, gimbal maintenance practices. When I stopped by the aircraft, the crew was ready to install the gimbal. On T.O. 28-71-04 page 202 section B, is where I started the evaluation. The T.O. gives a list of the circuit breakers that were supposed to be tagged and safetied. As I started my personal evaluation (P.E.), I would go over the forms and to make sure the correct circuit breakers were tagged and had safety clips applied. I went through the forms for verification, moved on to the steps where they applied the grease and filled the bushing cavity. After that they installed the gimbal support bolts to secure the gimbal to the aircraft. This took them some time, and I observed a little bit more than the half of the installation. I had observed a sufficient number of steps to assess SSgt MM2 's proficiency. I stopped the P.E. at that point and informed them that it passed P.E. pending Training Business Area (TBA) verification that SSgt MM2 is qualified on the task. I stopped there, and that is when I left, which was around 0330 or 0400. The next step would have been for them to secure the nuts and bolts with lock wires and cotter pins.

I was on night shift and when I came into work, I saw an aircraft parked with the boom removed and was told that they were going to be installing the boom on the aircraft during that shift. The quality assurance office has quarterly inspection quotas for inspecting certain tasks, and a boom installation is one of those quarterly requirements. A gimbal installation is not a quarterly requirement, and just counts as a standard P.E. I originally went out to the jet around 2330 or midnight to observe the boom installation, but at that point they had not removed the old gimbal from the aircraft. I then went to inspect a different quarterly requirement being performed on a C-5. When I returned around 0230, they had removed the old gimbal and were just about to install the new one. I realized that they would likely not get to the boom installation during this shift, so I proceeded with the standard P.E. for the gimbal installation, and turned over the boom installation inspection to my day shift counterpart.

At the time that I was evaluating the gimbal installation, I do not remember whether the Dual Rotary Voltage Transducer (DRVT) had already been installed in the gimbal. According to the tech data, the DRVT should not be installed until after the gimbal and boom are both mounted on the aircraft. I saw SSgt MM2 install the gimbal on the aircraft, and I was evaluating him on this task. I did not evaluate him on the installation of the DRVT. I do not recall whether the DRVT

had already been installed in the gimbal before the gimbal was attached to the aircraft. I also do not know if he used a new DRVT from supply or if he reinstalled an old one. During the segments of the gimbal installation that I observed, the maintenance personnel installing the gimbal were referencing the technical orders, and I did not observe any deviations from gimbal installation processes prescribed by the technical order. I did not evaluate the installation of the DRVT because that step comes later in the process and there was not enough time during that shift to get to that step. The QA inspectors for the following shift inspected the installation of the boom, but I do not personally know when the DRVT was installed because I did not evaluate that portion of the installation.

I am qualified at installing a DRVT, but I have never personally completed the task of removing and replacing either a DRVT or a gimbal because those procedures occur rarely. I estimate that I have only ever seen four gimbal replacements in my career. The tech data for 28-71-04, which addresses removing and replacing the gimbal, does not refer you to the tech data for 28-72-05, which is a different checklist for removing and replacing the DRVT. In addition, the tech data for installing the DRVT is very vague and simply says to install the DRVT and provides a picture of the components. The instructions are not specific so they leave an individual installing the DRVT several possible ways to accomplish that task. I do not recall anyone going back to inspect the DRVT.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 7 February 2017.

//SIGNED//

MM11 , SSgt, USAF
Quality Assurance Inspector

Signed and sworn before me this 07 day of February 2017.

//SIGNED//

BP Col, USAF
Board President

SUMMARIZED TESTIMONY OF SSGT MM11

SSgt MM11 appeared at the investigation, was sworn, and testified substantially as follows:

I am Staff Sergeant MM11 . I am stationed here at Travis Air Force Base with the 60th Maintenance Group. I am a quality assurance (QA) inspector.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

In response to Col BP 's questions I told him that my crew position was a quality assurance inspector. I have been a quality assurance inspector for 1 year and fourteen days. My specialty is hydraulics. I worked on KC-10's from March of 2008 until February 2016. During my air force career, I have never personally changed a gimbal assembly. On 13 October 2016, I conducted a personal evaluation on SSgt MM2 for installing the boom gimbal assembly. I went throught the procedures of the Technical Order (T.O.) 28-71-04, gimbal maintenance practices. When I stopped by the aircraft, the crew was ready to install the gimbal. On T.O. 28-71-04 page 202 section B, is where I started the evaluation. The T.O. gives a list of the circuit breakers that were supposed to be tagged and safetied. As I started my personal evaluation (P.E.), I would go over the forms and to make sure the correct circuit breakers were tagged and had safety clips applied. I went through the forms for verification, moved on to the steps where they applied the grease and filled the bushing cavity. After that they installed the gimbal support bolts to secure the gimbal to the aircraft. This took them some time, and I observed a little bit more than the half of the installation. I had observed a sufficient number of steps to assess SSgt MM2 's proficiency. I stopped the P.E. at that point and informed them that it passed P.E. pending Training Business Area (TBA) verification that SSgt MM2 is qualified on the task. I stopped there, and that is when I left, which was around 0330 or 0400. The next step would have been for them to secure the nuts and bolts with lock wires and cotter pins.

I was on night shift and when I came into work, I saw an aircraft parked with the boom removed and was told that they were going to be installing the boom on the aircraft during that shift. The quality assurance office has quarterly inspection quotas for inspecting certain tasks, and a boom installation is one of those quarterly requirements. A gimbal installation is not a quarterly requirement, and just counts as a standard P.E. I originally went out to the jet around 2330 or midnight to observe the boom installation, but at that point they had not removed the old gimbal from the aircraft. I then went to inspect a different quarterly requirement being performed on a C-5. When I returned around 0230, they had removed the old gimbal and were just about to install the new one. I realized that they would likely not get to the boom installation during this shift, so I proceeded with the standard P.E. for the gimbal installation, and turned over the boom installation inspection to my day shift counterpart.

At the time that I was evaluating the gimbal installation, I do not remember whether the Dual Rotary Voltage Transducer (DRVT) had already been installed in the gimbal. According to the tech data, the DRVT should not be installed until after the gimbal and boom are both mounted on the aircraft. I saw SSgt MM2 install the gimbal on the aircraft, and I was evaluating him on this task. I did not evaluate him on the installation of the DRVT. I do not recall whether the DRVT

had already been installed in the gimbal before the gimbal was attached to the aircraft. I also do not know if he used a new DRVT from supply or if he reinstalled an old one. During the segments of the gimbal installation that I observed, the maintenance personnel installing the gimbal were referencing the technical orders, and I did not observe any deviations from gimbal installation processes prescribed by the technical order. I did not evaluate the installation of the DRVT because that step comes later in the process and there was not enough time during that shift to get to that step. The QA inspectors for the following shift inspected the installation of the boom, but I do not personally know when the DRVT was installed because I did not evaluate that portion of the installation.

I am qualified at installing a DRVT, but I have never personally completed the task of removing and replacing either a DRVT or a gimbal because those procedures occur rarely. I estimate that I have only ever seen four gimbal replacements in my career. The tech data for 28-71-04, which addresses removing and replacing the gimbal, does not refer you to the tech data for 28-72-05, which is a different checklist for removing and replacing the DRVT. In addition, the tech data for installing the DRVT is very vague and simply says to install the DRVT and provides a picture of the components. The instructions are not specific so they leave an individual installing the DRVT several possible ways to accomplish that task. I do not recall anyone going back to inspect the DRVT.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 7 February 2017.

//SIGNED//

MM11 , SSgt, USAF
Quality Assurance Inspector

Signed and sworn before me this 07 day of February 2017.

//SIGNED//

BP Col, USAF
Board President

SUMMARIZED TESTIMONY OF TSGT MM12

TSgt MM12 appeared at the investigation, was sworn, and testified substantially as follows:

I am TSgt MM12 . I am stationed at Travis AFB with the 60th Maintenance Group. I am a Quality Assurance (QA) Inspector.

At the beginning of the interview, the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

My specialty is as a crew chief for the KC-10s. I have been working with KC-10s since September 2011. In October 2016 I was working the day shift. I remember conducting a personal evaluation (P.E.) on SrA MM3 for the installation of a boom on 13 October 2016. The tech data that I would use for the installation of the boom is task 28-71-06. I conducted an evaluation on steps three through ten on the boom installation, which essentially involves attaching the boom onto the aircraft. As part of this process, the crew would attach the boom hoist cable and install the bolts connecting the boom to the mounting points on the gimbal. They would then connect all of the associated cables and hydraulic lines and raise the boom.

I reviewed the maintenance forms prior to the start of my evaluation, but did not conduct what is known as a "forms evaluation." My review of the forms was to ensure that it would be safe to conduct a personal evaluation at that time, and that the boom was ready to be installed. A forms evaluation is a much more intensive inspection of all of the paperwork and documentation associated with a task, including verifying the tech data and man numbers associated with a given discrepancy. I cannot recall specifically what was in the forms from three or four months ago, but believe there were write-ups in the forms that would have led to the gimbal being removed and replaced. Nothing in the forms indicated that it was not safe to proceed with the boom installation at that time, and I would not have proceeded with the P.E. unless I thought that it was safe to do so.

I am aware of the requirement in T.O. 00-20-1 for an individual to document what steps of a task they completed or did not complete during their shift. As a QA inspector during a P.E. I am responsible for observing that task being performed, and once the P.E. is complete I do not have any further involvement in ensuring that task is performed properly. After I completed the P.E. on 13 October 2016, I did not observe the documentation that followed and I do not know if it was completed correctly. I also do not know what steps were completed after I left. I do not know if the Airmen checked the polarity of the Dual Rotary Voltage Trandsucer because that was not part of the boom installation that I observed. I did not observe them lower the boom to conduct any sort of function check. I also did not observe any steps of the gimbal installation, which is a different task and follows different tech data.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 13 February 2017.

//SIGNED//

MM12 , TSgt, USAF
Quality Assurance Inspector

Signed and sworn before me this 13 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

SUMMARIZED TESTIMONY OF SRA MM13

Senior Airman MM13 appeared at the investigation, was sworn, and testified substantially as follows:

I am SrA MM13 . I am stationed at Travis Air Force Base, and am assigned to the 60th Maintenance Squadron. I am a hydraulic systems journeyman.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

I was asked if I recalled working on a KC-10, tail number 83-0080, from 16 to 19 October 2016 while it was receiving its A-check inspections. Specifically, I was asked if I recalled removing its Boom Control Unit (BCU) in order to troubleshoot BCU issues on another aircraft. I stated that I did not recall performing that maintenance action off of the top of my head. I stated that if I were to remove a BCU for troubleshooting, I would use the same technical data as I would follow to remove and replace a BCU, which is technical order 2-28. I also did not recall working on a BCU issue on aircraft number 3075 due to the number of KC-10 BCU issues that I have been called to troubleshoot over the last couple of years. In response to the engineering advisor's question, I indicated that a lot of times the aircrew will write up any number of fails that the BCU or the Status Test Panel (STP) have logged while in the air, but when we go to troubleshoot the issues we will find the fault that has been logged and begin to troubleshoot the issues. It is common that while we are troubleshooting the issue on the ground that the fault will not reoccur as we go through the troubleshooting and pre-flight check process. To troubleshoot these issues we typically follow the 28FI utilizing the Air Refueling Boom (ARB) tester. When we are running these tests we will either remove the BCU and connect the test set to where the BCU goes or plug in where individual components connect, but that is done more occasionally when we are attempting to troubleshoot further down other components. Sometimes the ARB tester is accurate and sometimes it is not. There was an instance that I can recall, even though I cannot remember which aircraft it was on, where we used the ARB tester to test an elevator actuator that we suspected was bad. We hooked the ARB tester directly to the actuator and the ARB tester said that actuator was good. We then continued working the issue and could not determine any other reason why the problems would be occurring so we swapped out the actuator and that resolved the issues we were having. I cannot recall working any other boom write-ups on aircraft 83-0080 since October 2016, and I cannot recall hearing that aircraft 83-0080 was having boom control or boom roll issues. I cannot recall specifically why we removed the BCU from aircraft 83-0080 to troubleshoot another aircraft, but if we were using 83-0080's BCU, it was a known good BCU, then we were likely trying to address a logged fail of some sort in that other aircraft. I have replaced one gimbal in my career and I cannot recall replacing any dual rotary voltage transducers (DRVT's) in my career. Replacing a gimbal is a rather complex procedure because it involves removing the entire boom and replacing the entire assembly by which the boom is attached to the aircraft. It is normal operating procedure when we remove a BCU from an aircraft to perform a function check on the BCU once it is replaced to ensure that it is working and operable. It is normal practice when we remove a BCU to work on another plane, to put BCU back in its original aircraft.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 10 February 2017.

//SIGNED//

MM13 , SrA, USAF
Hydraulic Journeyman

Signed and sworn before me this 10 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

SUMMARIZED TESTIMONY OF SSGT MM14

SSgt MM14 appeared at the investigation, was sworn, and testified substantially as follows:

I am Staff Sergeant MM14 I am stationed at Travis AFB with the 60th Maintenance Squadron. I am an Aircraft Hydraulics Craftsman.

At the beginning of the interview, Colonel BP , the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

I do not recall working a Boom Control Unit (BCU) write-up where the BCU was removed from aircraft 83-0080 while it was undergoing maintenance in order to troubleshoot BCU issues on aircraft 3075. To troubleshoot BCU issues for an aircraft I would use the 2-28 series tech data, but I cannot recall the specific task number from memory. If the BCU is taken out and replaced, I would perform a pre-flight check as well as a maintenance test. I would check for further sensors and wiring for the boom.

BCU's have been a common issue for the maintenance team, especially around the time of the mishap. During the month of October, I do not remember working any other boom control issues on aircraft 83-0080. I remember hearing about this aircraft having repeating and recurring issues with its flight controls. The maintenance personnel would perform operational checks while aircraft was on the ground, and everything would appear functional. Then the aircraft would go out for a mission and the flight crew would come back and report the same, similar, or brand new issues. I did not work on any roll write-ups for boom issues. I have not adjusted a Dual Rotary Voltage Transformer in my air force career. I have utilized the Air Refueling Boom tester for a different issue and it was not used for flight control or roll access problems.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 10 February 2017.

//SIGNED//

MM14 , SSgt, USAF
Aircraft Hydraulics Craftsman

Signed and sworn before me this 10 day of February 2017.

//SIGNED//

BP , Col, USAF
Board President

SUMMARIZED TESTIMONY OF MSGT MM15

MSgt MM15 appeared at the investigation, was sworn, and testified substantially as follows:

I am Master Sergeant MM15 . I am stationed at Travis AFB with the 660th Aircraft Maintenance Squadron. I am a Flying Crew Chief and an Aircraft Section Chief.

At the beginning of the interview, the Accident Investigation Board (AIB) Board President, briefly introduced himself to me, informed me of the purpose of the investigation under AFI 51-503, and informed me that this investigation is separate and apart from the previously convened Safety Investigation Board.

I was aboard the mishap aircraft, KC-10 tail number 83-0080, on a flight from Eielson Air Force Base (AFB), Alaska, to Yokota Air Base (AB), Japan, on the 30th of October 2016. I was with the aircraft for the entire mission, which lasted from the 23rd to the 30th of October 2016. The only maintenance actions performed on the boom while the mishap aircraft was at Eielson AFB was a servicing of the independent disconnect system on the boom nozzle. That procedure requires the boom to be lowered onto a maintenance cable, but the boom does not get swung or offset to the side in order to accomplish this procedure. To my knowledge no other maintenance actions were performed on the boom or in the area of the boom.

On 30 October 2016, I was back in the Air Refueling Operator (ARO) compartment at the beginning of the flight, but once we were preparing to make contact I went to the front of the aircraft to alert another maintenance personnel so that she could come back and observe the aerial refueling from the ARO compartment. While I was at the front of the aircraft, the boom operators experienced some control issues with the refueling boom. I did not personally witness how the boom acted or hear any atypical noises while the boom was having control issues. The boom operators did tell me that they could not control the boom, and that they thought the boom may have struck the aircraft. I do not recall them saying that it had exceeded a structural limit. Once the boom operators were able to stow the boom, the crew determined that it was not safe to attempt to lower the boom again and we diverted to Travis AFB.

Once we landed, the plane was met by maintenance personnel from the hydraulics section, and I observed both of the boom operators at the back of the aircraft explaining what had happened with the boom. The aircrew went to the debrief with maintenance personnel, but I did not attend. I went to turn in our tools while they were in debrief , and the debrief was over by the time I returned to the aircraft. I am not aware of which personnel from maintenance participated in the debrief on 30 October 2016.

I reviewed the debrief form for mission number 6PH420W23300, dated 30 October 2016 (see attachment). That is my handwriting on the form. I prefilled the information on this form while we were on our way to Yokota AB, including writing my name on the top of the form in the "Debriefed By" block. During the mission, I did not update the form after we diverted to Travis AFB. After reviewing the form, the only inaccurate information would be my name at the top, and that the "Code 3" block should have had "yes" circled. A Code 3 means that the aircraft is not in a flyable condition. The reason I would have circled a Code 3 was based upon the fact that the boom was a necessary piece of equipment for our mission, and it was not functioning

properly. The maintenance personnel who were debriefed by the flight crew can also identify the aircraft as "Code 3." The standard practice is that during a mission I will fill out the debrief forms for any intermediate flights, and then bring them to maintenance once we complete the entire mission. On the final leg of a mission, the debrief section would typically be the ones to complete the debrief form. As far as I know, the debrief form that I filled out for the 30 October 2016 flight did not get to the maintenance personnel until after they had already been verbally debriefed by the aircrew.

Once I turned in the tools and returned to the aircraft to retrieve my baggage, I went to the back of the aircraft to look at the boom. I spoke with the maintenance personnel who were at the aircraft. During that conversation I relayed to them what the boom operators had told me about the incident. I essentially stated that the boom operators had told me that the boom had swung rapidly to the side and potentially struck the side of the aircraft. At this time I also did a visual inspection of the outside of the aircraft for damage, but did not see any damage.

After I dropped my tools off in the 660th Aircraft Maintenance Squadron (AMXS) building, I walked by the debrief section. Since no one was there at the time, I went to the 660 AMXS production office and explained what the boom operator told me about the aircraft. I do not recall talking with them specifically about whether they were going to consider the incident a Code 3 write-up. I also do not know what specific maintenance actions they intended to do to address the incident. I am not aware of any specific inspection that would be required for a boom striking an aircraft. I also do not recall someone mentioning any fault lights being on the boom panel during the incident.

The interview concluded with the AIB Board President reminding me of the official nature of the investigation and that prior to public release of the AIB report I should not disclose my testimony to anyone outside of the Accident Investigation Board without his permission.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Travis Air Force Base, California, on 14 February 2017.

//SIGNED//

MM15 , MSgt, USAF

Aircraft Section Chief

Signed and sworn before me this 14 day of February 2017.

//SIGNED//

BP , Col, USAF

Board President

Date: 13 Jan 16 1030		Aircraft: 83 0080 KC		Debriefed By:	MM15
Aircrew Time In:	N/A	Aircrew Time Out:	N/A		

Prior to debriefing: Review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies

Mission Number:	GPH42W23300	Mission Symbol:	T30L	Flying Squadron	
Scheduled Flying Hours:	5.4	Actual Flying Hours:	5.4	6th LC	2nd L"
Take-Off ICAO:	PAEI	Take-Off Time:	1810	8th L&	32nd L#
Landing ICAO:	KSUU	Landing Time:	2356	70th L'	76th L$
Training Complete:	Yes / No	Percentage Complete:	100%	79th LB	78th L%
Reason Training Was Not Completed:	N/A				
Type Of Training Not Completed:	N/A			Notes:	
Type Training Completed (If < 50 %):	N/A				
Reason Late/Early By +/- .5 Hours:	N/A			Was it coordinated through MOCC:	Yes / No

If UARSSI Contacts were wet, ensure Aircrew has documented AF Form 664

UARSSI	Boom Contacts	Drogue Contacts	Left Warp Contacts	Right Warp Contacts	Type Receivers / Remarks
0	0	0	0	0	
Fuel Offload	**Boom Cycles**	**Drogue Cycles**	**Left Warp Cycles**	**Right Warp Cycles**	
0	0	0	0	0	Boom Operators Name: IBO

Was a drogue check due prior to aircraft take-off:	Yes	No
Reason check was not accomplished:		
Do you have any engine coupons:	Yes	No
Reason coupon wasn't documented:		

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Dropped Objects: Yes / No JCN: Pro Super:		If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
Code 3: Yes / No JCN: Pro Super:		Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
Air Abort: Yes / No JCN: Pro Super:		Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
Repeat / Recur Discrepancies: Yes / No Original JCN: Pro Super: Repeat / Recur JCN:		Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
Bird strike: Yes / No JCN: Pro Super:		If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
Engine Shutdown: Yes / No JCN: Pro Super: Engine: #1 #2 #3 Engine Serial Number: Engine Hours: Shutdown Location ICAO:		Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
Thrust Reverser Discrepancies: Yes / No JCN: Pro Super:		If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
Uncommanded Flight control input: Auto Pilot: Yes / No JCN: Pro Super:		Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures

1	Prior to debrief:	Print out & prep Pre-launch package, Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
2.	During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
3.	Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
4	Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol, Times are in Zulu and the Pilots initials are in the Review Block.
5.	Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13 Servicing Data is correctly filled out.
6.	Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
7.	Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
8.	Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H
9.	Complete 9050 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
10	Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
11.	Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
12.	Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
13	Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
14.	Complete 8036 Screen:	Print out 1 copy for the last month of flights. Use option Y
15.	Fax Appropriate Documents:	Fax any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
16.	Create Debrief Package:	Staple 8036, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
17	Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

TAB W

WEATHER AND ENVIRONMENTAL RECORDS AND DATA (Not Included in Tab F)

THIS TAB NOT USED

INTENTIONALLY

LEFT

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TAB X

STATEMENTS OF INJURY OR DEATH

THIS TAB NOT USED

INTENTIONALLY

LEFT

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TAB Y

LEGAL BOARD APPOINTMENT DOCUMENTS

Y1. AIB Convening Order, 9 Nov 16 ..... Y-2

Y2. Memorandum appointing additional AIB members, 30 Nov 16 ..... Y-4

Y3. Memorandum appointing additional AIB member, 18 Jan 17..... Y-5

Y4. Memorandum appointing Subject Matter Experts, 18 Jan 17..... Y-6

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

9 November 2016

MEMORANDUM FOR COLONEL BP , 375 OG/CC

FROM: AMC/CV
402 Scott Drive, Unit 3EC
Scott AFB IL 62225-5310

SUBJECT: Convening of AFI 51-503 Accident Investigation Board, Class A, KC-10 Mishap, 1 November 2016, near Mountain Home AFB, ID

1. An Accident Investigation Board (AIB) is hereby convened under the provisions of AFI 51-503 to investigate the subject mishap. You must avoid accessing any privileged safety information regarding this mishap until approval of the report. This appointment letter is your authority to interview witnesses, take sworn testimony, and review all documents, files, and wreckage relevant to your investigation. Upon receipt of a complete Part I of the Safety Investigation Board (SIB) Report, you and other detailed members are relieved of all other duties until the AIB Report is submitted for approval. You may consider releasing any member when his/her AIB responsibilities are complete. The following personnel are detailed to serve on the AIB:

Colonel BP	, 375 OG/CC	President
Captain LA	, AFLOA/JACC	Legal Advisor

2. Your investigation will follow the guidelines and procedures in AFI 51-503. HQ AMC/JA will advise you on preliminary administrative matters, as required. Your legal advisor is required to be present during all witness interviews, and must review all evidence, documents, transcripts, and statements prior to inclusion in your report. Your report will include an Executive Summary, Summary of Facts, and Statement of Opinion as required by AFI 51-503. All witnesses, documents, records, and other evidence within the control of the Air Force will be made available to you, other than privileged safety information. All witnesses who testify must do so under oath or affirmation. Your report shall be released to the public and shall not contain any privileged safety or Privacy Act-protected information.

3. Your Statement of Opinion must be supported by a preponderance of the evidence contained in your report. Your legal advisor will assist you in evaluating evidence. Do not include recommendations for corrective or disciplinary action in your report. You and the other AIB members are not authorized to disclose board findings or opinions, except to members of my staff, prior to my approval of the AIB report.

4. Travel and billeting will be funded by Air Mobility Command. You will be provided a cross organizational funding authorization for your travel by HQ AMC/JA. Travel orders should be

issued locally and authorize variations in travel for all board members. All travel costs for witness interviews outside the host installation area should be coordinated with HQ AMC/JA in advance.

5. In accordance with AFI 51-503, the host installation will assist you with logistical and administrative support. A host installation liaison officer will be appointed to assist with arranging billeting, vehicles (if available), facilities, administrative support, and reproduction services. Make contact with the host installation liaison officer through the wing commander's office. Additionally, the mishap squadron shall appoint a point of contact to assist the AIB with access to witnesses and evidence secured by the unit.

6. Your investigation should be completed within 30 days from receipt of non-privileged safety information from your legal advisor. Submit any requests for extensions, additional advisors, or other matters to me through HQ AMC/JA. Submit your final report to HQ AMC/JA, and they will forward it to me for approval.

7. The HQ AMC/JA point of contact for any questions is Major AMC/JA

//SIGNED//

THOMAS J. SHARPY
Major General, USAF
Vice Commander

cc:
HQ AFLOA/JACC
18 AF/CC/JA
375 AMW/CC/JA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

30 November 2016

MEMORANDUM FOR COLONEL BP , 375 OG/CC

FROM: HQ AMC/JA
102 E. Martin St, Room N-119
Scott AFB IL 62225-5012

SUBJECT: Appointment of Additional Accident Investigation Board Members, Class A Mishap, 1 Nov 16, KC-10, near Mt Home AFB, ID

1. On 9 Nov 16, AMC/CV convened an Accident Investigation Board (AIB) under AFI 51-503 to investigate the above referenced mishap.

2. Pursuant to my authority under AFI 51-503, paragraph 2.1.3., I appoint the following individuals to serve on the AIB:

Captain PM	, 2 ARS/DOB, JB MDL, NJ	Pilot
Captain MDM	350 ARS/MDG, McConnell AFB, KS	Medical
Captain WM	, 89 OSS/OSW, Andrews AFB, MD	Weather
NH-03 EM	AFLCMC/WKDAB, Tinker AFB, OK	Engineer
CMSgt MM	, 735 AMS/CCC, Hickam AFB, HI	Maintenance
SrA REC	, 60 AMW/JA, Travis AFB, CA	Recorder

3. You must ensure that all AIB members are briefed on the requirements of AFI 51-503, paragraph 7.1.3, which prohbit the disclosure of information regarding the AIB investigation until the report is released to the public.

4. The HQ AMC/JA point of contact for any questions is Major AMC/JA

//SIGNED//

-
, Colonel, USAF
Staff Judge Advocate

Attachment:
Convening Order, 9 November 2016

UNRIVALED GLOBAL REACH FOR AMERICA ... ALWAYS!

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

18 January 2017

MEMORANDUM FOR COLONEL BP , 375 OG/CC

FROM: HQ AMC/JA
102 E. Martin St, Room N-119
Scott AFB IL 62225-5012

SUBJECT: Appointment of Additional Accident Investigation Board Member, Class A Mishap, 1 Nov 16, KC-10, near Mountain Home AFB, ID

1. On 9 Nov 16, AMC/CV convened an Accident Investigation Board (AIB) under AFI 51-503 to investigate the above referenced mishap.

2. Pursuant to my authority under AFI 51-503, paragraph 2.1.3., I appoint MSgt BO HQ AMC/A3VK, Scott AFB, IL to serve on the AIB.

3. You must ensure that all AIB members are briefed on the requirements of AFI 51-503, paragraph 7.1.3, which prohibit the disclosure of information regarding the AIB investigation until the report is released to the public.

4. The HQ AMC/JA point of contact for any questions is Major AMC/JA

//SIGNED//

Colonel, USAF
Staff Judge Advocate

Attachment:
Convening Order, 9 November 2016

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

18 January 2017

MEMORANDUM FOR COLONEL BP , 375 OG/CC

FROM: HQ AMC/JA
102 E. Martin St, Room N-119
Scott AFB IL 62225-5012

SUBJECT: Subject Matter Expert, 1 Nov 16, KC-10, Class A Mishap, near Mountain Home AFB, ID

1. On 9 Nov 16, AMC/CV convened an Accident Investigation Board (AIB) under AFI 51-503 to investigate the above referenced mishap.

2. Pursuant to the provisions of AFI 51-503, Paragraph 3.5.1., the following individuals have been detailed as Subject Matter Experts (SME) to assist in your investigation into the 1 Nov 16 mishap:

Mr. SME1	AFLCMC/WKD, Tinker AFB, OK	
Mr. SME2	, AFLCMC/WKDBB, Tinker AFB, OK	
MSgt FE	, HQ AMC/A3VK, Scott AFB, IL	Flight Engineer

3. You must ensure that all SMEs are briefed on the requirements of AFI 51-503, paragraph 7.1.3, which prohibits the disclosure of information regarding the AIB investigation until the report is released to the public.

4. The HQ AMC/JA point of contact for any questions is Major AMC/JA

//SIGNED//

, Colonel, USAF
Staff Judge Advocate

Attachment:
Convening Order, 9 November 2016

TAB Z

PHOTOGRAPHS, VIDEOS, DIAGRAMS, AND ANIMATIONS (Not Included in Tab S)

Z1. Mishap boom in trail status after separation from aircraft Z-3

Z2. Mishap Area of Operations Z-4

Z3. Boom Operator computer-based training illustration - center.....Z-5

Z4. Boom Operator computer-based training illustration – left Z-6

Z5. Boom Operator computer-based training illustration – right Z-7

Z6. Boom gimbal housing with DRVT pin in place Z-8

Z7. Boom gimbal housing after impact with DRVT pin displaced Z-9

Z8. Boom gimbal assembly A-frame after impact A.....Z-10

Z9. Boom gimbal assembly A-frame after impact B Z-11

Z10. Boom gimbal assembly A-frame after impact C.....Z-12

Z11. Boom gimbal assembly A-frame after impact D.....Z-13

Z12. Boom gimbal assembly A-frame after impact E Z-14

Z13. Boom gimbal assembly A-frame after impact F Z-15

Z14. Boom gimbal assembly A-frame after impact G.....Z-16

Z15. Boom gimbal assembly A-frame after impact H.....Z-17

Z16. Boom gimbal assembly A-frame after impact I Z-18

Z17. Boom gimbal assembly A-frame after impact J Z-19

Z18. Boom gimbal assembly A-frame after impact K.....Z-20

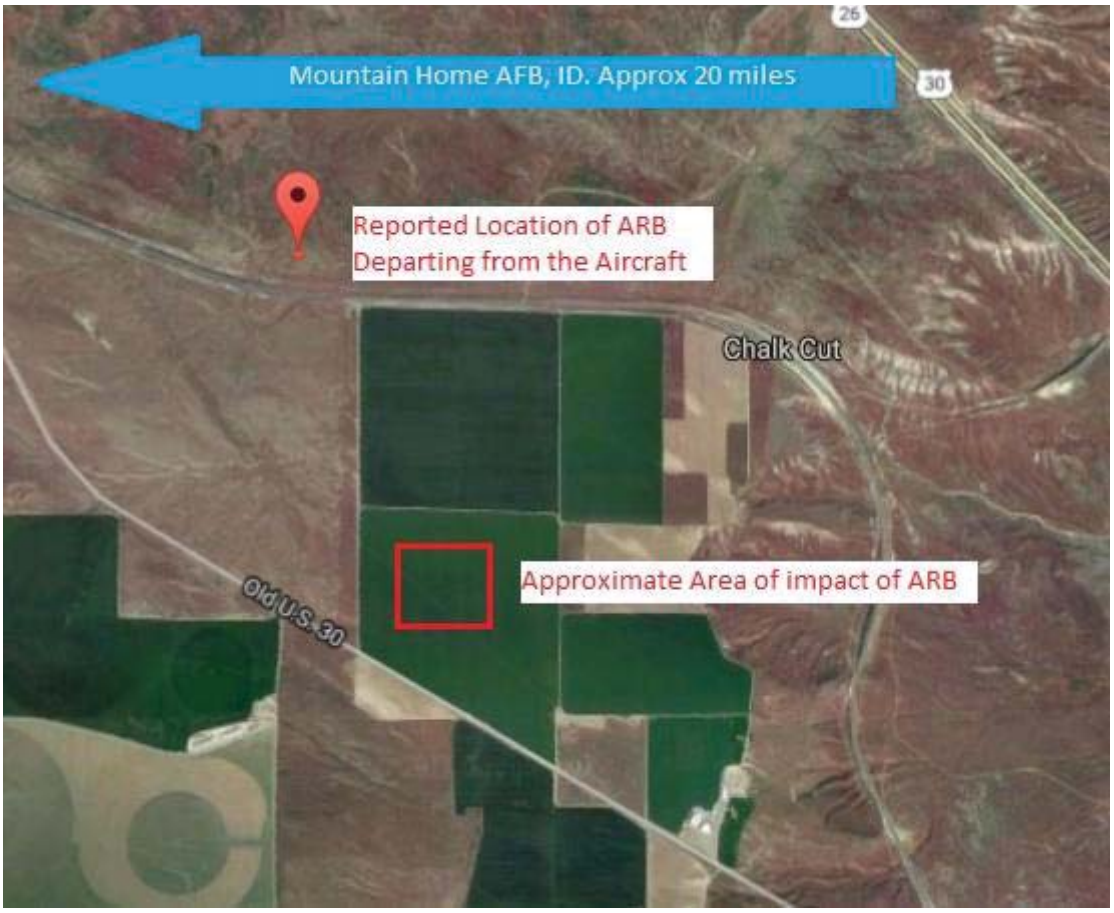
Z19. Boom gimbal assembly A-frame after impact L Z-21

Z20. Boom gimbal assembly A-frame after impact M Z-22

Z21. Boom Control Assembly frame Z-23

Z22. Boom Control Assembly wire Z-24

Z23. Parametric data charts referenced in Tab L Z-25


Mountain Home AFB, ID. Approx 20 miles
26
30
Reported Location of ARB
Departing from the Aircraft
Chalk Cut
Approximate Area of impact of ARB
Old U.S. 30

0
10
10
20
30
30
R
ROLL
L

0
10
10
20
30
30
ROLL
R
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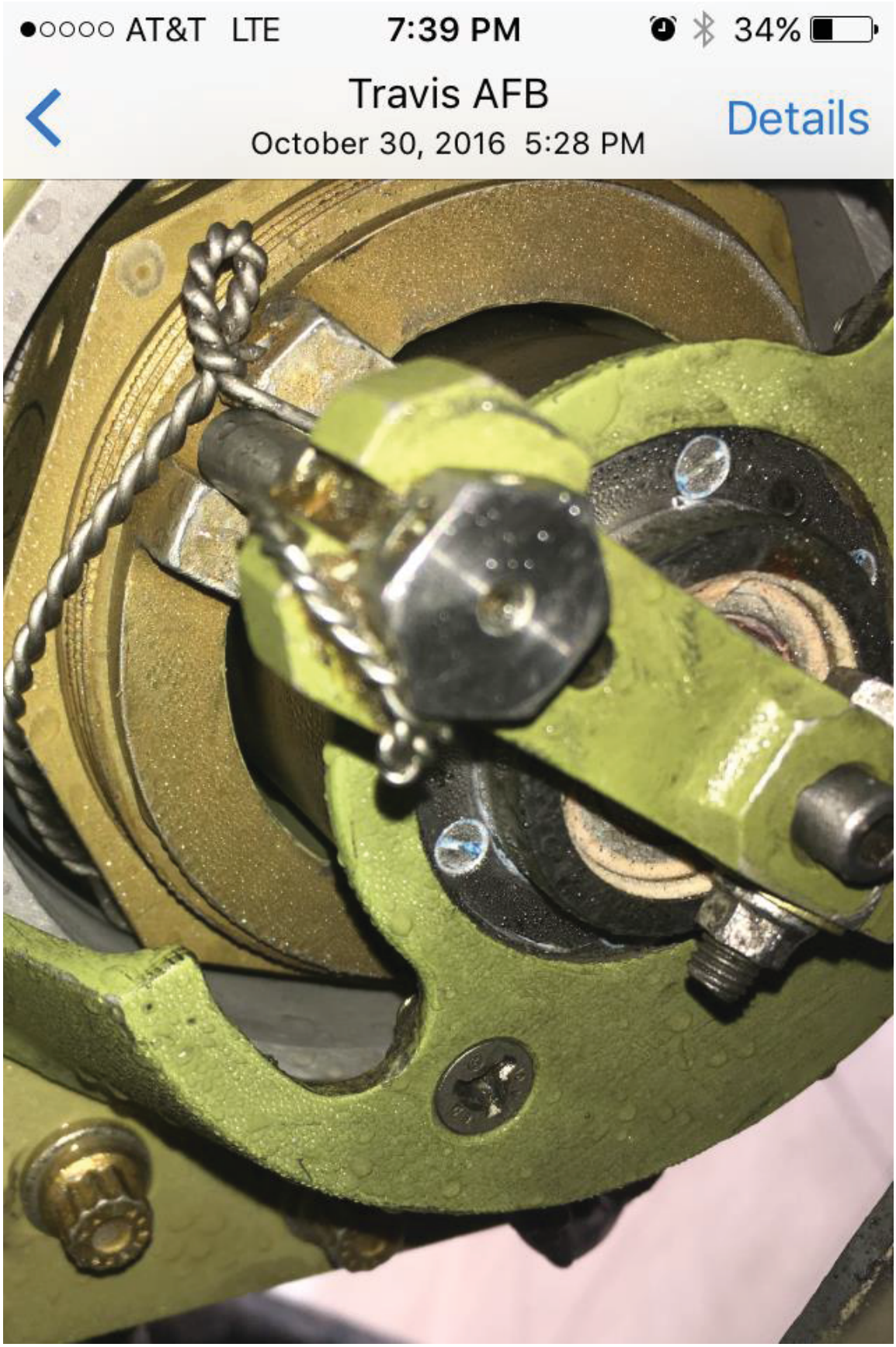
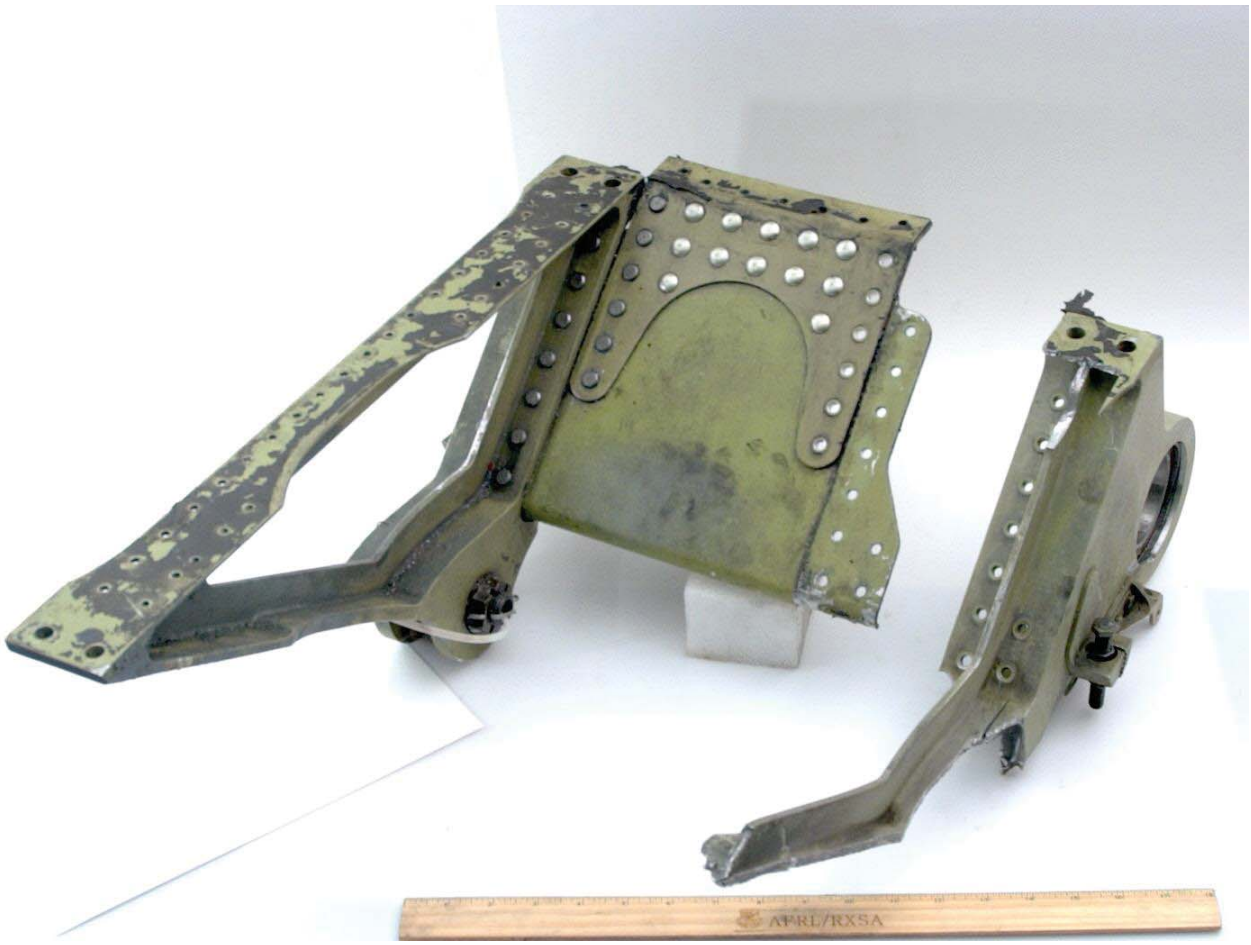
30
30
R
ROLL
L



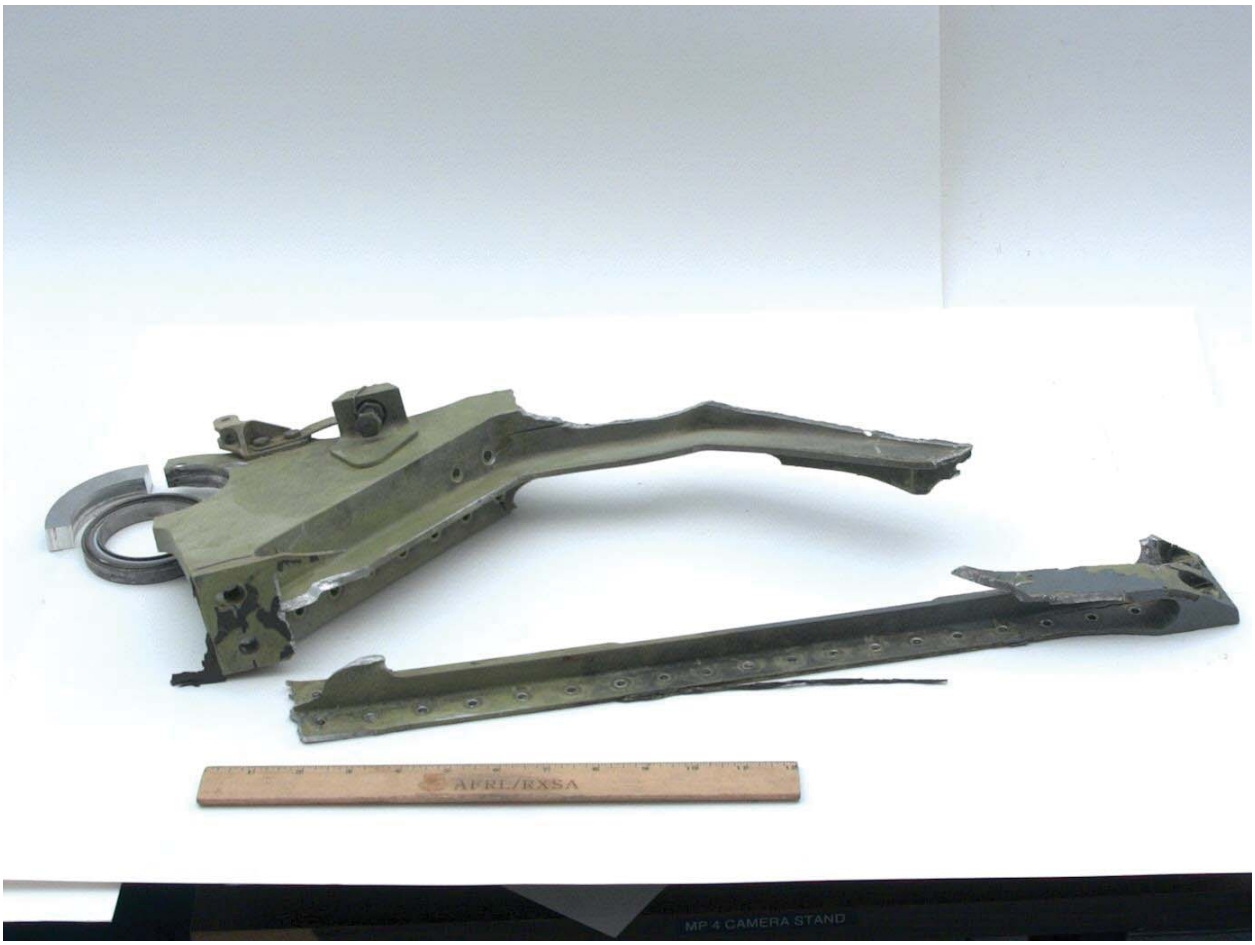
KC-10A, T/N 83-0080, 1 November 2016

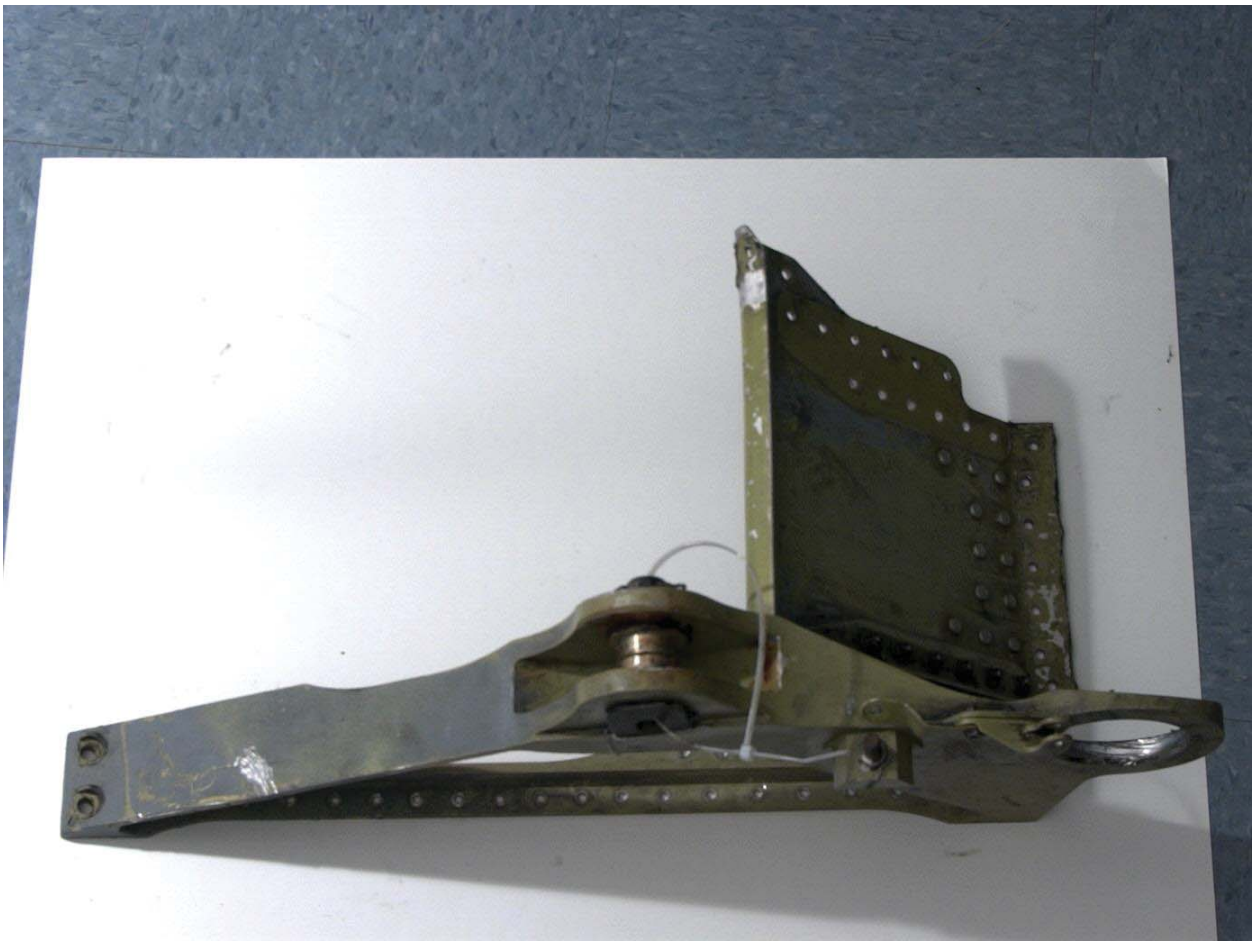
KC-10A, T/N 83-0080, 1 November 2016


AFRL/RXSA

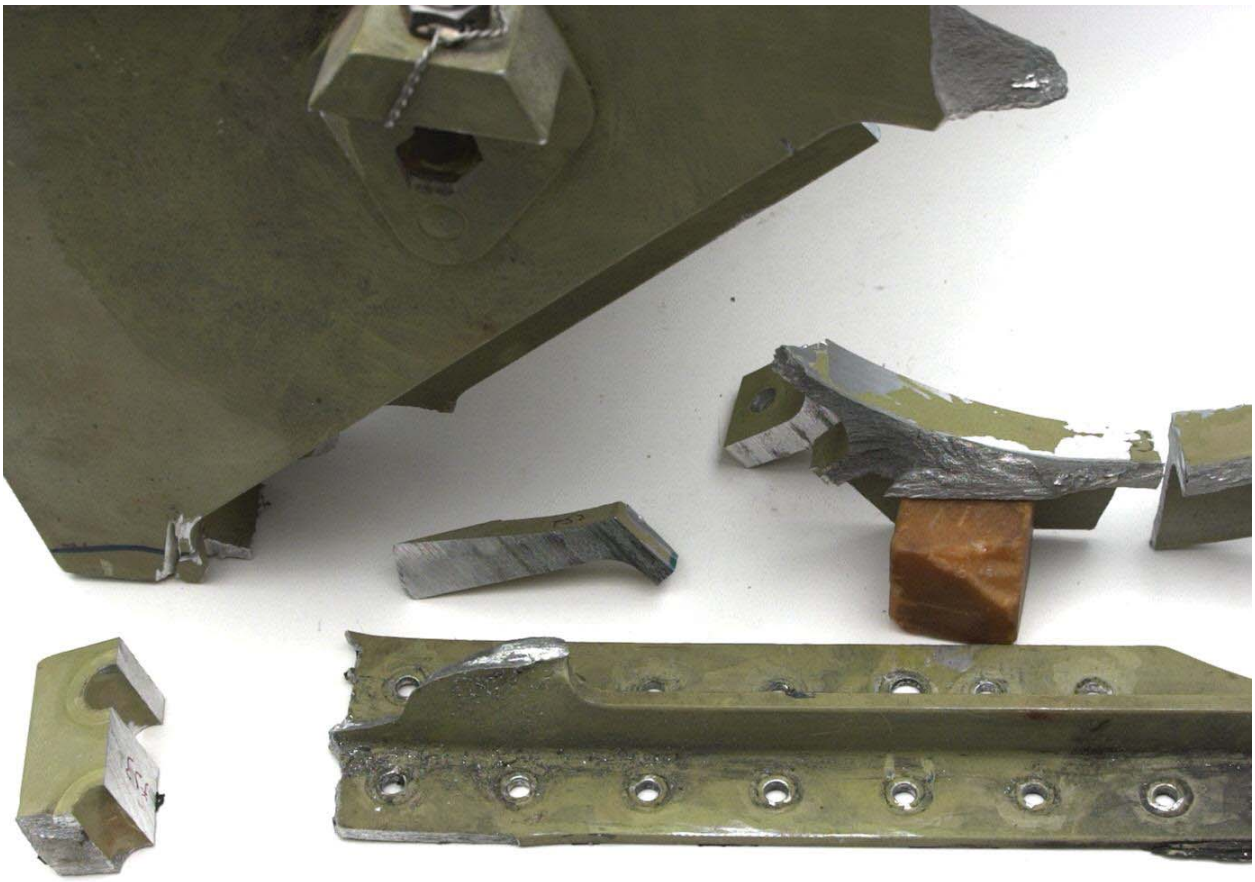
AFRL/RXSA

AFRL/RXSA

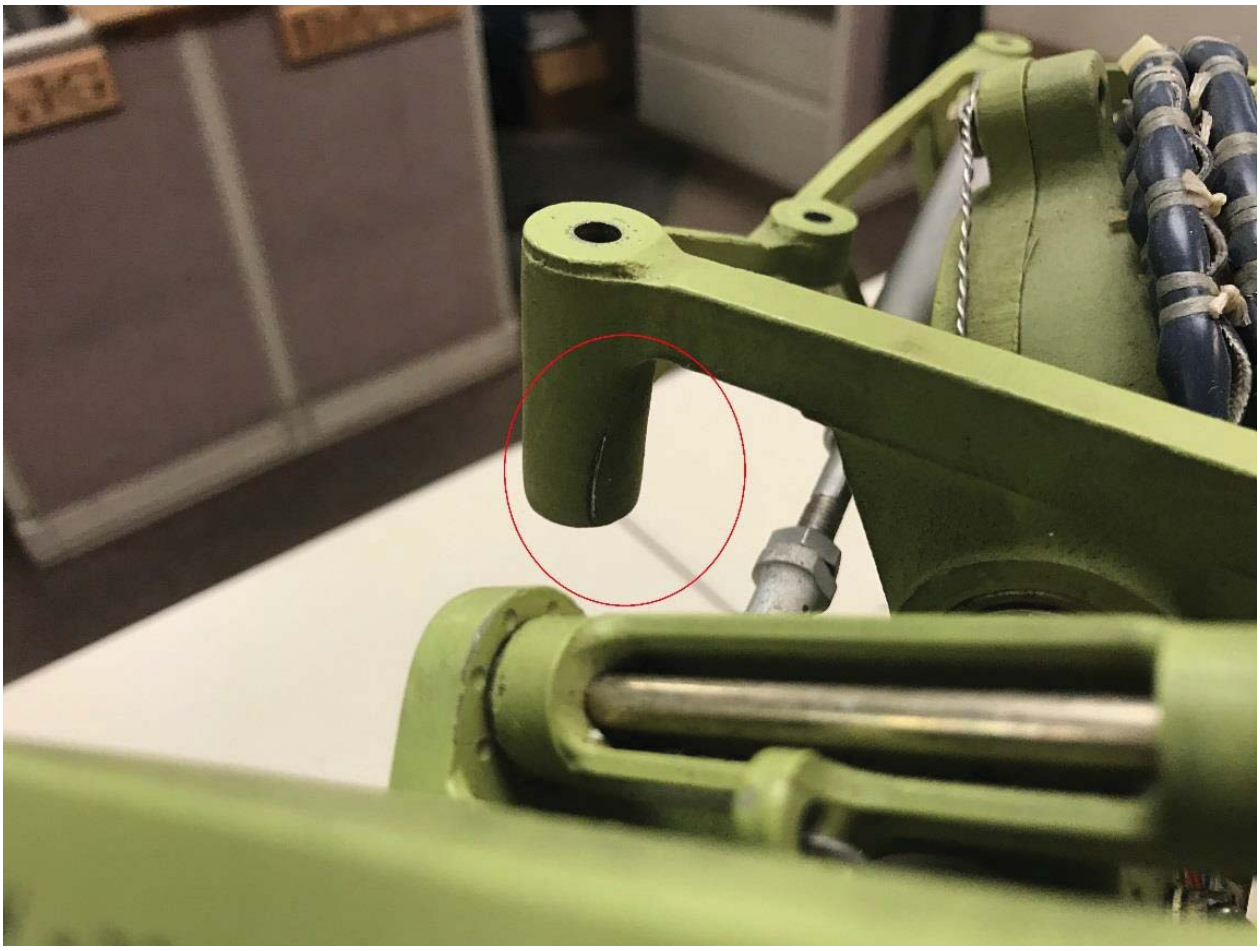

AFRL/RXSA
MP 4 CAMERA STAND



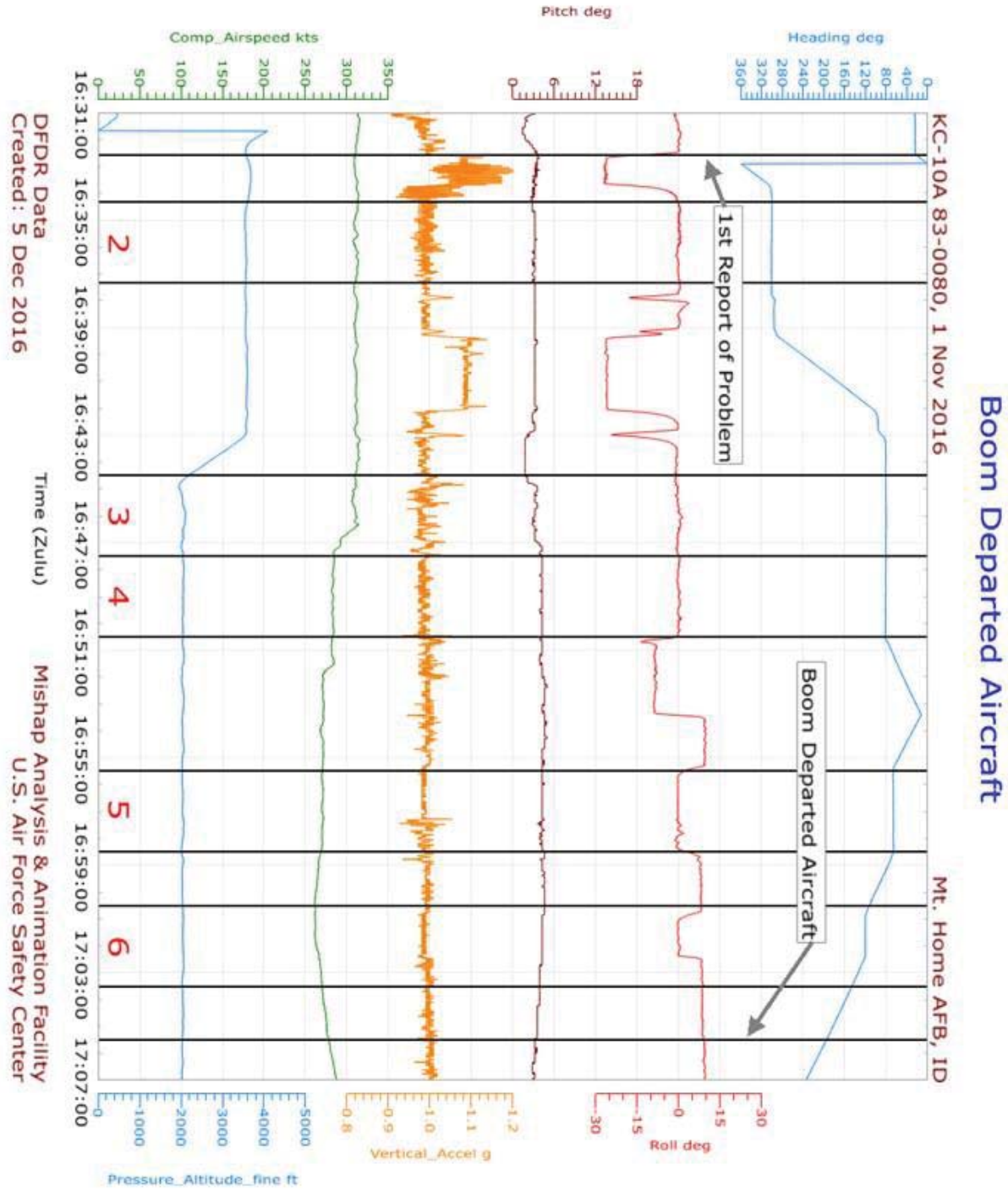
MP 4 CAMERA STAND

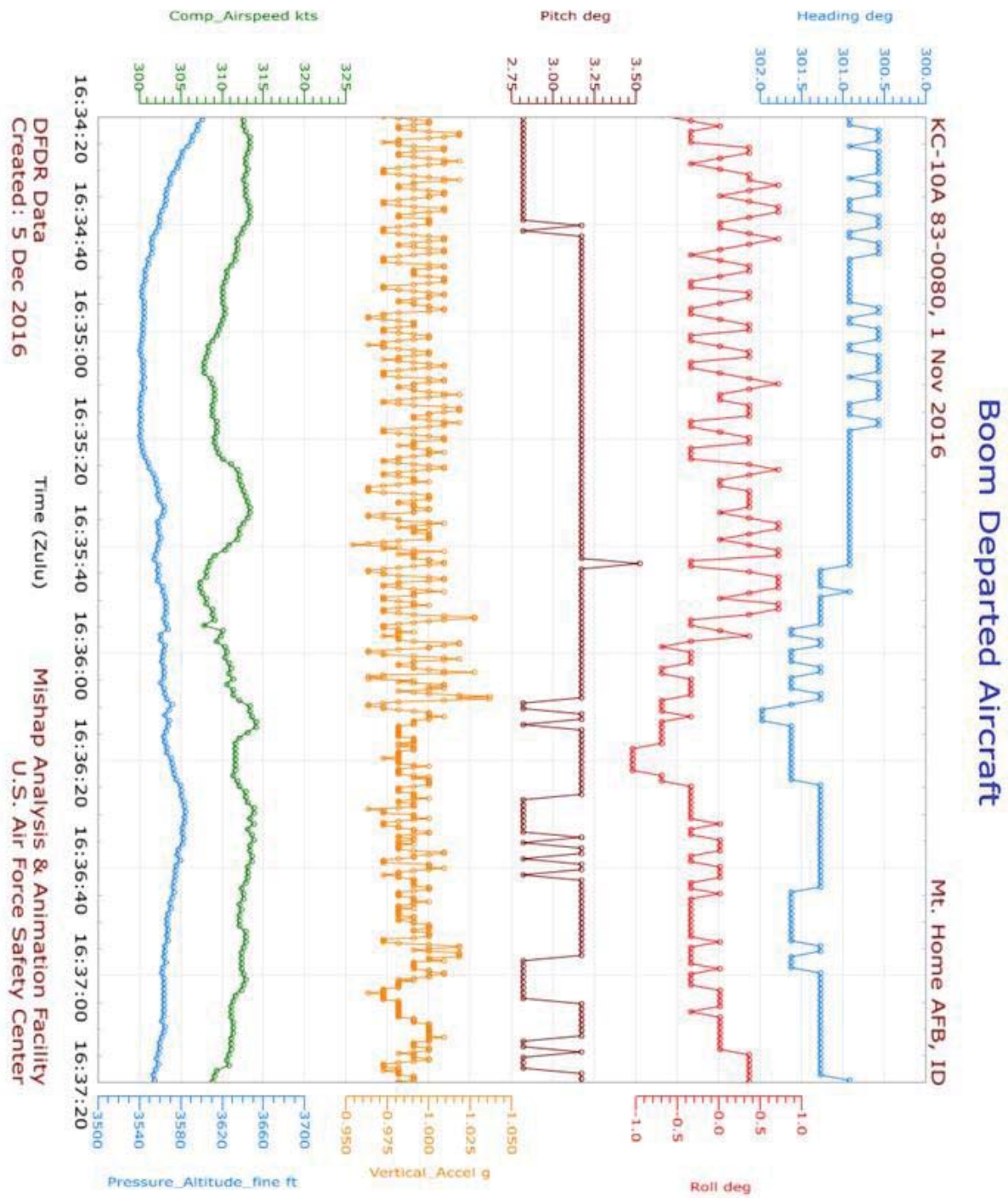


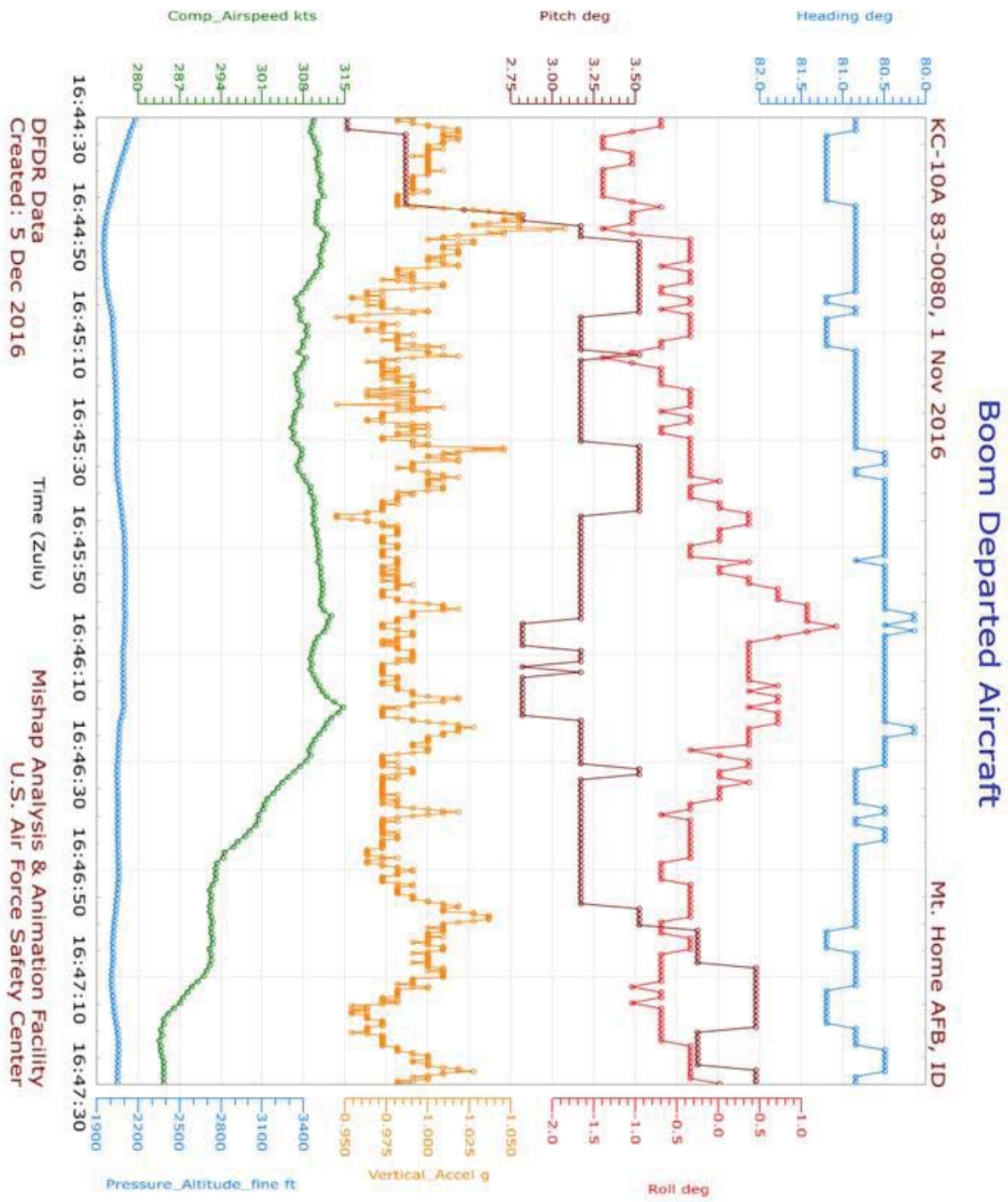
FS2

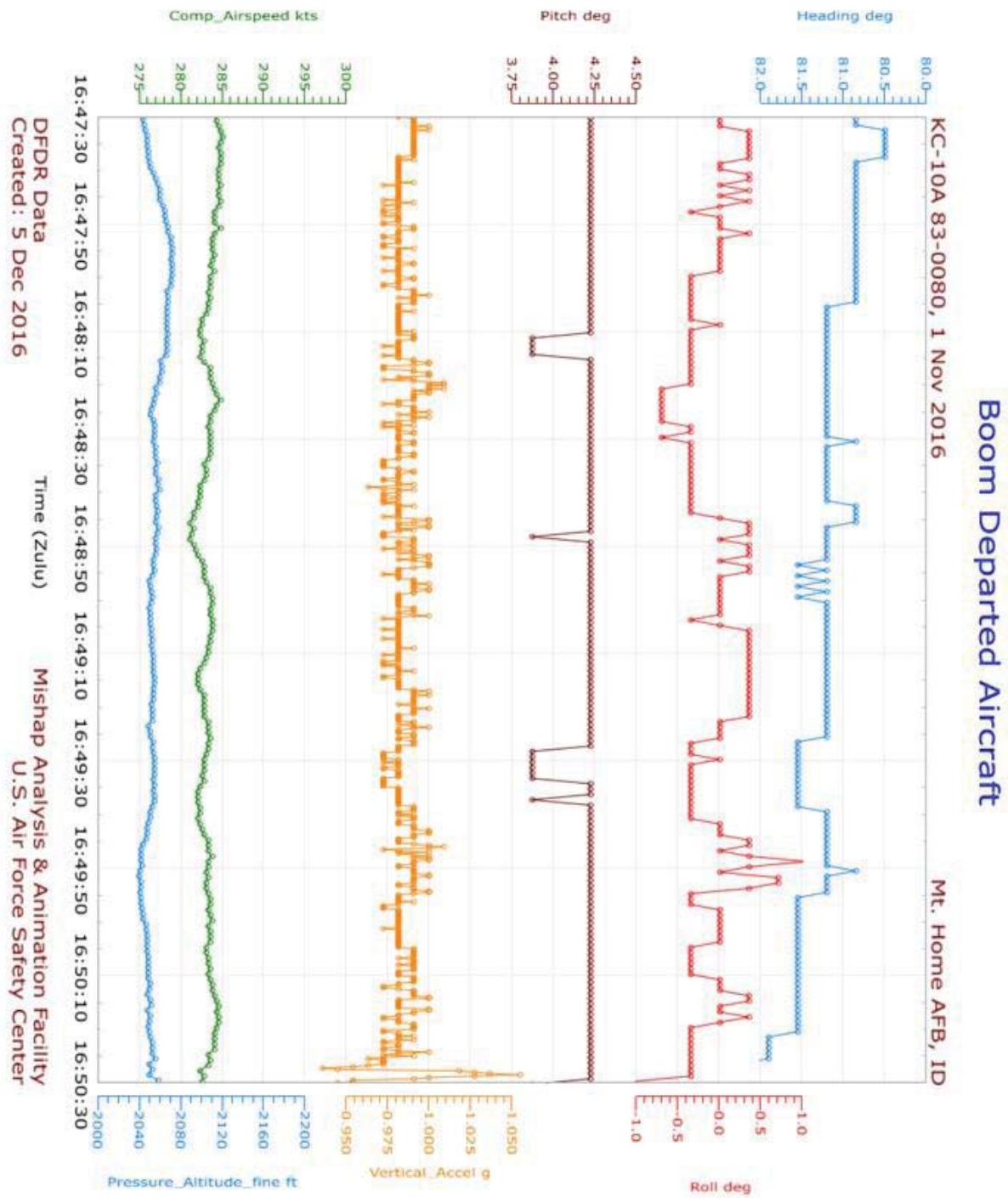


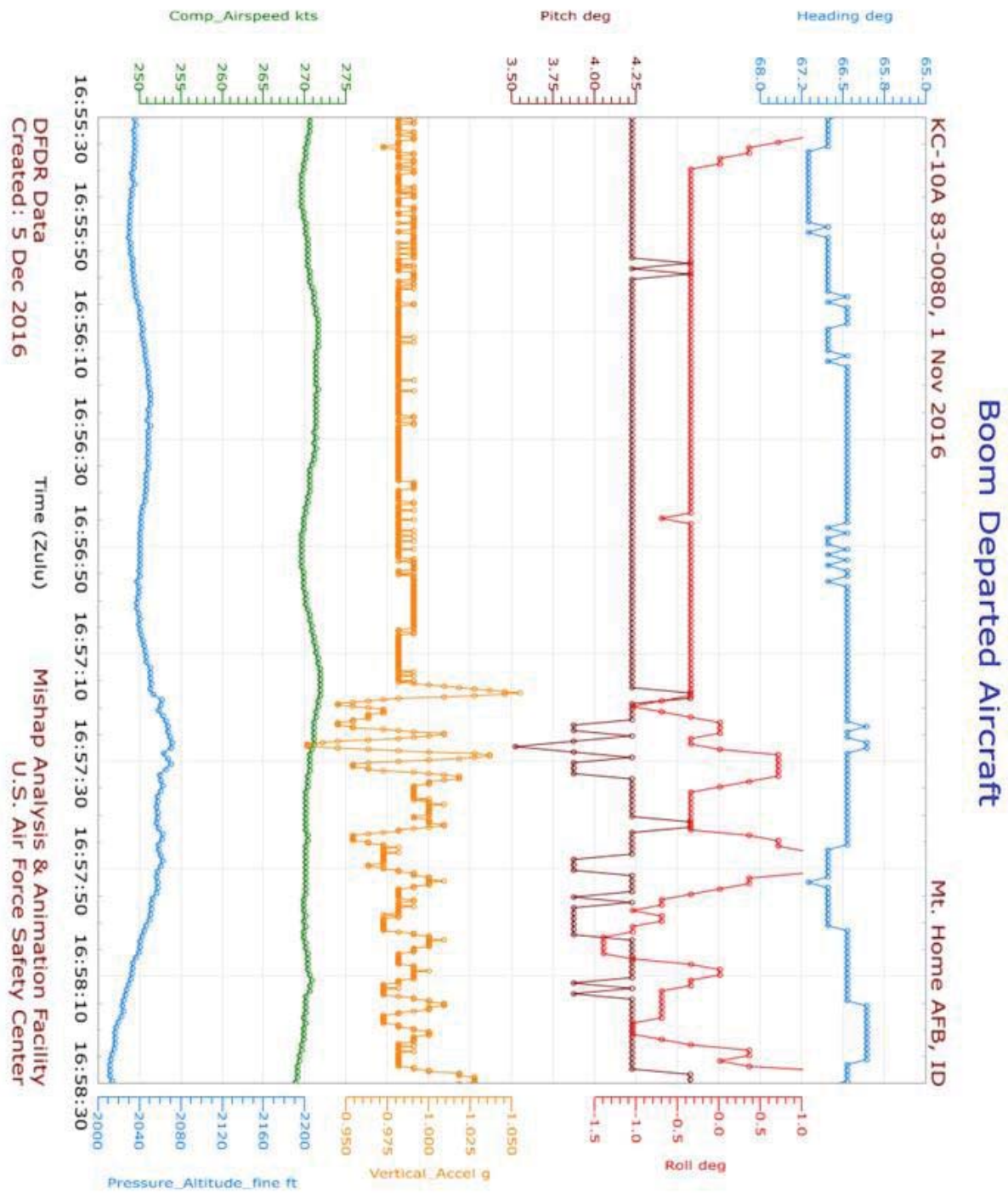
CRAIG
391
AGH7033-501V1
48221

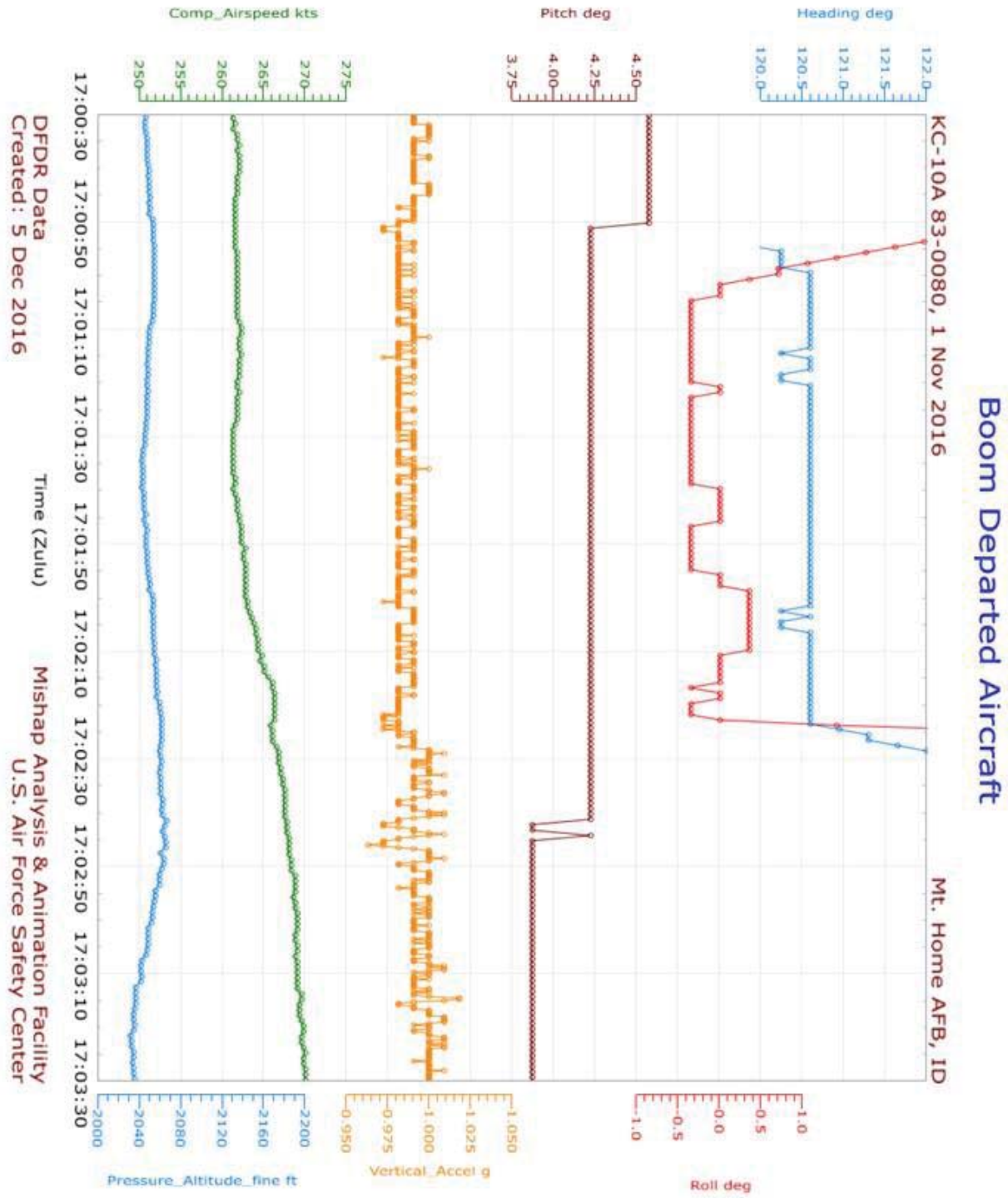

Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
1st Report of Problem
Boom Departed Aircraft
Heading deg
Pitch deg
Comp_Airspeed kts
Roll deg
Vertical_Accel g
Pressure_Altitude_fine ft
Time (Zulu)
16:31:00
16:35:00
16:39:00
16:43:00
16:47:00
16:51:00
16:55:00
16:59:00
17:03:00
17:07:00
2
3
4
5
6
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center


Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
Heading deg
Pitch deg
Comp_Airspeed kts
Roll deg
Vertical_Accel g
Pressure_Altitude_fine ft
Time (Zulu)
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center


Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
Heading deg
Pitch deg
Comp_Airspeed kts
Roll deg
Vertical_Accel g
Pressure_Altitude_fine ft
Time (Zulu)
16:44:30
16:44:50
16:45:10
16:45:30
16:45:50
16:46:10
16:46:30
16:46:50
16:47:10
16:47:30
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center


Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
Heading deg
Pitch deg
Comp_Airspeed kts
Roll deg
Vertical_Accel g
Pressure_Altitude_fine ft
Time (Zulu)
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center


Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
Heading deg
65.0
65.8
66.5
67.2
68.0
Pitch deg
3.50
3.75
4.00
4.25
Comp_Airspeed kts
250
255
260
265
270
275
Roll deg
1.5
1.0
0.5
0.0
0.5
1.0
Vertical_Accel g
0.950
0.975
1.000
1.025
1.050
Pressure_Altitude_fine ft
2000
2040
2080
2120
2160
2200
16:55:30
16:55:50
16:56:10
16:56:30
16:56:50
16:57:10
16:57:30
16:57:50
16:58:10
16:58:30
Time (Zulu)
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center


Boom Departed Aircraft
KC-10A 83-0080, 1 Nov 2016
Mt. Home AFB, ID
Heading deg
Pitch deg
Comp_Airspeed kts
Roll deg
Vertical_Accel g
Pressure_Altitude_fine ft
Time (Zulu)
17:00:30
17:00:50
17:01:10
17:01:30
17:01:50
17:02:10
17:02:30
17:02:50
17:03:10
17:03:30
DFDR Data
Created: 5 Dec 2016
Mishap Analysis & Animation Facility
U.S. Air Force Safety Center

TAB AA

FLIGHT DOCUMENTS

AA1. Form 97 – AMC In-Flight Emergency and Unusual Occurance Worksheet AA-2

AA1. Form 97 – AMC In-Flight Emergency and Unusual Occurance Worksheet AA-4

AA2. KC-10 Formation Briefing Guide AA-6

AA3. KC-10 Yoke Note and Pre-Departure Briefing Guide AA-8

AA4. DD Form 175 – Military Flight Plan AA-10

AA5. GDSS Mission Detail from four flights prior to the mishap AA-11

AA6. GDSS Mission Detail from three flights prior to the mishap AA-12

AA7. GDSS Mission Detail from two flights and the flight prior to the mishap AA-13

AA8. GDSS Mission Detail from the mishap AA-15

AA9. AFTO Form 781 – ARMS Aircrew/Mission Flight Data Document AA-16

AA10. 60th Operations Group Go/No-Go Checklist for mishap flight AA-18

AMC IN-FLIGHT EMERGENCY AND UNUSUAL OCCURRENCE WORKSHEET

SECTION I. **FOR CREW USE**

1. DATE	2. TIME (ZULU)	3. LAT/LONG	4. CLOSEST AIRFIELD ICAO
30 OCT16	1830Z		PAEI

5. REPORTING BASE (ICAO)	6. MISSION NUMBER	7. TYPE AIRCRAFT	8. TAIL NO.	9. HOME STATION (ICAO)
KSUU	GPH420W23300	KC-10	83-0080	KSUU

10. WING	12. ALTITUDE (MSL)	13. WEATHER (VFR, IFR, THUNDERSTORMS, HAIL, LIGHTNING, TURBULENCE, RAIN, ICING, ETC.)
60AMW	25000'	IFR IN & OUT OF CLOUDS
11. SQUADRON: 9 ARS		

14. PHASE OF FLIGHT

☐ TAXI ☐ TAKEOFF ☐ CLIMB ☐ CRUISE ☑ AIR REFUELING ☐ DESCENT ☐ LOW LEVEL
☐ FINAL APPROACH ☐ MISSED APPROACH ☐ TRAFFIC PATTERN ☐ TOUCH & GO ☐ LANDING ☐ UNKNOWN

15. TIME FROM ALERT TO INCIDENT	16. TAKEOFF TIME (ZULU)	17. FLIGHT DURATION	18. AIRCRAFT SYSTEM(S) INVOLVED	19. ENGINE SHUTDOWN
4+45	1809	5.9	AIR REFUELING BOOM & FUEL SYS	☒ NO ☐ YES POSITION NO: ☐ 1 ☐ 2 ☐ 3 ☐ 4

20. STATEMENT: *(A CONCISE, CHRONOLOGICAL DESCRIPTION OF THE FACTS AND CIRCUMSTANCES LEADING TO THE OCCURRENCE, ACTIONS TAKEN AND RESULTS. ATTACH EXTRA SHEETS IF ADDITIONAL SPACE IS REQUIRED.)*

During boom lowering procedures the elevation position switch was moved from stow to refuel. The boom began its downward movement. At approximately 20 degrees elevation the boom slowly moved left to approximately 5 degrees with no command inputs made. The operator attempted to center the boom by slowly inputting small commands to the right. The boom flew rapidly to the right structural limit. The operator attempted to stop the boom by flying the flight control stick to the left. The boom was not following command inputs, flew to at least 32 degrees right, and a audible bang was heard. The operator turned off the flight control switch and ran the appropriate abnormal checklist. This lead to discontinuing air refueling and returning to Travis AFB.

CREW ALSO COORDINATED W/TACC & ATC TO JETTISON FUEL IN LIEU OF HOLDING IN ORDER TO LAND UNDER MAX LDG WT. FUEL WAS DUMPED IN W-513 IAW TRAVIS AFB 11-2MDS-V3 OI. APPROX 30 K FUEL WAS DUMPED

21. PERSONNEL INVOLVED *(INCLUDE NAME, GRADE, ASSIGNED DUTY, PHONE NUMBER, AND A DESCRIPTION OF ANY INJURY OR ILLNESS. AIRCREWS ATTACH CREW ORDERS, WITHOUT SSN'S, TO FORM)*

SECTION II. FOR INVESTIGATOR USE

22. MISHAP CONTROL NUMBER	23. MISHAP COST AIR FORCE OTHER TOTAL	24. MISHAP CATEGORY

25. INVESTIGATOR NOTES *(ATTACH SEPARATE SHEET OF PAPER IF ADDITIONAL SPACE IS NECESSARY)*

26. MATERIAL INFORMATION *(NOMENCLATURE)*	27. WORK UNIT CODE *(WUC)*:	29. MAINTENANCE ACTION
	28. HOW MALFUNCTION CODE:	
	30. PART NUMBER	31. NATIONAL STOCK NUMBER

32. ENGINE INFORMATION *(TYPE AND SERIES)*	33. SERIAL NUMBER	34. TIME SINCE NEW *(TSN)*	35. TIME SINCE OVERHAUL *(TSO)*

36. OVERHAUL FACILITY	37. TIME SINCE INSTALLED *(TSI)*	38. SOAP READINGS *(IF SIGNIFICANT)*	

39. DISPOSITION OF WRECKAGE	40. OTHER REPORTS *(CAT 1, AFTO 22 AF FORM 847)*	41. OTHER AGENCIES NOTIFIED *(FAA, NTSB, AAC, ETC.)*	42. NEWS RELEASE *(IF YES, GIVE DATE)* ☐ NO ☐ YES DATE

43. CLASSIFIED MATERIAL INVOLVED	44. AFI 51-503 INVESTIGATION INFORMATION

45. COGNIZANT OFFICIAL AND TELEPHONE NUMBER

AMC FORM 97, 20030501 *(IMT-V1) (REVERSE)*

AMC IN-FLIGHT EMERGENCY AND UNUSUAL OCCURRENCE WORKSHEET

SECTION I. **FOR CREW USE**

1. DATE	2. TIME (ZULU)	3. LAT/LONG	4. CLOSEST AIRFIELD ICAO
1 Nov 16	1706Z	N4259.678W11533.467	KMUO

5. REPORTING BASE (ICAO)	6. MISSION NUMBER	7. TYPE AIRCRAFT	8. TAIL NO.	9. HOME STATION (ICAO)
KSUU	16MN5216C72301	KC-10	83-0080	KSUU

10. WING	12. ALTITUDE (MSL)	13. WEATHER (VFR, IFR, THUNDERSTORMS, HAIL, LIGHTNING, TURBULENCE, RAIN, ICING, ETC.)
60 AMW	22,500	CAVU
11. SQUADRON: 9 ARS		

14. PHASE OF FLIGHT

☐ TAXI ☐ TAKEOFF ☐ CLIMB ☐ CRUISE ☒ AIR REFUELING ☒ DESCENT ☐ LOW LEVEL
☐ FINAL APPROACH ☐ MISSED APPROACH ☐ TRAFFIC PATTERN ☐ TOUCH & GO ☐ LANDING ☐ UNKNOWN

15. TIME FROM ALERT TO INCIDENT	16. TAKEOFF TIME (ZULU)	17. FLIGHT DURATION	18. AIRCRAFT SYSTEM(S) INVOLVED	19. ENGINE SHUTDOWN
4+30	1535Z	2.2	Air Refueling Boom	☒ NO ☐ YES POSITION NO: ☐ 1 ☐ 2 ☐ 3 ☐ 4

20. STATEMENT: *(A CONCISE, CHRONOLOGICAL DESCRIPTION OF THE FACTS AND CIRCUMSTANCES LEADING TO THE OCCURRENCE, ACTIONS TAKEN AND RESULTS. ATTACH EXTRA SHEETS IF ADDITIONAL SPACE IS REQUIRED.)*

Normal crew showand brief, followed by a large formation briefing and departure. Upon breaking up the formation at RBL we proceeded to the SADDLE MOA. At approx. 1435Z, we began prepping for A/R. With all applicable checklists complete in the cockpit and on-speed, we approved the boom operator to lower the boom. About 1 minute after the boom was lowed, the boom operator notified the cockpit that the boom was erratic and out of control, pitching more than 30° right and left. The PF notified the receivers to remain at least 0.5nm from the aircraft while the PNF declred an emergency with ATC. Additionally, due to the violent maement of the boom, the aircraft was oscillating vertically and climbed ~200'. About 1 minute after the erratic movement began, the crew felt an abrupt aircraft movement and the boom operator notified the crew that the boom hoist cable had snapped. While the boom operator worked checklists, the crew up front got on immediate vectors to KMUO and began fuel dumping procedures from 475K pounds to 375K pounds. With crew concurrence, the pilots began a descent out of FL240 for FL200. In the descent, with the boom now seperated from the gimble, the boom maement got worse, so the pilots leveled at FL225 and reduced speed to min maneuver. Eventually, as the crew got vectored to KMUO, using 10° ACB, the boom operator notified the crew that the boom had seperated from the aircraft. The PNF reported to ATC the coordinates where the boom was lost. With the loss of the boom, the aircraft also lost all hydro fluid in system #2. The crew up front initiated and completed the HYD SYS LEAK OR LOSS checklist. Additionally, the pilots instructed the boom to finish all normal post-AR procedures and return to the front. With all abnormal checklists completed, the crew descended and prepared for the approach, using all normal checklists. ATC requested the crew to hold for 20-30 minutes while all the fighters recovered into KMUO. The crew discussed and decided the aircraft was safe to fly, and able to hold as requested. Once all the fighters had recovered, the crew flew an ILS to a full stop and taxied back to the ramp.

21. PERSONNEL INVOLVED *(INCLUDE NAME, GRADE, ASSIGNED DUTY, PHONE NUMBER, AND A DESCRIPTION OF ANY INJURY OR ILLNESS. AIRCREWS ATTACH CREW ORDERS, WITHOUT SSN'S, TO FORM)*

SECTION II. FOR INVESTIGATOR USE

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	28. HOW MALFUNCTION CODE:	
	30. PART NUMBER	31. NATIONAL STOCK NUMBER

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36. OVERHAUL FACILITY	37. TIME SINCE INSTALLED *(TSI)*	38. SOAP READINGS *(IF SIGNIFICANT)*	

39. DISPOSITION OF WRECKAGE	40. OTHER REPORTS *(CAT 1, AFTO 22 AF FORM 847)*	41. OTHER AGENCIES NOTIFIED *(FAA, NTSB, AAC, ETC.)*	42. NEWS RELEASE *(IF YES, GIVE DATE)* ☐ NO ☐ YES DATE

43. CLASSIFIED MATERIAL INVOLVED	44. AFI 51-503 INVESTIGATION INFORMATION

45. COGNIZANT OFFICIAL AND TELEPHONE NUMBER

KC-10 FORMATION BRIEFING GUIDE

☐ Roll Call ☐ Time Hack ☐ Overview ☐ Weather
☐ NOTAMS ☐ ORM ☐ Evaluations ☐ Training Goals
☐ Sympathetic Delays ☐ Alternate Missions ☐ Bus Time NLT

AIRCRAFT INFO Lead's Cell Phone # _____

	Callsign	Tail #	Spot	Status	Fuel	V_{MM}	TAC 1	TAC 2	BCN Ld
Ld	G 22	83-0080	272	FMC	2477	264	944	294 BI	SEQ
2	Q 62	84-0185	271	FMC	89	222	924	304 BI	SEQ
3	O 24	83-0077	261	FMC	108	228	934	314 BI	SEQ
4									

COMMUNICATIONS PLAN EMCON: 2 Starts at: CHECK-IN

UHF 1	CH 11	UHF 2	CH 2	HF 1	—	HF 2	—
VHF 1	138.875	VHF 2	127.55	Inter (P)	138.875	Inter (S)	139.925

SEQUENCE OF EVENTS

	FREQUENCY	TIME (Zulu)
Check-In		1505
WOD (1) Have Quick		↓
Secure Voice		↓
Clearance Delivery		↓
Engine Start		1515
Taxi		1525
Tower		1535
Takeoff (Departure)		1535

GROUND
☐ Lead will send/check-in on all frequencies
☐ All aircraft acknowledge all ATC clearances
☐ Last aircraft to check-in is the command of execution
☐ If lost, get well on VHF interplane
☐ Begin the before takeoff check in the chocks
☐ A/A TACAN on when ready for taxi
☐ Taxi Plan

DEPARTURE
☐ Wingmen use one minute spacing
☐ Ground Abort
☐ Routing: ( ) SID _____ *or* (X) Radar Vectors to ILA
☐ ( ) DME / (X) FMS reference for first turn SIGU
☐ Rejoin Method : ( ) IMC *or* (X) Visual Cutoff (*Day/VMC, ATC Approved*)
☐ Airborne Abort
☐ Intermediate level-offs, stack down 500 ft
☐ When established in assigned altitude block and closed to the proper en route cell interval, turn transponder to "STBY" or "ATC OFF"
☐ Lost Wingman procedures (*see reverse*)

KC-10 FORMATION BRIEFING GUIDE

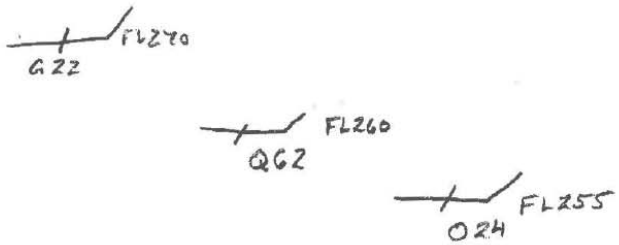
JOIN-UP/CLIMB/LEVEL-OFF

FINAL LVL-OFF 250 B 270

	ACCEL HT / FPM	BELOW 10K Climb Spd / FPM	ABOVE 10K Climb Spd / FPM	FINAL ALT / SPD
Lead	1600 / 1000	270 / 1500	290 / 1500	270 / 290
#2	1600 / 1000	290 / 1500	310 / 1500	260 / As Req'd
#3	1600 / 1000	310 / 1500	330 / 1500	265 / As Req'd
#4	/	/	/	/

☐ Above 10K, Lead will push it up when # 3 is within 3 NM. Use 1500 FPM
☐ Additional climbs/descents use 1000 FPM

FINAL LEVEL-OFF SKETCH / NOTES



POSITION CHANGE & BREAKUP PLAN
Position Change (see reverse)
☐ Planned point: _____
☐ Planned ( ) VMC *or* ( ) IMC
☐ Overtake lead on the ( ) Right *or* ( ) Left
Breakup Plan
☐ Breakup Fix: RBL

Callsign	G 22	Q62/O24		
Altitude	270	260 B 260		
Next Point	BAM 284/100	RBL 228/058		
Next Activity	BAG FLT	BA		

OPR: 60 OG/OGV October 2012

NAV EQUIPMENT SET-UP

2 SHIP

	TAC 1	TAC 2
Lead	NAV	29Y B
#2	NAV	92Y BI

3 SHIP

	TAC 1	TAC 2
Lead	94Y	29Y BI
#2	92Y	30Y BI
#3	93Y	31Y BI

4 SHIP

	TAC 1	TAC 2
Lead	95Y	29Y BI
#2	92Y	30Y BI
#3	93Y	31Y BI
#4	94Y	32Y BI

Beacon Light Mode *(for multi-tanker formations)*
Note: KC-10s use SEQ when not in a multi-tanker formation

	KC-10	KC-135
Lead	Red/Red	Red/Red & Bright/Flash
2	White/White	White/White & Bright/Steady
3	Red/White	Red/White & Bright/Flash
4	Red/Red	Red/Red & Bright/Steady

Note: KC-135 has (1) UHF, (1) TACAN, (2) VHF/UHF radios, (1) HF Radio

JOIN-UP/CLIMB/LEVEL-OFF

		Below 10,000 ft	Above 10,000 ft
KC-10	> 450	1,500 FPM	1,000 FPM
	350-450	2,000 FPM	1,500 FPM
	< 350	3,000 FPM	2,000 FPM
KC-135	> 225	1,500 FPM	1,500 FPM
	170-225	2,000 FPM	2,000 FPM
	< 170	3,000 FPM	3,000 FPM

Differential Airspeed for Closure

≤ 3 aircraft: 20 - 30$_{KIAS}$ per aircraft
> 3 aircraft: 15 - 20$_{KIAS}$ per aircraft

Notes

- Turns > 30° into echelon only in an emergency; turns into **echelon use ≤ 15° bank**
- Subtract 3$_{KIAS}$ for every 500 ft above lead to match lead's TAS

FORMATION DESCENT *(Stack up 500 FT/1 Mile)*

	FPM > 10K	Slow Down to 250 KIAS	FPM<10K	Drag Devices
Lead	2000 FPM	12k, 500FPM/Idle. At 250, 500FPM until 10K	1000 FPM	IDLE
#2	2000 FPM	12.5k, 500FPM/Idle. At 250, 500FPM until 10.5K	1000 FPM	IDLE + 1/3 SPOILERS
#3	2000 FPM	13k, 500FPM/Idle. At 250, 500FPM until 11K	1000 FPM	IDLE + 2/3 SPOILERS
#4	2000 FPM	13.5k, 500FPM/Idle. At 250, 500FPM until 11.5K	1000 FPM	IDLE + Full SPOILERS

- #4 should consider slats if needed & below ops limits
- Distance for idle thrust descent from 26K FT = 100 NM / 18 Mins (1-1, Fig 8-4)

BRIEF FOR KC-135 AIRCRAFT TO FOLLOW KC-10 CLIMB PROFILE

Place the KC-135 last in formation; have them execute the following:

- Climb to 2,000 ft
- Reduce VVI to 1,000 FPM
- Retract Flaps
- Accelerate to briefed climb speed
- Climb at briefed climb speed and maintain briefed VVI, not EPR.

POSITION CHANGES

VMC (Requires approximately 30 miles / 10 minutes)

Should be accomplished in straight/level flight

The wingman will maintain a minimum ½ mile and 500 foot separation throughout the maneuver. Aircraft to assume lead will move laterally (normally right) ½ mile using 15° of bank to turn 15° from formation heading, then turn back to lead's heading using 15° of bank and accelerate to pass lead. As the wingman passes lead, the leader will give lead to the overtaking aircraft. The new leader assumes formation responsibility, directs altitude changes, turns IFF on, and contacts ATC. The new wingman (old lead) obtains or maintains 500-foot altitude separation, places IFF to STBY or ATC OFF, and notifies the new lead when approaching position in trail. At this time, the new leader will decelerate to briefed airspeed.

IMC (Requires approximately 60 miles / 20 minutes)

Should be accomplished in straight/level flight

Maneuvering aircraft will echelon (normally right) using approx 30° of bank and turning 30° from formation heading. Reverse turn using approx 30° of bank and return to formation heading. Accelerate forward using 15$_{KIAS}$ (recommended) until approx 1¼ NMs forward of lead. Resume formation airspeed. When old lead has positive contact, conduct altitude changes, and direct new lead to assume formation responsibility. New lead moves into lead position using no more than 15° of heading corrections.

LOST WINGMAN PROCEDURES

These procedures are to be used when visual, A/A TACAN, TCAS, radar, or radio contact cannot be maintained and altitude separation cannot be ensured. Simultaneously execute the applicable lost wingman procedure while transitioning to instruments and inform lead.

Lead	Acknowledge lost wingman and establish a reference heading and altitude	
#2	Wings-Level	Turn 15° away / maintain new heading for 15 secs / resume course
	Outside Turn	Roll wings level / continue straight ahead
	Inside Turn	Maintain bank angle / reduce A/S by 10$_{KIAS}$ / † lead rolls wings level
#3/4	Wings-Level	Turn 30° away / maintain new heading for 30 secs / resume course
	Outside Turn	Reverse direction of turn for 15 secs
	Inside Turn	Maintain bank angle / reduce A/S by 20$_{KIAS}$ / † lead rolls wings level

† If lead acknowledges, (#2) roll wings level after 15 secs (#3/4) 30 secs; if not, (#2) estab 500' (#3/4) 1000' alt separation

CH

CALL SIGN: Guard 22

KC-10 YOKE NOTE

TAIL NUMBER	PARKING SPOT	FUEL	CONFIG	WARP	PODS
83-0080	272	247		✓	NO

CREW SHOW	CREW BUS	FORM BRIEF	FE/BOOM SHOW	PILOT SHOW
1250	NLT 1320	1345	1350	1400
CLOSE	**ENGINE START**	**TAXI**	**TAKEOFF**	**LAND**
1--	1515	1525	1535	2130

PILOT SEAT PLAN

PHASE OF FLIGHT	LEFT	RIGHT
C-TO	MC	T
↓	MC	T
LDG	MC	T

MISSION NOTES

EAGLE 1-4 - 1630 8K a piece
RAGE 1-2 8-10K a piece
HITMAN 1-4 8-10K a piece
1700-1730
ANGLER 1-2 8-10K a piece

250 / 3Lvl3
10
09 325 295
Contemp

SLC - 306.95
312-728-4703

AIR REFUELING #1

TRACK	RDZV
RAME	F

ENTRY	ARCT	EXIT
1635	1635	1740

AIRCRAFT TYPE	CALLSIGN
F-15E	RAGE + EAGLE

		BLOCK	BASE ALT
ON/OFF LOAD	180K	230B250	240

		5°L	0°	5°R
TANKER TAS	415			
RECEIVER TAS	503	TR 23.5	27.5	26.5
CLOSURE	918	OFF 10	11	13

AR SPEED	OVERRUN	45 MI	60 MI	75 MI
310	350	1:07	2:05	3:08

FREQ-PRI	FREQ-SEC	A/A TACAN
229.8	255.75	118Y / 55Y

END A/R REQUEST

AIR REFUELING #2

TRACK	RDZV
TA	E

ENTRY	ARCT	EXIT
1825	1834	1945

AIRCRAFT TYPE	CALLSIGN
C-17	TAHOE 37

		BLOCK	BASE ALT
ON/OFF LOAD	—	250B270	260

		5°L	0°	5°R
TANKER TAS	402			
RECEIVER TAS	442	TR 22	23.5	25
CLOSURE	844	OFF 9	10	12

AR SPEED	OVERRUN	45 MI	60 MI	75 MI
285	310	1:30	2:34	3:33

FREQ-PRI	FREQ-SEC	A/A TACAN
226.65	256.65	52 / 115

END A/R REQUEST

2 engine ops - 320 KIAS?

KC-10 PRE-DEPARTURE BRIEFING GUIDE

DATE OF FLIGHT	CALL SIGN	AIRCRAFT CC	MOBILE #
1 NOV 16	Guard 22	MCP	

SHOW TIME: 0560 | BUS TIME: NLT 0620 | FORM BRIEF: 0630
T/O TIME: 0730 | LAND TIME: 1130 | DURATION: 5.0

MISSION OVERVIEW

SCHEDULED ACTIVITIES
WX BRIEF (T/O, Enroute, AR Tracks, Arrival)
CREW STATUS (DNIF-Did you see a doctor?, Currency/Qualifications, Training Goals, Seat Plan)
SPECIAL REQUIREMENTS (Formation, ~~Cargo, PAX, DVs, FCG/DIPs, Intel, Security~~)

TAKEOFF

ACFT CONSIDERATIONS | FUEL: 247K | CARGO: — | GW: 497 K | PAX: —
AIRFIELD FACTORS (V, Obstacles, SDP, NOTAMs, D, Taxi Plan/Team Brief, BASH-Sunrise/Sunset)
NORMAL/EMERGENCY PROCEDURES (Tgt Pitch, Accel Ht, Abort, Ground Egress, EFTOC, Fuel Dump, MSA & ESA, Crash Landing, Ditching, TCAS, GPWS)
DEPARTURE PLAN/ROUTING (SID/Vectors, Transition Altitude)

ENROUTE

COMMUNICATIONS PLAN (VHF, UHF, ~~HF, IRIDIUM~~)
FACTORS (High Terrain, Diverts, Airspace Considerations, DIP Clearances, Oceanic Procedures)

A/R	Track	Call Sign	ARCT	RDZ Type	Base Altitude	On/Off Load
#1	SADDLE	VARIOUS	1630	F-TO	240	-130K
#2	TBA	TANKER	1825	E-N	260	—

RECEIVER INFO and CONTINGENCIES (ATP-56, Separation Briefs, Overrun Procedures)

ARRIVAL

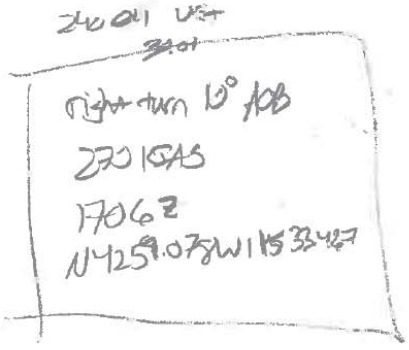
PLANNED LANDING FUEL: 16K | DESIGNATED ALTERNATE: —
AIRFIELD FACTORS (Restrictions, Vis Illusions, D, Weight Bearing, NOTAMs, BASH-Sunrise/Sunset)
APPROACH REVIEW (Descent Rate, ESA/MSA, MDA/DH/VDP, Missed App, Reference Groundspeed)
BRIEFINGS (Missed Approach, Touch and Go)
ARRIVAL GAMEPLAN (Taxi Plan/Parking, ~~Cargo, Fueling, Customs/Ag~~)

OTHER

FCIF # 16-101 | Unit Read File # 16-607 | ePubs date: 20161012P
"WHAT IFs" & ALTERNATE MISSIONS
CRM & ORM ("Time Out" call, Risks/Mitigation)
~~TACTICAL ANALYSIS (Threats, Countermeasures)~~
SPECIAL INTEREST ITEMS
EP of the DAY
Complete Go/No-Go Process (Checklist, Orders)
FAX Meal Request Form
Mission Kit, ~~Customs Forms, Mobility Bags~~, Pro Gear, Luggage, Remove Rings, "Call Crew Bus"

BASE OPS

WEATHER
ACTIVATE Flight Plan (Hazardous Cargo Remarks, Photocopy)
NOTAMS, SDP, Secrets, IRIDIUM, Data Cards, Laptop, MIF, FLIP, IFM, Plotting Chart, Rcvr/Tkr Status
TAXI PLAN
SELF (Crew meals, FAX orders to next station)



30080

KC-10

FLA 280 VEL 250B270 C10 3254 Q42 Q24
HDG 050B100 126.6 3375 3207

	DATE	AIRCRAFT CALL SIGN	AIRCRAFT DESG AND TD CODE
	1 NOV 16	GUCCI 22	H/DC10/L

BASE OPERATIONS USE

	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE
	I	445	KSUU	1535	250B270	ILA RBL REO346012/D0+50 REO		
						RBL042076/D0+20 AR7B LKV325052		
						LKV300067 AR7A RBL114050 SAC		
						TUDOR		
						(R) D1+00 TUDOR KSUU		4+10
	I	215	TUDOR	2045	50	SUU	KSUU	0+15

REMARKS
KSUU - REQUEST RADAR DEPARTURE
MARSA NONSTANDARD FORM DEP WITH QUEST 62 AND ORCA 24 TO RBL

RANK AND HONOR CODE
AR7BA WITH TAHOE 37 FL250B270
LOCAL BACKEND TRANSITION 0+30 KSUU

FUEL ON BD	ALTN AIRFIELD	ETE TO ALTN	NOTAMS	WEATHER	WT AND BALANCE	AIRCRAFT SERIAL NUMBER, UNIT, AND HOME STATION
6+40			✓		660 AMIS	60 AMW, KSUU

SIGNATURE OF APPROVAL AUTHORITY	CREW/PASSENGER LIST	ACTUAL DEP TIME (Z)	BASE OPERATIONS USE
	ATTACHED ~~SEE PSGR~~ SUU CP		

DUTY	NAME AND INITIALS	RANK	SSN	ORGANIZATION AND LOCATION
PILOT IN COMMAND	Mishap Copilot	CPT	ON FILE	9 ARS, KSUU

DD Form 175, MAY 86 — *Previous editions are obsolete.* — **MILITARY FLIGHT PLAN**
Adobe Professional 8.0

January 20, 2017, 4:21 pm (7020)

******* BASIC INFO ********

Mission #: 6UN52TI63285 ***Time:*** 6285/2158 ***Status:*** CLO ***CW:***
Prev Mission #: ***DST:*** 6285/2200 ***DIPS:*** / ***SCHM:***
Next Mission #: ***Mission Dev:*** ***Priority:*** 4A1 / 4A1 ***Load:*** F
Call Sign: QUEST63 ***Tasked Wing:*** 60AMW ***Operation Name:*** ***Hazmat:***

Mission Alias: Q63: Fw/Q65 / 6SN KC-10 / 8BA C-17 ***Mission Symbol:*** T2AT ***As Reqd:***
Mission Type: OPERATIONAL TRAINING ***NAF:*** 18AF

Commander: ***Rank:*** MAJ ***SRT:*** 6285/2200 ***Tail:*** 30080 ***Acft Owner:*** 60AMW
Crew Source: A ***LFA:*** ***MDS:*** KC10A ***DHD:***
Crew Wing: 60AMW ***A-FDP:*** B ***Crew Show:*** 6285/1220 ***Mx Status:*** FMC ***Spot:***
Crew Sqd: 60FTU ***Alerted:*** ***Fuel Reqd:*** 131.0 ***Curr/Home ICAO:*** KGSO / KDMA

******* ITINERARY ********

MSN #	*ITIN*	*EVT*	*LOC*	*SCH DTG Z*	*SCH PC*	*EST DTG Z*	*ACT DTG Z*	*ACT PC*	*TAIL*	*DEL*	*PPR*	*RM*	*STATION NAME*	*CALLSIGN*	*PRI*	*SL*	*AS R
6UN52TI63285	100	DEP	KSUU	6285/1535Z	L	6285/1535Z	6285/1533Z	L	30080				TRAVIS	QUEST63	4A1	N	
6UN52TI63285	122	ARR	006SN	6285/1600Z	A	6285/1558Z			30080					QUEST63	4A1		
6UN52TI63285	122	DEP	006SN	6285/1740Z	A	6285/1738Z			30080						4A1		
6UN52TI63285	144	ARR	008BA	6285/1800Z	A	6285/1758Z			30080						4A1		
6UN52TI63285	144	DEP	008BA	6285/1910Z	A	6285/1908Z			30080						4A1		
6UN52TI63285	**800**	**ARR**	**KSUU**	**6285/2200Z**	**L**	**6285/2158Z**	**6285/2100Z**	**L**	**30080**			**N**	**TRAVIS**		**4A1**	**N**	

******* MISSION REMARKS ********

* TYPE *	* USER *	* ENTERED *	* REMARK *
MP		6273/2056	LOCAL TRAINING SORTIE - LATEST BLOCK IN TIME 2235Z DUE TO 4-HOUR TURN TIME TO NIGHT GO. NOTIFY COMMAND POST AS SOON AS POSSIBLE WITH BLOCK-IN TIMES THAT DEVIATE +/- 20 MINUTES FROM SCHEDULED. IF PLANNING TAXI PRACTICE AFTER LANDING, HAVE COMMAND POST NOTIFY MX OF INTENTIONS AS SOON AS POSSIBLE. FOR REFUELING IN AR645, CONTACT SEATTLE CENTER AT DSN .
NOTE-MP		6274/1650	POC 1: 60AMW, POC 2: AMC: 16
MSN		6285/2115	MISSION CLOSED

******* AIRCREW DETAIL ********

NAME	*RANK*	*CPOS*	*DPOS*	*REMARK*	*UNIT*	*SHOW TM*	*SRT*	*TYPE*	*P/DH*
	MAJ	EP A	IP	A	60AMW/9ARS	6285/1220	6285/2200	A	PRIMARY
	CPT	MP C	MP	B, I	60AMW/6ARS	6285/1220	6285/2200	A	PRIMARY
	1LT	FPN C	UP		60AMW/9ARS	6285/1220	6285/2200	A	PRIMARY
	CPT	FPNC	FPN	B	60AMW/9ARS	6285/1220	6285/2200	A	PRIMARY
	SSG	IF B	MF		60AMW/9ARS	6285/1220	6285/2200	A	PRIMARY
	SSG	IB B	IB	Z	60AMW/9ARS	6285/1220	6285/2200	A	PRIMARY
	A1C	UB	UB		60AMW/6ARS	6285/1220	6285/2200	A	PRIMARY

******* AR DETAIL ********

TRK ID	*TRK NM*	*ARCT*	*ALT*	*PRI*	*REGION NM*	*SHT NM*	*STAT*	*TRK TM*	*RZCT*
006SN	AR6 SN	6285/1600	260	5A1	SOUTHWEST US	06SN		1.7	

CORD	*SEQ ID*	*MSN #*	*RZ TYPE*	*OFF/ON*	*#RCR*	*UNIT*	*MDS*	*CALLSIGN*	*DEL MTD*	*PRI*	*ENTER*	*EXIT*
T	1	6UN52TI65285	Buddy	-1		60AMW	KC010A	QUEST65	B	4A1	6285/1600	6285/1742
R		6UN52TI63285	Buddy	+1	1	60AMW	KC010A	QUEST63	B	4A1	6285/1600	6285/1742

TRK ID	*TRK NM*	*ARCT*	*ALT*	*PRI*	*REGION NM*	*SHT NM*	*STAT*	*TRK TM*	*RZCT*
008BA	HORSEBLANKET 8BA	6285/1800	260	5A1	SOUTHWEST US	08BA		1.2	

CORD	*SEQ ID*	*MSN #*	*RZ TYPE*	*OFF/ON*	*#RCR*	*UNIT*	*MDS*	*CALLSIGN*	*DEL MTD*	*PRI*	*ENTER*	*EXIT*
T	1	6UN52TI63285	Point Parallel	-1		60AMW	KC010A	QUEST63	B	4A1	6285/1745	6285/1912
R		QUN04TB02285	Point Parallel	+1	1	60AMW	C017A	TAHOE 37	B	4A1	6285/1800	6285/1912

******* C2 MESSAGES ********

SRT ID	*FROM*	*SUBJECT*	*RCVD*	*TEXT*
100	30080	MEDIA	6285/1336	MEDIA ADVISORY MESSAGE Version Number: 0 Media: Established Inmarsat Aero H/H+/I/L Satcom Time of Transmission: 13:35:43 Aircraft Media Status: Inmarsat Aero H/H+/I/L Satcom Raw message: QU STLE4MC .DDLXCXA 111335 MED FI MC0000/AN 30080S DT DDL XXH 111335 M00A - 0ES133543S

Generated by the GDSS Report Subsystem Version 3.0 Jan 20 2017 16 21 58 Zulu

Originator
Report Name MISSION INFORMATION
Schedule ID

Run Time: 16 seconds

January 20, 2017, 4:19 pm (7020)

******* BASIC INFO ********

Mission #: 6UN52TC23286 ***Time:*** 6286/0742 ***Status:*** CLO ***CW:***
Prev Mission #: ***DST:*** 6286/0735 ***DIPS:*** / ***SCHM:***
Next Mission #: ***Mission Dev:*** ***Priority:*** 4A1 / 4A1 ***Load:*** F
Call Sign: GUCCI23 ***Tasked Wing:*** 60AMW ***Operation Name:*** ***Hazmat:***

Mission Alias: G23: F w/X21 / 6SN KC-10 / 7BA C-5 / 11-202 x 2 ***Mission Symbol:*** T3MA ***As Reqd:*** Y
Mission Type: OPERATIONAL TRAINING ***NAF:*** 18AF

Commander: ***Rank:*** LTC ***SRT:*** 6286/0735 ***Tail:*** 30080 ***Acft Owner:*** 60AMW
Crew Wing: 6UAMW ***Crew Source:*** ***LFA:*** ***MDS:*** KC10A ***DHD:***
Crew Sqd: 9ARS ***A-FDP:*** B ***Crew Show:*** 6285/2345 ***Mx Status:*** FMC ***Spot:***
Alerted: 6281/1758 ***Fuel Reqd:*** 150.0 ***Curr/Home ICAO:*** KGSO / KDMA

******* ITINERARY ********

MSN #	*ITIN*	*EVT*	*LOC*	*SCH DTG Z*	*SCH PC*	*EST DTG Z*	*ACT DTG Z*	*ACT PC*	*TAIL*	*DEL*	*PPR*	*RM*	*STATION NAME*	*CALLSIGN*	*PRI*	*SL*	*AS R
6UN52TC23286	100	DEP	KSUU	6286/0300Z	L	6286/0300Z	6286/0307Z	L	30080				TRAVIS	GUCCI23	4A1	N	Y
6UN52TC23286	713	ARR	006SN	6286/0315Z	A	6286/0322Z			30080					GUCCI23	4A1		Y
6UN52TC23286	713	DEP	006SN	6286/0454Z	A	6286/0501Z			30080						4A1		Y
6UN52TC23286	757	ARR	007BA	6286/0535Z	A	6286/0542Z			30080						4A1		Y
6UN52TC23286	757	DEP	007BA	6286/0645Z	A	6286/0652Z			30080						4A1		Y
6UN52TC23286	**800**	**ARR**	**KSUU**	**6286/0735Z**	**L**	**6286/0742Z**	**6286/0652Z**	**L**	**30080**			**N**	**TRAVIS**		**4A1**	**N**	**Y**

******* MISSION REMARKS ********

* TYPE *	* USER *	* ENTERED *	* REMARK *
MP		6273/2052	LOCAL TRAINING SORTIE - SUNSET 1835L (0135Z). CUT TO TAKEOFF AFTER BASH WINDOW. FORM DEPARTURE IF CONDITIONS ALLOW FOR RWY3R TAKEOFF. LATEST BLOCK-IN TIME 0740Z FOR 8 HOURS TURN TIME TO MORNING GO. NOTIFY COMMAND POST AS SOON AS POSSIBLE WITH BLOCK-IN TIMES THAT DEVIATE +/- 20 MINUTES FROM SCHEDULED. IF PLANNING TAXI PRACTICE AFTER LANDING, HAVE COMMAND POST NOTIFY MX OF INTENTIONS AS SOON AS POSSIBLE. FOR REFUELING IN AR645, CONTACT SEATTLE CENTER AT DSN .
NOTE-MP		6281/1823	POC 1: 60AMW, POC 2: 60AMW, AMC: 14
MSN		6286/0707	MISSION CLOSED

******* AIRCREW DETAIL ********

NAME	*RANK*	*CPOS*	*DPOS*	*REMARK*	*UNIT*	*SHOW TM*	*SRT*	*TYPE*	*P/DH*
	LTC	EP A	IP	A	60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
	CPT	EP B	EP		60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
	LTC	IP B	UP		60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
	1LT	FPQC	FPQ		60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
	MSG	MF C	MF	Z	60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
IBO2	SSG	IB B	IB		60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY
	SRA	MB C	MB	B	60AMW/9ARS	6285/2345	6286/0735	A	PRIMARY

******* AR DETAIL ********

TRK ID	*TRK NM*	*ARCT*	*ALT*	*PRI*	*REGION NM*	*SHT NM*	*STAT*	*TRK TM*	*RZCT*
006SN	AR6 SN	6286/0315	210	5A1	SOUTHWEST US	06SN		1.6	

CORD	*SEQ ID*	*MSN #*	*RZ TYPE*	*OFF/ON*	*#RCR*	*UNIT*	*MDS*	*CALLSIGN*	*DEL MTD*	*PRI*	*ENTER*	*EXIT*
T	1	6UN52TC21286	Buddy	-1		60AMW	KC010A	XTNDR21	B	4A1	6286/0315	6286/0451
R		6UN52TC23286	Buddy	+1	1	60AMW	KC010A	GUCCI23	B	4A1	6286/0315	6286/0451

TRK ID	*TRK NM*	*ARCT*	*ALT*	*PRI*	*REGION NM*	*SHT NM*	*STAT*	*TRK TM*	*RZCT*
007BA	HORSEBLANKET 7BA	6286/0535	260	5A1	SOUTHWEST US	07BA		1.2	

CORD	*SEQ ID*	*MSN #*	*RZ TYPE*	*OFF/ON*	*#RCR*	*UNIT*	*MDS*	*CALLSIGN*	*DEL MTD*	*PRI*	*ENTER*	*EXIT*
T	1	6UN52TC23286	Point Parallel	-1		60AMW	KC010A	GUCCI23	B	4A1	6286/0520	6286/0647
R		QUN03TB04286	Point Parallel	+1	1	60AMW	C005M	HEFTY 44	B	4A1	6286/0535	6286/0647

******* C2 MESSAGES ********

SRT ID	*FROM*	*SUBJECT*	*RCVD*	*TEXT*
100	30080	MEDIA	6286/0042	MEDIA ADVISORY MESSAGE Version Number: 0 Media: Established Inmarsat Aero H/H+/I/L Satcom Time of Transmission: 00:40:52 Aircraft Media Status: Inmarsat Aero H/H+/I/L Satcom Raw message: QU STLE4MC .DDLXCXA 120041 MED FI MC0000/AN 30080S DT DDL XXH 120041 M01A - 0ES004052S

Generated by the GDSS Report Subsystem Version 3.0 Jan 20 2017 16 19 16 Zulu

Originator
Report Name MISSION INFORMATION
Schedule ID

Run Time: 1 seconds

January 23, 2017, 2:32 pm (7023)

******* BASIC INFO ********

Mission #: 6PH420W23300 ***Time:*** 6304/2350 ***Status:*** CLO ***CW:*** Y
Prev Mission #: ***DST:*** ***DIPS:*** / ***SCHM:***
Next Mission #: ***Mission Dev:*** ***Priority:*** 3A1 / 3A1 ***Load:*** F
Call Sign: RUMMY03 ***Tasked Wing:*** 60AMW ***Operation Name:*** ***Hazmat:***

Mission Alias: CW-420 PN 0615 / ARLO AR ***Mission Symbol:*** T3OC ***As Reqd:***
Mission Type: CORONET ***NAF:*** 18AF

Commander: ***Rank:*** CPT ***SRT:*** 6299/2342 ***Tail:*** 30080 ***Acft Owner:*** 60AMW
Crew Wing: 60AMW ***Crew Source:*** A ***LFA:*** ***MDS:*** KC10A ***DHD:***
Crew Sqd: 9ARS ***A-FDP:*** B ***Crew Show:*** ***Mx Status:*** FMC ***Spot:***
Alerted: ***Fuel Reqd:*** .0 ***Curr/Home ICAO:*** KGSO / KDMA

******* ITINERARY ********

MSN #	*ITIN*	*EVT*	*LOC*	*SCH DTG Z*	*SCH PC*	*EST DTG Z*	*ACT DTG Z*	*ACT PC*	*TAIL*	*DEL*	*PPR*	*RM*
6JH420W23297	100	DEP	KSUU	6297/1601Z	P	6297/1601Z	6297/1629Z	P	30080	X913		1
6JH420W23297	112	ARR	KSUU			6297/1710Z	6297/1725Z	J	30080		N	1
6JH420W23297	112	DEP	KSUU			6298/1150Z	6297/2008Z	J	30080	L913	N	
~~6JH420W23297~~	~~125~~	~~ARR~~	~~AR509~~	~~6297/2030Z~~	~~A~~	~~6298/0038Z~~			~~30080~~			~~1~~
~~6JH420W23297~~	~~125~~	~~DEP~~	~~AR509~~	~~6297/2100Z~~	~~A~~	~~6298/0108Z~~			~~30080~~			
6JH420W23297	150	ARR	PAEI	6297/2113Z	P	6298/0018Z	6298/0015Z	P	30080		G	1
6PH420W23300	150	DEP	PAEI	6300/1631Z	O	6304/1801Z	6304/1810Z	O	30080	X945	G	4
6PH420W23300	**225**	**ARR**	**KSUU**			**6304/2350Z**	**6304/2356Z**	**J**	**30080**		**N**	**2**
6PH420W23300	225	DEP	KSUU						30080		N	1
6PH420W23300	263	ARR	PAEI	6300/1632Z	R						R	
6PH420W23300	263	DEP	PAEI	6300/1635Z	R						R	1
6PH420W23300	300	ARR	ALTRV	6300/1645Z	A							
6PH420W23300	300	DEP	ALTRV	6301/0105Z	A							
6PH420W23300	400	ARR	RJTY	6301/0125Z	U						N	
6VH420W23301	400	DEP	RJTY	6301/2100Z	P						N	1
6VH420W23301	500	ARR	KSUU	6302/0546Z	T						N	

******* MISSION REMARKS ********

* TYPE *	* USER *	* ENTERED *	* REMARK *
MP		6292/0830	THIS 18AF/618 TACC/XOOKP TASKED MISSION SUPPORTS CW-420. UNIT STAFF AND AIRCREWS MUST COMPLY WITH XOOKP CORONET SPINS LOCATED ON THE TACC WEB PAGE AT EACH ACFT COMMANDER IS REQUIRED TO DOWNLOAD THE EMF LOCATED ON THE TACC WEB PAGE AT: CONTACT INFO: DURING EXECUTION (STARTING 24 HRS BEFORE FIRST SCHEDULED TAKEOFF) CONTACT TACC AR EXECUTION CELL, DSN OR COMM CORONET MISSION DIRECTOR (S):MR 613 AOC AMDR . LONG RANGE PLANNER MR , 618 TACC XOOKP, DSN PROFILE .

******* INFO REMARKS ********

* TYPE *	* ITIN *	* EVT *	* USER *	* ENTERED *	* REMARK *
CON	100	DEP		6295/1104	FM KSUU-TKR AR509-PAEI.
DVT	112	ARR		6297/1700	ACFT DIVERTING BACK TO KSUU FOR LEFT WING ANTI ICE DISAGREE LIGHT.
CON	150	ARR		6292/1126	FM PAED-RJSM.
ACT	150	ARR		6298/0026	Block In time from aircraft's ACARS system
CON	150	ARR		6302/0019	**AMC MRT** TP#:T60240 XXX-XX-0840/RENOLLET/MF KC10A/30080// MISSION INFO: PAEI-RJTY / 6PH420W23300 RJTY-KSUU / 6VH420W23301
CON	150	ARR		6302/1355	Per Tanker Cell DO, Airfield Manager at PAEI approved 590K T/O for KC10.
ACT	150	ARR		6304/1833	DEP TIME PASSED FROM PAEI CP
DVT	225	ARR		6304/1914	Diverting to KSUU d2 tanker boom mx
ACT	225	ARR		6305/2255	ACFT DIVERTED INTO KSUU FOR MX ISSUES WITH FLIGHT CNTRL BOOM STRUCTURE L MIT BROKE, MOVED UN-COMMANDED. ETD IS PLACEHOLDER. MSN is being terminated d2 non-support from XOBK
CON	225	ARR		6305/0342	FM KSUU-PAEI.
CON	263	ARR		6305/0343	FM PAEI-ALTRV-RJTY.
CON	400	ARR		6292/1126	FM RODN-KSUU.

******* AIRCREW DETAIL ********

NAME	*RANK*	*CPOS*	*DPOS*	*REMARK*	*UNIT*	*SHOW TM*	*SRT*	*TYPE*	*P/DH*
	CPT	IP B	IP	AG	60AMW/9ARS		6299/2342	A	PRIMARY
	CPT	FPCC	FPN	G	60AMW/9ARS		6299/2342	A	PRIMARY
	MSG	IF B	IF	Z	60AMW/9ARS		6299/2342	A	PRIMARY
	SRA	MF C	FF		60AMW/9ARS		6299/2342	A	PRIMARY
EBO	TSG	EB B			60AMW/9ARS		6299/2342	A	PRIMARY
IBO	SSG	IB B	MB		60AMW/9ARS		6299/2342	A	PRIMARY
	A1C	MEP		660 MXS	60MXG/660AM		6299/2342	A	PRIMARY
MM15	MSG	MEP		660 MXS	60MXG/660AM		6299/2342	A	PRIMARY

Generated by the GDSS Report Subsystem Version 3 0: Jan 23 2017 14:32:35 Zulu

Originator :
Report Name : MISSION INFORMATION
Schedule ID :

Run Time: 0 seconds

January 23, 2017, 2:34 pm (7023)

******* BASIC INFO ********

Mission #: 6UN52TC22306 ***Time:*** 6306/2000 ***Status:*** CLO ***CW:***
Prev Mission #: ***DST:*** ***DIPS:*** / ***SCHM:***
Next Mission #: ***Mission Dev:*** ***Priority:*** 4A1 / 4A1 ***Load:*** F
Call Sign: GUCCI22 ***Tasked Wing:*** 60AMW ***Operation Name:*** ***Hazmat:***

Mission Alias: G22 3-SHIP: SADDLE F-15E / 7BA C-17 ***Mission Symbol:*** T3MA ***As Reqd:***
Mission Type: OPERATIONAL TRAINING ***NAF:*** 18AF

Commander: MCP ***Rank:*** CPT ***SRT:*** 6306/2130 ***Tail:*** 30080 ***Acft Owner:*** 60AMW
Crew Wing: 60AMW ***Crew Source:*** A ***LFA:*** ***MDS:*** KC10A ***DHD:*** 6126/0700
Crew Sqd: 9ARS ***A-FDP:*** B ***Crew Show:*** 6306/1220 ***Mx Status:*** NMCMUA ***Spot:***
Alerted: ***Fuel Reqd:*** 242.0 ***Curr/Home ICAO:*** KGSO / KDMA

******* ITINERARY ********

MSN #	*ITIN*	*EVT*	*LOC*	*SCH DTG Z*	*SCH PC*	*EST DTG Z*	*ACT DTG Z*	*ACT PC*	*TAIL*	*DEL*	*PPR*	*RM*
6UN52TC22306	100	DEP	KSUU	6306/1535Z	L	6306/1535Z	6306/1537Z	L	30080			1
6UN52TC22306	363	ARR	S1DDLE	6306/1640Z	A	6306/1642Z			30080			
6UN52TC22306	363	DEP	S1DDLE	6306/1740Z	A	6306/1742Z			30080			
6UN52TC22306	**494**	**ARR**	**KMUO**			**6306/2000Z**	**6306/2000Z**	**J**	**30080**			**2**
6UN52TC22306	494	DEP	KMUO						30080			
~~6UN52TC22306~~	~~625~~	~~ARR~~	~~007BA~~	~~6306/1825Z~~	~~A~~							~~1~~
~~6UN52TC22306~~	~~625~~	~~DEP~~	~~007BA~~	~~6306/1945Z~~	~~A~~							
6UN52TC22306	800	ARR	KSUU	6306/2130Z	L						N	

******* MISSION REMARKS ********

* TYPE *	* USER *	* ENTERED *	* REMARK *
MP		6292/1545	LOCAL TRAINING SORTIE - LATEST BLOCK IN TIME 2235Z FOR 4-HOUR TURN TIME TO NIGHT GO. NOTIFY COMMAND POST AS SOON AS POSSIBLE WITH BLOCK-IN TIMES THAT DEVIATE +/- 20 MINUTES FROM SCHEDULED. IF PLANNING TAXI PRACTICE AFTER LANDING, HAVE COMMAND POST NOTIFY MX OF INTENTIONS AS SOON AS POSSIBLE. FOR REFUELING IN AR645, CONTACT SEATTLE CENTER AT DSN .

******* INFO REMARKS ********

* TYPE *	* ITIN *	* EVT *	* USER *	* ENTERED *	* REMARK *
ACT	100	DEP		6306/2157	Block Out time from aircraft's ACARS system. Departure time from aircraft's ACARS system.
DVT	494	ARR		6307/0158	BOOM DISCONNECTED FROM ACFT DURING AIR REFUELING
ACT	494	ARR		6327/2218	MSN HARD BROKE AT KMUO. NEW MSN BUILT TO FLY ACFT TO KGSO

******* AIRCREW DETAIL ********

NAME	*RANK*	*CPOS*	*DPOS*	*REMARK*	*UNIT*	*SHOW TM*	*SRT*	*TYPE*	*P/DH*
MCP	CPT	IP C	IP	A	60AMW/9ARS	6306/1220	6306/2130	A	PRIMARY
MP	CPT	MP C	MP		60AMW/9ARS	6306/1220	6306/2130	A	PRIMARY
MFE	SSG	EF B	MF	Z	60AMW/9ARS	6306/1220	6306/2130	A	PRIMARY
MB	SRA	MB C	MB		60AMW/9ARS	6306/1220	6306/2130	A	PRIMARY

Generated by the GDSS Report Subsystem Version 3 0: Jan 23 2017 14:34:23 Zulu

Originator :
Report Name : MISSION INFORMATION
Schedule ID :

Run Time: 9 seconds

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I — MISSION DATA

1. DATE (DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION
0 / NOV 2016	KC10A	83-0080	60 AMW (AMC) / XDAT	TRAVIS AFB, CA

FLT SEQ	MISSION NUMBER	MISSION SYMBOL	FROM (ICAO)	TO (ICAO)	TAKE OFF TIME (Z)	LAND TIME (Z)	TOTAL TIME	14. LANDINGS TOUCH & GO	LANDINGS FULL STOP	LANDINGS TOTAL	SORTIES	SPECIAL USE
6	7	8	9	10	11	12	13				15	16
a.	6UN52TC22306	T3MA	KSCU	KMHO	1546	1756	2.2	0	0	0	1	
b.												
c.												
d.												
e.												
f.												
GRAND TOTALS							2.2	0	0	0	1	

CONVERSION (Minutes — Dur): 1 ~ 2 = .0; 3 ~ 8 = .1; 9 ~ 14 = .2; 15 ~ 20 = .3; 21 ~ 26 = .4; 27 ~ 33 = .5; 34 ~ 39 = .6; 40 ~ 45 = .7; 46 ~ 51 = .8; 52 ~ 57 = .9; 58 ~ 60 = Next

17. FLIGHT AUTH # 17-0036 — 18. ISSUING UNIT: 0009 ARS

II — AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME: PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	FLIGHT CONDITIONS: NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	RESV STATUS 38
0009			IP			2.2			2.2	1		0.3							
0009		MCP	MP	2.0	0.2				2.2	1		0.3							
0009		MP	MF	2.2					2.2	1									
0009		MFE	MB	2.2					2.2	1									
		MB																	

39. MAINT REVIEW	40. PILOT REVIEW (If different, AC for each Flt Seq should initial)	41. SARM REVIEW	42. ARMS INPUT DATE:	ARMS INPUT INITIALS	ARMS AUDIT DATE	ARMS AUDIT INITIALS:
	a. b. c. d. e. f.					

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out.
//SIGNED// //SIGNED//

Prt : _____ Rank: _____ Branch of Svc: _____ DSN: _____ Signature: _____

AFTO FORM 781, 20080911 — **PREVIOUS EDITION IS OBSOLETE** — **ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT**

AUTHORITY: 10 U.S.C. 8012; 44 U.S.C. 3101; and EO 9397
PRINCIPAL PURPOSES: Source document for recording individual flying time for input into the Aviation Resource Management System (ARMS) and Integrated Maintenance Data System (IMDS).
ROUTINE USES: Validation of accomplishment of flying requirements needed to attain or maintain professional standards. Validation of hourly flying accomplishments where necessary to authorize payment of flying incentive pay. Provide basic record of each flight of USAF aircraft, reason for mission, duration, crew members and duty positions. Used as a source document for determining number of hours of operating time on airframes and power plants. The SSN is used for identification of individuals and records.
DISCLOSURE IS MANDATORY: Individuals must furnish the information to meet qualification and incentive pay standards. Failure to provide the information and SSN could result in loss of records with consequent loss of professional qualification and incentive pay entitlement.

II. (CONTINUED) **AIRCREW DATA**

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME							FLIGHT CONDITIONS								RESV STATUS 38
				PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	

44. REMARKS OTHER THAN FLIGHT DISCREPANCIES

AFTO FORM 781, 20080911

60 OG PRE-MISSION SCHEDULING & EXECUTION CHECKLIST

1. SCHEDULING/FTU INSTRUCTOR

n/a P FE LM/BO

- ☑ ☑ ☑ ☑ Valid crew complement (aug/basic/MEPs)
- ☐ ☑ ☑ ☑ Valid Interfly Agreement *(as required)*
- ☐ ☑ ☑ ☑ Additional BOs/LMs? *(as required)*
- ☑ ☐ ☑ ☑ Confirm Passports & Visas *(as required)*

2. SARM

- ☑ Print ITS for each crewmember
- ☑ Grounding Items: (through FSRT)
  - Verify crewmember is not DNIF (including Sq Roster)
  - Current Aeronautical Order - Aviation Service Code
  - Physical - Physiological
  - Egress Training (LL03) - EPT (SS06) (C-17 Only)
- ☑ Attach local browser
- ☑ Check crew against NMR Letter (FAAO Binder)
- ☑ Flying time maximums checked

3. SCHEDULING/FTU CREW INSTRUCTORS

n/a P FE LM/BO

- ☑ ☑ ☑ ☑ No crewmembers DNIF (including Sq Roster)
- ☑ ☑ ☑ ☑ Ground currency through FSRT
- ☑ ☑ ☑ ☑ Flight currency through FSRT (Zulu Day)
- *Notify Ops Officer of req'd training and evaluations*
- ☐ ☑ ☑ ☑ Waiver Required? (i.e. currency, pre/post-Msn)
- ☑ ☑ ☑ Check Letter of X's (FAAO Binder)
- *Members cert'd for msn tasks (i.e. AR, Banner, Special PIC)*
- *Coordinate requirements with training & stan/eval*
- ☑ ☑ ☑ Check Supervised Status Letter (FAAO Binder)
- ☑ ☑ ☑ Check NMR Letter (FAAO Binder)
- ☑ ☑ ☑ Code crewmembers (A, B, G, I, U, etc.)
- ☑ ☑ ☑ ☑ Instructor Required?
- *Crewmembers that are non-current, non-msn ready, under supervision/unqualified, Senior Officers, or FTL E*
- ☑ ☑ ☑ Confirm alert/show/dep times w/GDSS
- ☑ ☑ ☑ Crew & FCCs notified / proper crew rest

X //SIGNED//

Pilot Scheduler Name & Signature
(FTU Pilot Instructor Signature)

X //SIGNED//

FE Scheduler Name & Signature (N/A for C-17)
(FTU FE Instructor Signature)

X //SIGNED//

LM/BO Scheduler Name & Signature
(FTU BO Instructor Signature)

4. AC (MSN Controller/SOC/ADO, if AC unavailable)

n/a ✓

- ☑ Check ITS/Browser for each crewmember (Zulu Day)
- ☐ ☑ Determine training requirements/priorities
- ☑ Crewmembers coded correctly in GDSS (A, B, IP, EP, etc.)
- ☑ ☐ Mission Support Request (MSR) submitted *(as required)*
  https://elm.amc.af.mil/org/60oss/OneStop/default.aspx

X //SIGNED//

AC or Msn Controller/SOC/ADO Name & Signature
(FTU Acting AC Signature)

5. SARM

n/a ✓

- ☑ Validate FAAO is on 60 OG Appt letter (FAAO Binder)
- ☑ ☐ OG MEP letter/MEP remarks/Manifest Data *(as required)*
- ☑ ☐ NATO orders printed *(as required)*
- ☑ Print remarks (Block 12)
- ☑ Print flight orders (Full SSN)
- ☑ Initials on FA (Block 16, 1C0X2)

X //SIGNED//

SARM Name & Signature

6. KC-10 & C-5 Msn Controller/C-17 SOC/FTU A-CODE

n/a ✓

- ☑ All previous items completed/boxes checked
- ☑ All previous signatures completed
- ☑ ☐ DIP Asset Letter *(as required)*
- ☑ Tier 3 ORM completed/approved
- ☑ Mission Binder Assembled

X //SIGNED//

Msn Controller/SOC/FTU Name & Signature

Call Sign	Gucci 12
Expected Alert Time	0505
AC Name	
Alert Data Entered By	

60 OG PRE-MISSION SCHEDULING & EXECUTION CHECKLIST

60 OG Flight Authorization Authentication Official (FAAO) Go/No-Go Checklist

n/a ✓

- ☑ All blocks checked and all lines signed on first page
- ☑ Check Form 8 Qualification Status (incl Letter of X's), Supervised Status Letter, and NMR Letter
  - *(FTU) Confirm Parent Flying Unit's Letters have been checked*
- ☑ Flight physical, physiological, egress training, and aeronautical orders are current (none DNIF)
- ☑ Flight/Ground currency requirements met per AFI11-202V1 & AFI11-2MDS-V1
  - *Flight currency is logged on the Zulu Day (i.e. expiration is on the Zulu Day)*
- ☑ 7/30/90 day times checked
- ☑ Crew complement/experience has been considered against MSN/LCL complexity
- ☑ ☐ MEPs are on OG/CC letter *(as required)*
- ☑ ☐ Airfield qualification or special crew qualification requirements met *(as required)*
- ☑ ☐ Waivers approved? (Currency, pre/post MSN, check ride extension, etc.)
- ☑ Orders checked for accuracy ("B" & "I" coded crewmembers supervised, if req'd)
- ☑ ORM completed. Score is 9H. Crew complement considered with elevated score
- ☑ ☐ NATO orders signed (blue ink) and stamped/Checked against flight authorization *(as required)*
- ☑ Flight Authorization signed

The above procedures have been complied with

→ //SIGNED// 31 OCT 16

FAAO Signature / Date

60 OG Aircraft Commander Go/No-Go Checklist

n/a ✓

- ☑ Ensure crewmembers did not receive medical attention since the orders were signed.
  If unsure of a member's current DNIF status, call the on-call flight surgeon via the command post.
- ☑ Ensure the trip kit and navigation bag is properly prepared and inventoried
- ☑ ☐ Equipment coordination: Intel/Tactics, Crew Comm, ALEPs, NVGs, Helmets, CSELs *(as required)*
- ☑ Entire crew signs FCIFs in command validated software (incl unit read files).
  - *FCIF#/initials on FA, if command validated software is unavailable*
- ☑ Ensure crew has access to current E-Pubs
- ☑ Ensure crew has completed monthly Boldface via GTIMS or paper version
- ☐ ☑ Designate a crewmember to maintain positive control of secrets/SKL *(as required)*
- ☑ Complete and sign Tier 4 ORM - obtain necessary approval for increased ORM
- ☑ Input Aircraft tail number on orders if not already accomplished (Block 9)
- ☑ ☐ Confirm that "B" or "I" coded crewmembers are under instructor supervision *(as required)* (Block 11)
- ☑ Confirm SARM has initialed (Block 16) and FAAO has signed the Flight Authorization (Block 18)
- ☑ Initial Go/No-Go verification on Flight Authorization (Block 16)
- ☑ ☐ If adding crewmembers, complete "Go/No-Go Guide for Adding Personnel Enroute" and sign (Block 16)
  - *All changes prior to launch require verbal approval from an approving official*
- ☑ ☐ If any changes are made to crew complement, verify valid complement exists (aug/basic/MEPs)
  - *Coordinate changes with Command Post (x-) and fax updated orders (X*

→ **GO / NO-GO** (circle one)

ADO/SOC USE ONLY

Mission Returned Date _____

Paperwork Review Date _____

Return the following completed documentation:

- ☐ Signed Hard Copy of ORM Worksheet
- ☑ Signed Go/No-Go checklist
- ☑ Signed/initialed original flight authorization

The above procedures have been complied with

→ //SIGNED// 1 Nov 16

Date

60 OG GNG Checklist, 1 June 2014
File with flight orders for 1 year per AFI33-364

INTENTIONALLY

LEFT

BLANK

TAB BB

APPLICABLE REGULATIONS, DIRECTIVES, AND OTHER GOVERNMENT DOCUMENTS

BB1. TO 1C-10(K)A-1 Volume 1 Flight Manual BB-2

BB2. TO 1C-10(K)A-2-28 Fuel BB-16

BB3. TO 1C-10(K)A-2-28 Fuel 28-72-00 .....BB-17

BB4. TO 1C-10(K)A-2-28 Fuel 28-71-00 .....BB-20

BB5. TO 1C-10(K)A-2-28 Fuel 28-70-00 .....BB-21

BB6. TO 1C-10(K)A-2-28 Fuel 28-71-04 .....BB-23

BB7. TO 1C-10(K)A-6WC-1 .....BB-29

BB8. Air Force Instruction 21-101 Air Mobility Command Supplement BB-32

BB9. TO 00-20-1 .....BB-35

BB10. 60th and 349th Maintenance Group Operating Instruction 21-101 .....BB-38

BB11. Air Force Instruction 11-2KC-10 Volume 3 .....BB-40

BB12. Air Force Instruction 11-202 Volume 3 .....BB-42

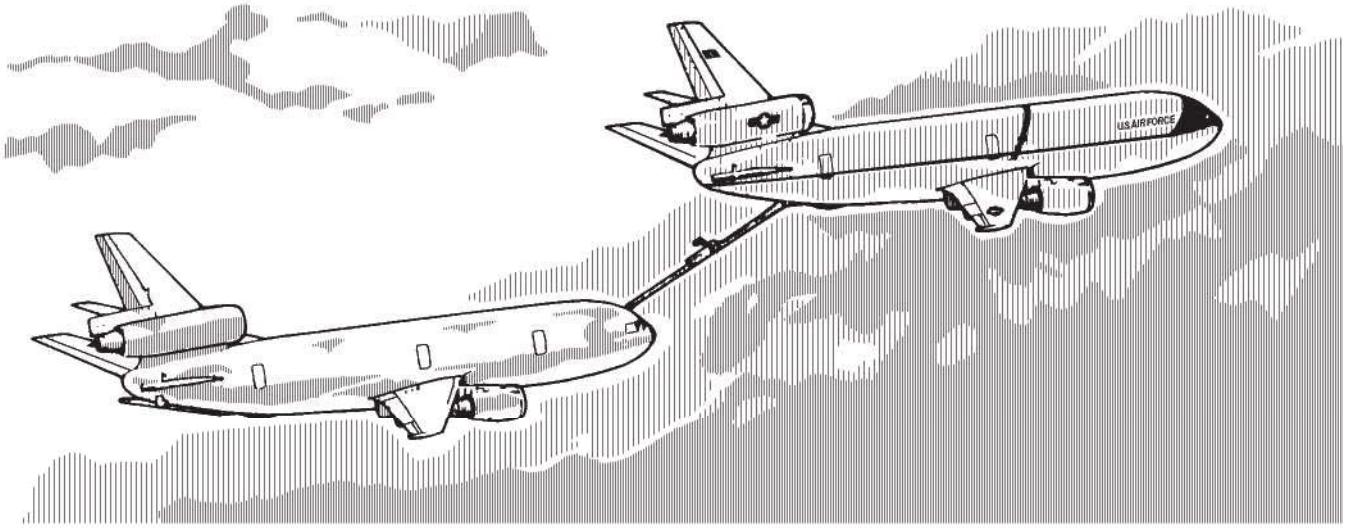
TO 1C-10(K)A-1
VOLUME 1

FLIGHT MANUAL

IOS -167 DATE 11 JULY 2012

ISS-168 DATED 9 AUGUST 2016

USAF SERIES
KC-10A
AIRCRAFT



Prepared by OC-ALC/GKSWB
TINKER AFB, OK
Prepared Under Contract FA8106-11-D-0001

BASIC AND ALL CHANGES HAVE BEEN MERGED TO MAKE THIS A COMPLETE PUBLICATION.

Refer to ETIMS for current status of flight manuals, safety supplements, operational supplements, and flight crew checklists.

Commanders are responsible for bringing this publication to the attention of all affected Air Force Personnel.

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

15 DECEMBER 2008
CHANGE 6 1 JUNE 2012

BOOM STOWING AND HOIST SYSTEM DESCRIPTION

The boom stowing and hoist system provides a means to lower, raise, hold, free-wheel, and stow the boom. The system consists of a hydraulic motor driven hoist, winch cable, shock absorber, latch assembly and cable tension motor. Controls and indicators for the system are located in the ARO compartment.

BOOM HOIST WINCH

The boom hoist winch winds the cable to raise the refueling boom and allows the boom to lower through gravity.

BOOM SHOCK ABSORBER

The rechargeable shock absorber cushions the boom against the aircraft when the boom is in the stowed position. The shock absorber is recharged manually with compressed air or dry nitrogen through the air valve by ground service personnel.

HYDRAULIC SYSTEM QUANTITY LEAK OR LOSS (cont)

2 SYSTEM 2 INOP

AP . . . . . "USE AS REQ D" (PF)

CAUTION

EFFECT ON SYSTEMS

Air Refueling - AR boom and drogue hydraulic systems may be inoperative.
- AR pump - inoperative.
- Refuel only if AR HYD RESVR PRESS LOW light is off with the motor pump ON.

RUD STBY PWR OFF LT ON
OR
HYDRAULIC SYSTEM 3 ELEV OFF LIGHT ON

YES

Lower rudder inop.

- Max X-WIND component - knots

V_{MCA}

MIN CONT SPD (KIAS)							
LDG WT (LBX 1,000)							
V_{MC_A}							

NO

Both rudders operative.

NOTE

-
-

END

BOOM SYSTEM FAIL LIGHT ON / FLIGHT CONTROL STICK FAILURE

Align flight control stick, notify receiver of boom flight control malfunction, direct receiver to safe position, and disconnect as applicable.

WARNING

If a limp flight control stick condition occurs, align stick to correspond with boom position immediately. Control authority will start to return in 1 second and boom will move to stick commanded position, unless corresponding control surface failure light is on.

FLT CONT Sw ..... CYCLE (OFF/ON)

YES — FAILURE LIGHT(S) OFF/STICK NORMAL — NO

Perform boom control check of the affected system.

YES — SYSTEM NORMAL — NO

Continue Air Refueling.

END

Go to appropriate procedure as follows:

A	ELEVATOR
B	RUDDER
C	TELESCOPE
D	FLIGHT CONTROL STICK

A ELEVATOR FAIL LT ON

Discontinue Air Refueling Operations.

Boom ..... STOW

The boom will not fly up when the ELEV POSN Sw is moved to STOW. Use the boom hoist to stow the boom.

END

CONTINUED

BOOM SYSTEM FAIL LIGHT ON / FLIGHT CONTROL STICK FAILURE (cont)

B RUDDER FAIL LIGHT(S) ON

With a single RUD FAIL Light on, continue air refueling as dictated by operational necessity. (Refer to MAJCOM Directives.)

NOTE

- *Rudder effectiveness will be reduced. Determine roll capability by accomplishing a flight control check at air refueling airspeed.*
- *Adjust roll limits to less than maximum attained during the flight control check, or receiver limit, whichever is less.*

Boom ..... STOW

END

C TLSCP FAIL LIGHT ON

Discontinue air refueling operations.

CAUTION

Receiver pilot should not attempt to push the boom in during telescope failure.

Retract boom using EMER TLSCP.

CAUTION

- *Do not allow boom to strike retract shock absorber when using emergency retract on the ground or when boom is stowed.*
- *A hard landing with the boom extended in the stowed position may cause damage to the boom and/or latching assembly.*

Boom ..... STOW

END

D FLIGHT CONTROL STICK FAILURE

Flight Control Stick Failure is identified by; audible tone and ROLL/ELEVATION ALAS Light(s) on and stick limp in the failed axis.

Stick abnormal (limp), ALAS INOP lights on.

Discontinue boom air refueling except in an emergency.

WARNING

During limp flight control stick condition, the stick does not have back drive or centering force feel in the failed axis. Large control inputs which could cause boom or receiver damage are easily applied.

NOTE

Set roll limits to 15° if boom air refueling will be continued.

Boom ..... STOW

END

FLIGHT CONTROLS DO NOT RESPOND TO COMMAND INPUTS OR CONTROL SURFACES ARE ERRATIC

Disconnect . . . . . INITIATE (If Applicable)

Boom . . . . . RETRACT (If Able)

Flt Cont Sw . . . . . OFF

Boom . . . . . STOW

NOTE

The boom will not fly up when the ELEV POSN SW is moved to STOW. Use the boom hoist to stow the boom.

Discontinue boom air refueling.

END

BROKEN BOOM HOIST CABLE

Disconnect . . . . . INITIATE (If Applicable)

WILL BROKEN CABLE DAMAGE BOOM OR RECEIVER AIRCRAFT

YES

Discontinue boom air refueling except in an emergency.

NO

Continue mission as dictated by operational necessity.

Stow the boom using the following procedures.

Inform the pilot when ready to stow the boom and coordinate the following prior to attempting boom stowage procedures.

NOTE

- *Increase airspeed as required (300 KIAS or higher) to stow the boom.*
- *The boom may not fly to stowed position above 20,000 feet or while the aircraft is in a turn.*

ELEVATION POSN Sw . . . . . STOW

Fly the boom to the stowed position and hold it in the stowed position until latched.

CAUTION

Avoid applying abrupt up commands after placing the ELEVATION POSN switch in STOW.

Flight Control Stick . . . . . NEUTRAL

BOOM LATCHED

YES

NOTE

Repeated attempts may be required.

Complete the Boom Post AR Checklist.

END

NO

Refer to LANDING WITH BOOM IN TRAIL Checklist.

END

LANDING WITH BOOM/DROGUE IN TRAIL

NOTE

Confirm BOOM PREPARATION FOR LANDING WITH THE BOOM IN TRAIL checklist, Section IIA has been completed.

DROGUE — YES / NO

Landing . . . . . COMPLETE (PF)

If unable to jettison the hose or the decision is made to land with it in trail: land at slowest practical speed. Clear runway as required and stop for maintenance action.

END

Boom Scavenge . . . . . COMPLETE (FE)

The BO/FE will coordinate and accomplish this action, anytime prior to descent.

Fuel Qty in AFT Body Tank 15,000 Lbs min (If Available). . . . . VERIFY (FE)
Boom Operator . . . . . NOTIFY (P)

When ready to start the final approach to landing, notify the boom operator to complete his checklist. (BO will complete the checklist and return to forward position for landing.)

Landing . . . . . COMPLETE (PF)

Make a normal 35°/EXT approach and landing with normal reverse thrust and braking. Stop on the runway for maintenance action.

NOTE

- *Do not use 50°/EXT with maximum braking in an effort to minimize landing roll or reduced braking to give a smooth slow deceleration.*
- *BOOM/DROGUE DEPLOYED annunciator light will be ON. After the landing gear is lowered, the BOOM/DROGUE NOT STOWED annunciator light will also be ON.*
- *FUEL Cue Light comes on when any main tank pressure low light or FWD Body fuel schedule light comes on or during premature tip pump operation, or on when the boom is not stowed and latched and the landing gear is deployed. Light remains on until pushed for reset or until condition causing light to illuminate is corrected.*

END

MAXIMUM LANDING AND INFLIGHT LIMITING WEIGHTS

The maximum unrestricted landing weight (MLW) of the KC-10A is 436,000 pounds at the design R/D at touchdown of 10 feet per second (600 fpm).

AIR REFUELING LIMITATIONS

AIR REFUELING BOOM

NOTE

BOOM OPERATOR go to the appropriate TANKER PREPARATION FOR CONTACT checklist as follows:

A	(BOOM)
B	(Centerline Drogue)
C	(Wing POD Drogue)

A PREPARATION FOR CONTACT - TANKER - (BOOM)

Prior to receiver(s) reaching 1 NM in trail, complete PREPARATION FOR CONTACT checklist up to establishing radio contact. When using buddy refueling procedures, complete checklist a minimum of 5 minutes before ARCT.

1. Oxygen Regulator (ARO Station) ON/100%
2. Command Radio. . . . . MONITOR
3. Sighting Door. . . . . OPEN

CAUTION

4. Boom Coil . . . . . .TEST
5. HYD SEL . . . . . .BOOM
6. Side Viewing Doors . . . . . AS DESIRED

   Move side viewing doors to open if desired.
7. STICK FORCE . . . . . SET

   Adjust STICK FORCE ROLL and ELEVATION to desired level.
8. AR SIG SYS OVRD Sw . . . . . .NORM

   Verify the AR SIG SYS OVRD NORM light is on.
9. BOOM ENV Limits . . . . . ACTIVE
10. TLSCP-AT-DISC Sw . . . . . .AS REQUIRED

    Verify the TLSCP-AT-DISC switch-light displays AUTO/MAN.

11. ALAS Sw . . . . . ENABLE

    Verify the ALAS (automatic load alleviation system) switch displays ENABLE, and observe ROLL ALAS INOP and ELEVATION ALAS INOP lights are off.

CAUTION

The flight control stick shall be guarded to insure boom structural limits are not exceeded when the ENABLE mode is selected, while the boom is in trail and the flight control system is in the COUPLED Mode.

12. FLT CONT Sw . . . . . ON

    Observe the FREE FLIGHT light comes ON and the RUD FAIL, TLSCP FAIL, ELEV FAIL, and system CAUTION lights are OFF.

NOTE

- The L&R RUD FAIL and ELEV FAIL lights with aural warning will come on when the FLT CONT switch is moved to ON if the HYD SEL is in OFF or DROGUE. To return system to normal, move HYD SEL to BOOM and cycle FLT CONT switch from ON to OFF and back ON.
- If any FAIL or system CAUTION light is still on, refer to appropriate abnormal checklist.

13. INDEP DISC . . . . . CHECK

14. RCVR DISC DELAY and Limits . . . . . SET

15. FUEL OFFLOAD Gage . . . . . ZERO

16. AR EXT LIGHTS . . . . . AS REQUIRED

17. BOOM ELEVATION POSN Sw. . . . . STOW

18. BOOM AUDIO
    Sw. . . . . AS REQUIRED (PF,BO)

19. Boom. . . . . LOWER (PF,BO)
    a. Notify pilot before lowering boom.
    b. Move the BOOM HOIST lever to RAISE.

c. Move the BOOM LATCH lever to UNLOCK.

d. Move the BOOM HOIST lever to LWR; guard flight control stick to prevent uncommanded control inputs while boom is being lowered.

CAUTION

- Do not apply DOWN command to flight control stick with hoist lever in LOWER. Excessive force loads generated by control surface movement may cause hoist cable failure.
- Do not cycle HYD SEL from BOOM to OFF when boom is deployed and BOOM HOIST Lever is in FREE WHEEL. This causes interruption of hydraulic pressure to cable tension motor and could result in damage to boom hoist cable and motor. If HYD SEL is inadvertently placed in OFF position while boom is deployed, do not reposition HYD SEL to BOOM until slack is removed from hoist cable. Remove slack in hoist cable by placing boom hoist lever to RAISE. When hoist cable is taut, HYD SEL may be moved to BOOM and hoist lever returned to HOLD or FREE WHEEL as required.

e. After boom stops its downward movement (approximately 0°), move the BOOM HOIST lever to FREE WHEEL.

f. Move the BOOM ELEVATION POSN switch to REFUEL and observe boom goes to trail position.

NOTE

- The boom may deploy very rapidly from 14° below 0° elevation to the trail position when airspeed is below 200 KIAS.
- The boom will not lower to the trail position unless the BOOM HOIST lever is in FREE WHEEL and BOOM ELEVATION POSN switch is in REFUEL.
- If boom does not trail at 0° roll and 30° elevation, move the BOOM TRIM switch UP, DOWN, LEFT or RIGHT as applicable, to position the boom at 0° roll and 30° elevation.

20. Boom Flight Controls . . . . . CHECK

Move and hold the boom telescope control stick to extend until boom extension is 12 feet. Verify the boom can be controlled smoothly through the envelope of 18° to 40° in elevation and 0° to 25° in left and right roll.

CAUTION

Damage to boom telescoping mechanism may occur if RESET TO READY switch is pushed when boom is extending or retracting.

NOTE

- Adjust stick force, as necessary, after the boom flight control check. If multiple air refuelings are scheduled for the mission, only one boom flight control check is required.
- If the boom fails to attain the prescribed positions but all other indications are normal, continue the mission and initiate disconnects as applicable prior to receiver reaching the maximum position attained during the check. Adjustable limits may be RESET to within the position attained during Boom Flight Controls Check.

21. Radio Check . . . . . .COMPLETE (AS REQ D)

.

22. PREPARATION FOR CONTACT Checklist . . . . . "COMPLETED" (FE,BO)

Flight Engineer will confirm that the PREPARATION FOR CONTACT Checklist is completed and the crew is ready for refueling.

NOTE

BOOM OPERATOR go to appropriate Tanker Post Air Refueling steps as follows:

A	(BOOM)
B	
C	

A POST AIR REFUELING (BOOM)

1. Boom ..... STOW

   Move BOOM ELEVATION POSN switch to STOW; observe boom retract (if extended) and move toward stowed position.

   After boom stops upward movement (approximately 0°), move BOOM HOIST lever to RAISE. Observe plus 15° on the ELEVATION instrument when the boom is seated in the chock.

   Move BOOM LATCH lever to LOCK, then move the BOOM HOIST lever to LWR and observe the ELEVATION instrument for indication of movement.

WARNING

Avoid applying abrupt commands after elevation switch is placed in stow.

NOTE

- While boom is moving toward stowed position, guard controls to prevent boom from rising too rapidly.
- If ELEVATION gage confirms boom is stowed, move the BOOM HOIST lever to HOLD.
- If ELEVATION gage indicates movement, move BOOM LATCH lever to UNLOCK, repeat stowing procedures.
- If it becomes necessary to fly the boom to the stowed position, refer to the BROKEN BOOM HOIST CABLE abnormal procedure.

2. FLT CONT Sw ..... OFF
3. HYD SEL..... OFF
4. BOOM AUDIO Sw ..... OFF
5. AR EXT LIGHTS..... OFF
6. Side Viewing Doors (If Applicable) ... CLOSE
7. Sighting Door ..... CLOSE

8. Oxygen Regulator (ARO station) ... OFF/100%
9. Leaving Position .. NOTIFY PILOT (PF,BO)

   Notify pilot, "Boom stowed, leaving position."

TO 1C-10(K)A-2-28

FORMERLY 1C-10(K)A-2-28-1
FORMERLY 1C-10(K)A-2-28-2
FORMERLY 1C-10(K)A-2-28-3

TECHNICAL MANUAL

MAINTENANCE MANUAL ORGANIZATIONAL

FUEL

USAF SERIES KC-10A AIRCRAFT

THE BOEING COMPANY
F34601-93-C-0448
Prepared Under Contract FA8222-12-D-0011
Prepared by OC-ALC/AFLCMC KC10 Weapon System Program Office

THIS CHANGE INCORPORATES URGENT PCRS 21L0305AMW6039U AND 21L0305AMW6040U

BASIC AND ALL CHANGES HAVE BEEN MERGED TO MAKE THIS A COMPLETE PUBLICATION

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

CHANGE 5 01 JULY 2015

KC-10A, T/N 83-0080, 1 November 2016
BB-16

2 DECEMBER 2016

BOOM FLIGHT CONTROL ACTUATION - DESCRIPTION AND OPERATION

1. Description

A. The boom flight control actuation system is an integrated closed-loop, fly-by-wire system utilizing a boom control unit (BCU) with fail-passive fault monitoring and self-test features.

B. The boom flight control actuation system consists of the boom control unit (BCU), an elevation/roll hand controller, linear and rotary position transducers, accelerometers, nozzle load sensors, elevator and rudder actuators, a boom controller force selector, annunciator lights, and switches. A Status/Test Panel is provided for displaying built-in-test information from the BCU.

C. Boom positioning (elevation and roll) during free-flight is accomplished through the use of the elevation/roll hand controller. During coupled flight, an automatic load alleviation system (ALAS) is available to minimize nozzle radial loads by trimming the boom control surfaces to track the receiver aircraft position during coupled flight.

D. The boom control unit (BCU), located in the aerial refueling operator (ARO) equipment rack, contains a digital processor unit and associated components which provide the elevation, roll, and telescoping control logic computations, preflight and maintenance testing, inflight monitoring, and display functions. The BCU also contains the signal conditioning and data converting circuitry required to interface the digital processor with the remainder of the control system elements. The BCU also provides the dual servo drives; engage, shutdown, and warning circuitry; and the power supplies for external sensor excitation.

E. The boom elevation/roll controller, located on the aerial refueling operator (ARO) boom position control console, provides the ARO with precision control of the boom during free-flight mode. The elevation/roll controller is used to manually control the boom elevator and rudders, to follow receiver motion and to reduce load on the boom. The elevation/ roll controller consists of a wrist grip, two elevation linear variable differential transducers (LVDT's), two roll LVDT's, one elevation torque motor, and one roll torque motor. The LVDT's sense controller elevation and roll commands. The torque motors, in the free-flight mode, act as centering springs for the controller. In the coupled mode, boom position signals from the BCU are fed to the torque motors to drive the controller and the control surfaces to an approximate trim position. When the automatic load alleviation system (ALAS) is engaged, the nozzle load sensor signals are added to the position signals to drive the controller and the control surfaces to automatically minimize nozzle radial loads.

F. Two linear variable differential transducers (LVDT), located between the gimbal unit and structure, sense right and left roll axis inclination. Two LVDT's, located between the boom yoke and the gimbal unit yoke, sense boom elevation. A dual rotary voltage transformer (DRVT), located in the gimbal housing, senses boom roll. A nozzle load sensor assembly, located between the telescopic tube and the nozzle recoil assembly, senses nozzle radial loads. The boom accelerometer, located near end of outer fuel tube, is used to derive boom angular roll rates.

G. The elevator actuator provides control of the boom elevator. The actuator, located on the top of the boom under the control surfaces, is covered with a fairing.

H. The elevator actuator consists of a control module, two reservoir manifolds, a tandem cylinder, an output ram assembly and a dual linear variable differential transducer (LVDT).

I. The control module consists of two electro-hydraulic valves (EHV), the upstream monitor valve, the downstream control valve, a solenoid operated valve, a pilot operated shutoff valve and a thermal conditioning orifice.

J. There is one reservoir manifold in each half of the tandem cylinder. Each manifold consists of a pressure operated bypass valve, a spring-loaded reservoir, an inlet check valve, a check valve, one thermal valve and two restrictors.

K. The elevator actuator, in the normal or powered mode, moves the boom elevator in response to the two independent electrical command signals from the boom control unit (BCU). When a significant signal disagreement between the two command signals occurs, the actuator will immediately lock the elevator. If the signal disagreement continues, the actuator will go into the faired or power-off mode, otherwise, it will unlock and resume the powered mode. In the event of an electrical or hydraulic failure, the actuator will go into the faired or power-off mode to prevent flutter.

L. The rudder actuators provide control of the boom rudders. The actuators, located on each of the boom vertical stabilizers are covered with a fairing.

M. Each rudder actuator consists of a control module, two reservoir manifolds, a tandem cylinder, an output ram assembly and a dual linear variable differential transducer (LVDT).

N. The control module consists of two electro-hydraulic valves (EHV), an upstream monitor valve and a downstream control valve, a solenoid operated valve, a pilot operated shutoff valve and a thermal conditioning orifice.

O. Each reservoir manifold, one for each half of the tandem cylinder, consists of a pressure operated bypass valve, a spring-loaded reservoir, an inlet check valve, a check valve, one thermal relief valve and two restrictors.

P. A rotary swivel, located on the elevator pivot, routes hydraulic fluid to the two rudder actuators.

Q. An expander, located adjacent to the elevator actuator, allows axial play to accommodate pipe length changes due to thermal effects and boom deflection.

R. The rudder actuators, in the normal or powered mode, moves the boom rudders in response to the two independent electrical command signals from the boom control unit (BCU). When a significant signal disagreement between the two command signals occurs, the actuator will immediately lock the affected rudder. If the signal disagreement continues, the actuator will go into the faired or power-off mode, otherwise, it will unlock and resume the power mode. In the event of a hydraulic or electric failure, the actuator will go into the faired or power-off mode to prevent flutter.

S. The Status/Test (STP) panel is located on the ARO overhead panel. The STP has the capability of accessing, monitoring, and displaying BIT (Built-In-Test) information provided from the boom control unit (BCU). The STP provides the operator with a display of English language commands and questions, and also allows specific portions of the testing to be bypassed if desired. The STP displays 32 alphanumeric characters. The message readout window allows two lines, each consisting of 16 characters. During use of the STP, standardized abbreviations are used in some cases due to the limited space available on the readout window. These abbreviations will be explained in the Maintenance Practices portion of this section. The STP is used for ground test only.

T. The boom control system annunciator lights are located on the ARO instrument panel.

U. The left side of the elevation/roll wrist grip is equipped with a thumb wheel type switch (RAD INT) to permit the ARO to select either radio or intercom functions. The front of the grip is provided with a two position trigger switch. Depressing the trigger switch to the first detent causes normal disconnect of the boom from the receiver. In the event normal disconnect does not occur, depressing the trigger switch to the second detent causes the boom to disconnect from the receiver pneumatically.

V. The automatic load alleviation system (ALAS) provides automatic control of the boom when boom is coupled to a receiver aircraft. It measures the boom forces at the nozzle and commands the control

stick to a position which will alleviate the load. If the boom operator inputs manual commands to the stick, (tries to fly the boom manually), while in the COUPLED mode, the Automatic Load Alleviator cannot function properly.

W. A stick shaker function is built into the system to alert the ARO that he is forcing the control stick into a position different from that commanded by the ALAS. If this differential in position varies by as much as 4°, the stick shaker is activated which will vibrate/shake the flight control stick.

X. ALAS will continue to alleviate nozzle loads after a disconnect is initiated (DISC light on) until the RCVR DISC DELAY time has elapsed. At the end of the RCVR DISC DELAY time setting, the COUPLED light will go off, ALAS will cease to alleviate nozzle loads, the stick shaker will be deactivated, the control stick forces return to their selected values, the controller back drive is frozen in the last commanded position for two seconds and the flight control will start transitioning from COUPLED to FREE FLIGHT over a one second period.

Y. Aural tones are used to alert the boom operator when the aerial refueling boom (ARB) signal system advances to the CONTACT and DISC (DISCONNECT) conditions. One beep tone is annunciated for the CONTACT condition and three beep tones represent the DISC condition. The tones serve as supplemental indication to the existing light annunciators. These beep tones are heard through the audio system over the three headsets in the ARO station only. No tones will be heard in the cockpit.

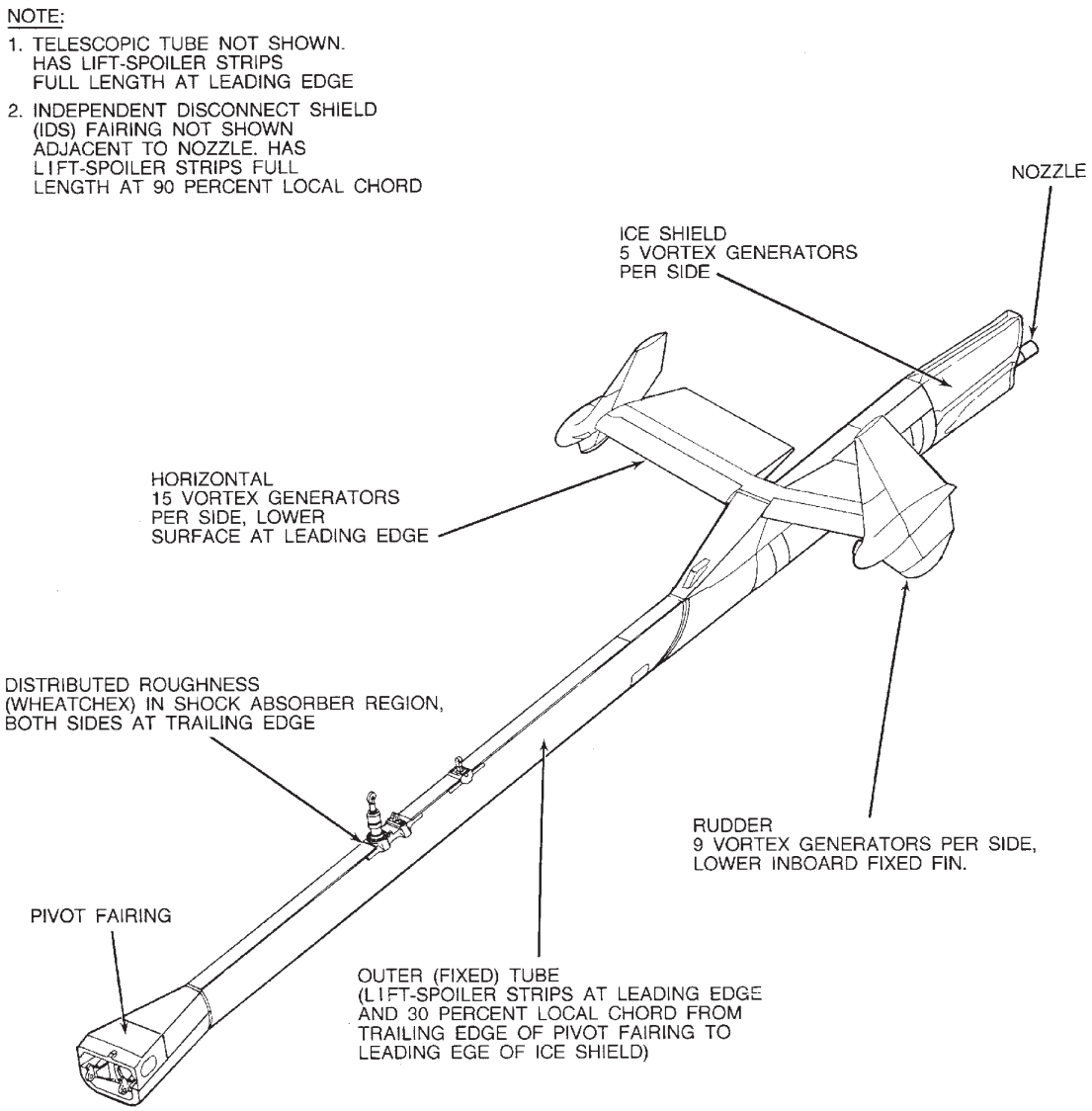
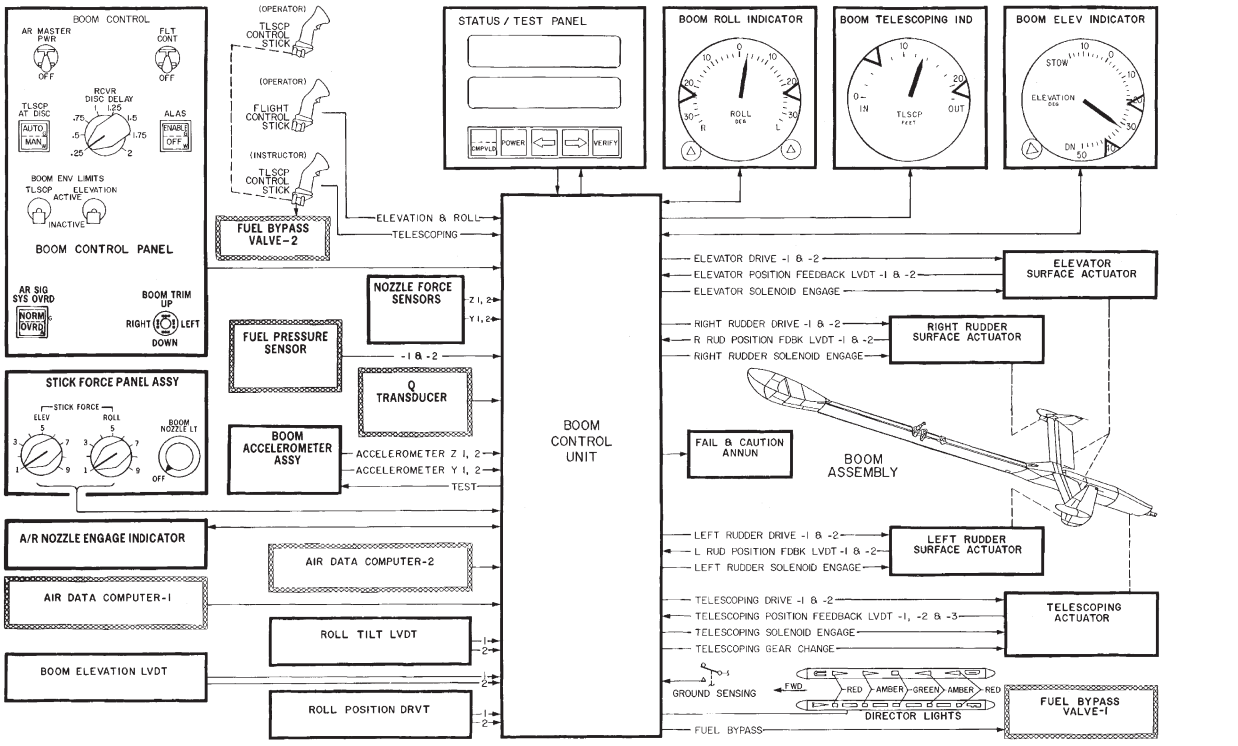


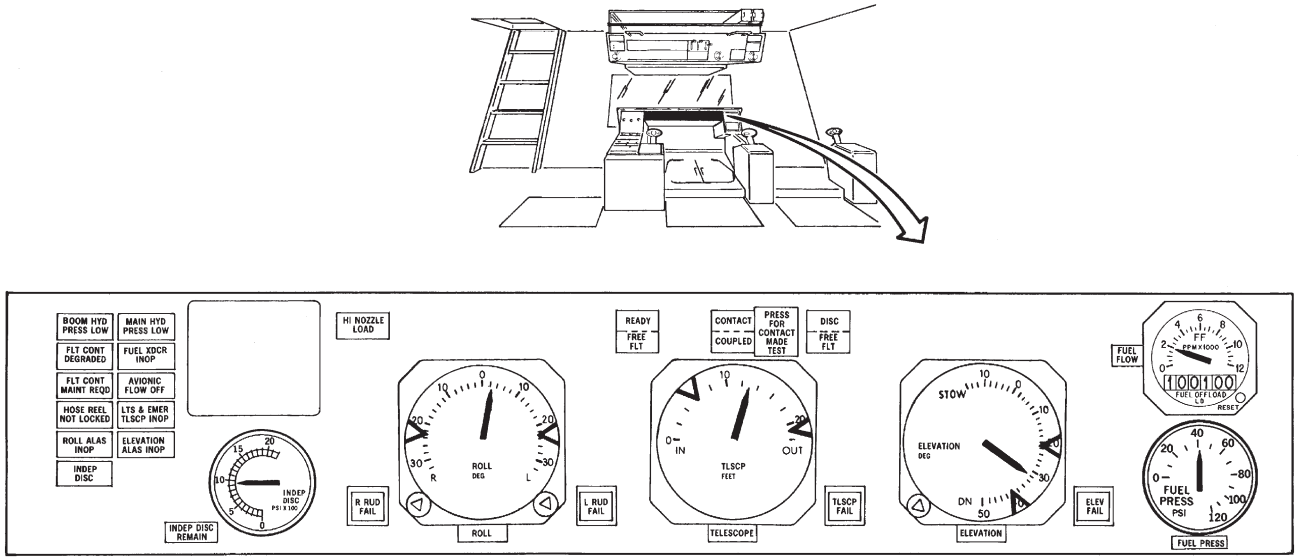
Figure 1. Boom Aerodynamic "Add-On" Fixes

28-71-00-990-801 (Sheet 1 of 1)



S100459549V2

Figure 4. Boom Control System - Schematic
28-70-00-990-804 (Sheet 1 of 1)



S100459548V2

Figure 1. ARO Instrument Panels
28-70-00-990-801 (Sheet 1 of 1)

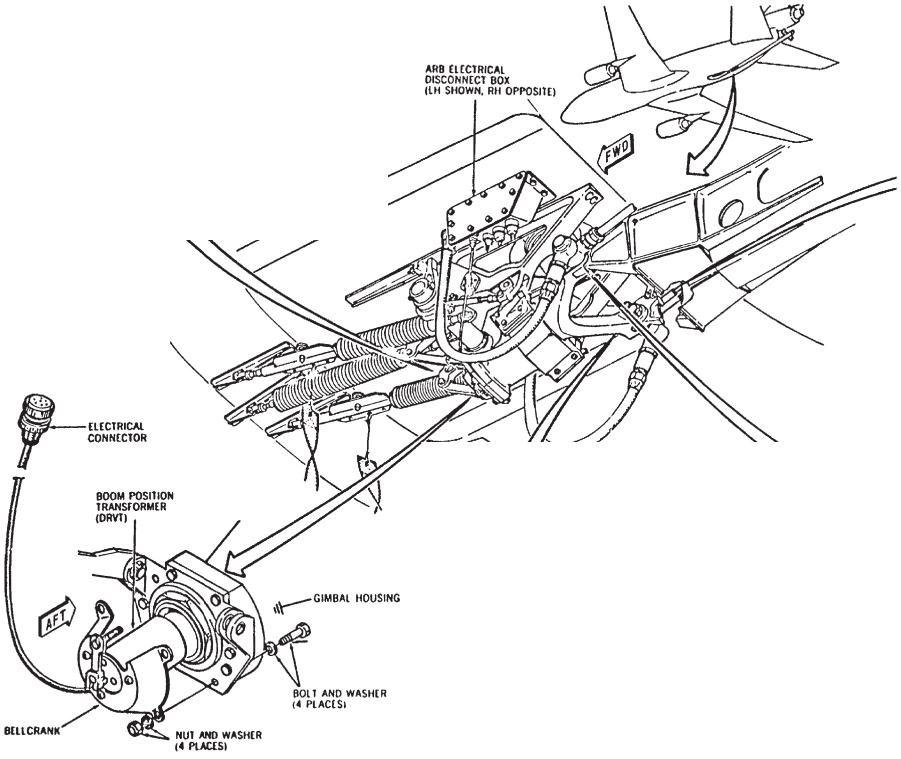


Figure 201. ARB Gimbal - Removal/Installation
28-71-04-990-801 (Sheet 1 of 1)

GIMBAL - MAINTENANCE PRACTICES

1. General

A. This maintenance practice provides instructions for removal/installation of the Aerial Refueling Boom (ARB) gimbal mechanism installed on the ARB support fitting located on the lower aft fuselage ARB support structure, and connected to the boom at the boom-gimbal pivot point by the hydraulic glands.

3. Removal/Installation - Gimbal

A. Remove Gimbal

B. Install Gimbal

(17) Verify that roll position DRVT polarity is correct by lowering boom on to dolly and moving to aircraft left. Verify that boom roll indicator indicates boom left.

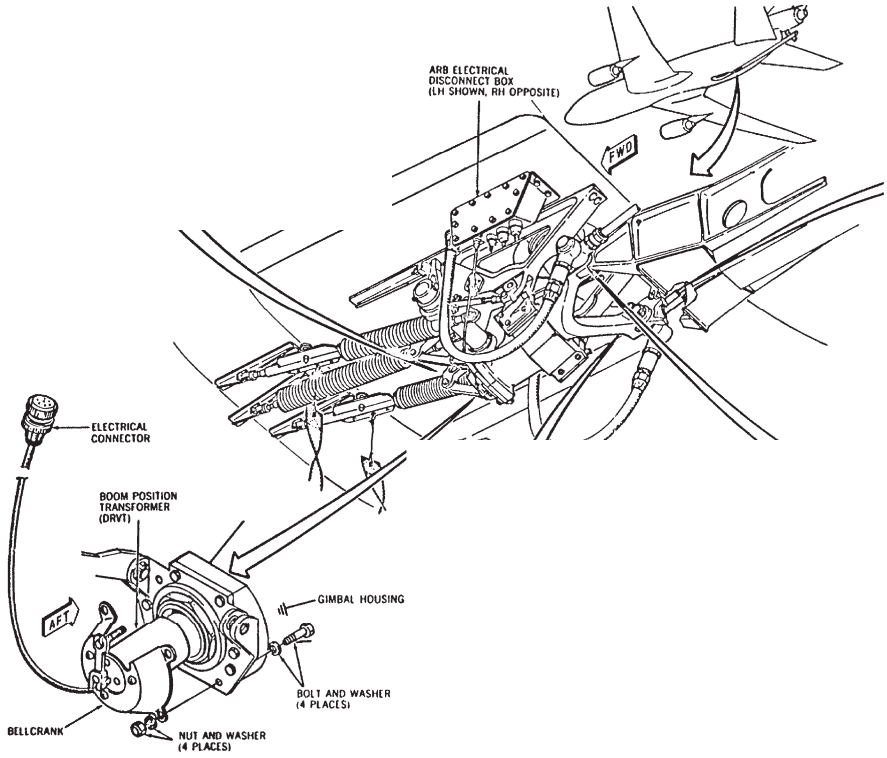


Figure 201. ARB Gimbal - Removal/Installation
28-71-04-990-801 (Sheet 1 of 1)

TO 1C-10(K)A-6WC-1

ONE SET
USAF KC-10A AIRCRAFT
PREFLIGHT-BASIC POST AND THRUFLIGHT INSPECTION WORK CARDS

F34601-95-C-0945
Prepared Under Contract FA8222-12-D-0011
Prepared by OC-ALC/AFLCMC KC10 Weapon System Program Office

BASIC AND ALL CHANGES HAVE BEEN MERGED TO MAKE THIS A COMLETE PUBLICATION

NOTICE - THIS SPECIAL RIGHTS LEGEND IS APPLICABLE TO ALL TECHNICAL DATA EXCEPT THOSE SYSTEMS AND COMPONENTS LISTED IN SUPPLEMENTAL AGREEMENT P00075 OF THE U.S. GOVERNMENT CONTRACT F33700-78-C-0001.

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

15 NOVEMBER 2003
CHANGE 39 1 MARCH 2017

KC-10A, T/N 83-0080, 1 November 2016
BB-29

PUBLICATION	CHANGE NO.	CHANGE DATE	PAGE NO.	INSP CHK	CARD NO.
TO 1C-10(K)A-6WC-1	39	1 MAR 17	37	POSTFLIGHT	10LM-004.4
	ATA CHAP	AREA ZONE 4		INSP DATE	A/C NO.

INSTRUCTION	SIGN OFF	
AREA 4 (EXTERIOR) (CONTINUED)	MECH	INSP
&11. ACCESS GIMBAL YOKE NUT BY OPENING PETAL DOORS.		
A. USING MIRROR CHECK GIMBAL YOKE NUT FOR SECURITY (SAFETY WIRE INTACT WITH 2-3 THREADS VISIBLE FORWARD OF THE YOKE NUT).		
$12. CHECK AERIAL REFUELING BOOM NOZZLE CONTACT COIL (REF. MM 28-76-01) FOR CORROSION AND IMPACT DAMAGE. TREAT IF REQUIRED. 941-N001 (28-76-01)		

MDC data subject to restrictive legend(s) on title page

PUBLICATION	CHANGE NO.	CHANGE DATE	PAGE NO.	INSP CHK	CARD NO.
TO 1C-10(K)A-6WC-1	39	1 MAR 17	85	COMB PRE/POST	10LM-005.4
	ATA CHAP	AREA ZONE 4		INSP DATE	A/C NO.

INSTRUCTION	SIGN OFF	
AREA 4 (EXTERIOR) (CONTINUED)	MECH	INSP
&13. ACCESS GIMBAL YOKE NUT BY OPENING PETAL DOORS.		
A. USING MIRROR CHECK GIMBAL YOKE NUT FOR SECURITY (SAFETY WIRE INTACT WITH 2-3 THREADS VISIBLE FORWARD OF THE YOKE NUT).		
14. CHECK AERIAL REFUELING BOOM FLIGHT CONTROLS (REF. MM 28-73-00) FOR FOREIGN OBJECT OR IMPACT DAMAGE. 900-J005 (28-73-00)		

MDC data subject to restrictive legend(s) on title page

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 21-101

21 MAY 2015

AIR MOBILITY COMMAND Supplement

9 FEBRUARY 2016

Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Pages:54

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This publication implements Air Force Policy Directive (AFPD) 21-1, *Maintenance of Military Materiel;* and is consistent with AFPD 13-5, *Air Force Nuclear Enterprise.* It is the basic Air Force instruction (AFI) for all weapon system and support equipment maintenance management guidance. It provides the minimum essential guidance and procedures to safely and effectively maintain, service, and repair weapon systems and support equipment. It applies to all Major Commands (MAJCOMs), including Air Force Reserve Command (AFRC), and the Air National Guard (ANG), along with their subordinates. Supplements and addendums must be written in accordance with (IAW) AFI 33-360, *Publication and Forms Management*. Supplements must identify required deviations (applicability, variance, and/or differences in organizational placement of responsibilities/processes) on the supplement with the abbreviation "(DEV)" directly preceding the affected paragraph number. Only supplements and addendums containing deviations must be submitted to AF/A4L for approval. The authorities to waive wing/unit level requirements in this publication are identified with a tier ("T-0, T-1, T-2, T-3") number

Primary Development & Test Aircraft Inventory (PDAI). Aircraft assigned primarily for testing aircraft or its components for purposes of research, development, test and evaluation, operational test and evaluation, or for testing programs.	None
Primary Other Aircraft Inventory (POAI). Aircraft required for special missions not defined elsewhere.	None
Quantity Per Application (QPA). The number of duplicate items installed on an aircraft.	Note: QPA is used as a multiplier for calculating Mean Time Between Failures (MTBF) for systems, subsystems, and components.
Reclamation. Aircraft removed from operational service due to damage, depreciation, administrative decision, or completion of projected service life.	None
Reconstitution Reserve. Aircraft stored or on ramp that are planned for return to operating forces in event of mobilization, replacement, or reconstitution.	None
Recur Discrepancy. A malfunction that occurs on the second through fourth sortie or attempted sortie after corrective action has been taken and the system or sub-system indicates the same malfunction when operated.	None
Recur Rate	[Number of recur discrepancies / Total Pilot Reported Discrepancies (PRD)] x 100
*Repeat Discrepancy. Malfunction in a system or subsystem that reappears on the next sortie (or attempted sortie) NOTE: Each consecutive sortie that experiences the malfunction is a Repeat and resets the counter, i.e. there can be several repeats in a row, but not a Recur unless there is at least one flight between malfunctions.	None

Condition-Based Maintenance Plus—A set of maintenance processes and capabilities derived from real-time assessment of weapon system condition obtained from embedded sensors and/or external tests and measurements using portable equipment. The goal of CBM+ is to perform maintenance only when internal/external sensors indicate the need instead of performing maintenance on a periodic basis.

Contracting Officer Representative (COR)—A COR is an individual designated in accordance with DFARS subsection 201.602-2 and authorized in writing by the contracting officer to perform specific technical or administrative functions.

Corrosion Control Facility—A facility where activities are conducted to treat, prevent or repair corrosion control for aircraft or associated components and equipment; these activities include wash, treatment, repair, stripping, and repainting processes. Corrosion control shops also support vehicles, weapons and munitions, and avionics shops. Additionally, it provides space for the corrosion control shop which includes preparation and drying areas, abrasive blasting rooms, paint booths for mixing and/or applying paint, tool storage, lockers, and administrative areas.

Course Control Documents (CCD)—Set of documents that dictate how a course is taught. These documents include a course training standard, course chart, and a plan of instruction.

Crash Damaged or Disable Aircraft Recovery (CDDAR)—The ability to move damaged or disabled aircraft using specialized equipment

Cross-tell—Cross-tells are used to highlight trends, benchmarks or safety conditions relating to maintenance equipment, personnel, training or processes. A cross-tell is initiated to assist other maintenance or logistics personnel with similar equipment to do their jobs more safely and/or efficiently. Typically a cross-tell will be initiated when a condition or trend is discovered regarding, but not limited to, a weapon system or common components that should be shared with other users or potential users. This information should be transmitted using signed and encrypted email to ensure widest dissemination and ensure it is brought to the attention of unit commanders in order to prevent or mitigate mishaps, injury or damage to AF personnel, equipment or property. Typically cross-tells will provide relevant background information and history and can include such information as NSNs, part numbers, specific location of problem areas, etc.

Customer Wait Time (CWT)—CWT for LRUs is the total elapsed time between the issuance of a customer order and satisfaction of that order, regardless of source (immediate issues or backorders), and can include issues from wholesale and/or retail stocks as well as various other arrangements. CWT for end items (engines and pods) includes time for the retrograde and serviceable transportation legs.

Debriefing—Program designed to ensure malfunctions identified by aircrews are properly reported and documented.

Decertification—The removal of certification status from a person for a specific task

Dedicated Crew Chief—DCCs are first-level supervisors in the flightline management structure who manage and supervise all maintenance on their aircraft, and are selected on the basis of initiative, management and leadership ability, and technical knowledge.

Delayed or Deferred Discrepancies—Malfunctions or discrepancies not creating NMC or PMC status that are not immediately corrected.

TECHNICAL MANUAL

AEROSPACE EQUIPMENT MAINTENANCE INSPECTION, DOCUMENTATION, POLICIES, AND PROCEDURES

(ATOS-HILL)

THIS MANUAL SUPERSEDES TO 00-20-1, DATED 1 APRIL 2016.

FOR QUESTIONS CONCERNING TECHNICAL CONTENT OF THIS TECHNICAL MANUAL, CONTACT THE APPLICABLE TECHNICAL CONTENT MANAGER (TCM) LISTED IN THE ENHANCED TECHNICAL INFORMATION MANAGEMENT SYSTEM (ETIMS). HQ AFMC/A4FI, WPAFB, OH IS THE APPROVAL AND WAIVER AUTHORITY FOR THIS TECHNICAL MANUAL.

DISTRIBUTION STATEMENT A: Approved for public release; distribution unlimited. HQ AFMC/PA Certificate Number AFMC PAX-04-329. Submit recommended changes or problems with this technical order to the applicable TO Manager (TM) listed in ETIMS using the Recommended Change Process outlined in accordance with (IAW) TO 00-5-1.

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11 JULY 2016

KC-10A, T/N 83-0080, 1 November 2016
BB-35

equipment aircraft maintenance. For aircraft with Electronic Circuit Breakers (ECBs), strapping/unstrapping is the equivalent of installing/removing warning tags.

5.7.3.16.5.1 Installation. The individual that performs the procedure or validates the condition or configuration for which a warning tag/ECB strap is required shall install the AF Form 1492. Note: AF 1492 will not be used on ECBs.

5.7.3.16.5.1.1 Attach Part A to the aircraft specific circuit breaker, switch, control handle, etc.

5.7.3.16.5.1.2 Place Part B as an administrative "cross-check" in the aircraft forms, WCD or locally developed warning tag program (board, binder, form, etc.).

5.7.3.16.5.1.2.1 When using aircraft forms, insert through the aircraft forms binder ring, aligned with its corresponding entry.

5.7.3.16.5.1.2.2 When utilizing a WCD or locally developed warning tag program, the GP/CC will establish local procedures.

5.7.3.16.5.2 Removal. The warning tag/ECB strap will be removed prior to activation, movement or configuration change of the system, flight control, stored energy, etc. that was isolated. Only personnel authorized to clear Red X discrepancies shall physically remove the AF Form 1492/ECB strap.

5.7.3.16.5.3 Documentation. Warning tag(s)/ECB strap(s) will be documented on a separate Red X as either an associated JCN or WCE. Warning tag(s)/ECB strap(s) must match a corresponding AFTO Form 781A and MIS entry. (MIS only for paperless inspections). Warning tags/ECB straps may be grouped providing all tags/straps pertain to the same discrepancy.

5.7.3.16.5.3.1 In the "DISCREPANCY" block, enter the total number of warning tags/ECB straps installed, an applicable warning note per paragraph 5.7.3.16.4. For example, 2 each warning tags/ECB straps installed. NOTE: DO NOT OPERATE LANDING GEAR. Reference the original discrepancy using "See JCN _____" (For paperless only) and/or "See Page_____, Item_____."

5.7.3.16.5.3.2 In the "CORRECTIVE ACTION" block annotate total number of warning tags/ECB straps removed, and clear the Red X as directed in paragraph 4.5.3.

5.7.3.16.5.3.2.1 When grouped warning tags/ECB straps are removed at different times or by different Red X authorized individuals, each warning tag/ECB strap will be annotated in the "CORRECTIVE ACTION" block along with the minimum signature of the individual(s) that removed the warning tag(s)/ECB strap(s).

5.7.3.16.5.3.2.2 The individual that removes the final grouped warning tag/ECB strap will ensure that each warning tag/ECB strap itemized in the "DISCREPANCY" block has been properly annotated as removed in the "CORRECTIVE ACTION" block prior to clearing the Red X as directed in paragraph 4.5.3.

5.7.3.16.6 The following procedures apply to the documentation requirements for completing an IPI. Some digital TOs include IPIs displayed as a step in the task. The IPI executes as a process within the TO. Once executed, a WCE is automatically created in the digital aircraft forms detailing the IPI task description. In this case, the IPI requirement is fulfilled and the following procedures do not apply.

5.7.3.16.6.1 The IPI inspector who completes the IPI will indicate completion of the IPI (s) in the corrective action block of the original discrepancy by stating, "Required IPI (insert IPI task title or IPI description or IPI step number) complied with" and enter minimum signature in the corrective action block. If more than one IPI is required to complete the task, IPI inspector must identify number of IPIs in corrective action block such as, "Three required IPIs (insert IPI task title or IPI description or IPI step number of three IPIs) complied with." If there is no room in the corrective action block, the IPI inspector will document IPIs as a separate entry in the AFTO Form 781A or appropriate work package. Place the IPI (s) on a Red X and reference the page and item number of the original discrepancy(s). When an IPI is documented as a separate entry, the IPI inspector will indicate completion by entering their minimum signature in the "Inspected By" block in accordance with paragraph 4.5.3.

5.7.3.16.7 The following documentation will be accomplished whenever a maintenance action is stopped prior to completion or a change of maintenance technician occurs (e.g. job awaiting parts, technician reassigned to another job, end of shift, etc.).

5.7.3.16.7.1 The technician(s) will document and sign off the TO steps accomplished prior to the maintenance action(s) being stopped. Example: Lt MLG Strut repack steps 1 thru 25 CW in accordance with 1C-5B-5-5JG-2, Sec 5-2 (reference the

page __, item __ of original entry). For S1000D IETM users, place TO number, data module code and steps. For Non-S1000D IETM users, follow your MAJCOM guidance.

5.7.3.16.7.2 The technician will create a subsequent entry in the AFTO Form 781A detailing the remaining open TO steps or tasks. Example: Lt MLG Strut requires repack in accordance with 1C-5B-5-5JG-2, Sect 5-2, steps 26 thru 30 NCW (reference original entry). For S1000D IETM users, place TO number, data module code and steps. For Non-S1000D IETM users, follow your MAJCOM guidance.

5.7.3.16.7.3 Keep the original discrepancy and job control number (JCN) open until the entire maintenance action is completed, since subsequent discrepancy corrective actions only document partial completion. Do not transcribe aerospace vehicles forms until all tasks associated with the original discrepancy are completed.

5.7.3.16.7.4 When all steps or tasks of the maintenance action are complete, a qualified technician will clear the discrepancy and review all pertinent discrepancies to determine if all steps were accomplished in accordance with the applicable technical data.

5.7.3.16.8 Record discrepancies discovered during scheduled inspections directly in the MIS, locally developed/approved lists or WCDs. All Red X entries must be entered in both the AFTO Form 781A and MIS (MIS only for paperless inspections). All other discrepancies tracked on locally developed lists and/or WCDs that cannot be corrected by the allotted scheduled inspection time, must be transcribed to the MIS with the documents routed with the 781 series forms package and filed with the inspection historical documents.

5.7.3.16.8.1 When utilizing the paperless process, all discrepancies will be entered directly into the MIS.

5.7.3.16.9 Any component removed to FOM, will be documented as a separate discrepancy with the appropriate Red symbol entry. This applies even if the item is immediately reinstalled. Reference the original discrepancy using "See JCN _____" and/or "See Page _____, Item _____." EXCEPTION: Procedures that require removal of a component as a step of the task and contain all of the steps for component removal/installation within the same procedure do not need to be documented separately. EXCEPTION: If the removal to FOM WCEs are part of a JST and are listed sequentially in the MIS generated AFTO Form 781A, a reference to the original discrepancy is not required.

5.7.3.16.10 Identify Repeat/Recurring discrepancies by entering "Repeat/Recurring" in the "DISCREPANCY" block.

5.7.3.16.11 Internally loaded munitions will be entered as an "INFO NOTE," identifying type and quantity of munitions uploaded (refer to TO 11A-1-33 for internally loaded munitions). Annotate multiple entries in the same discrepancy block. Update the "INFO NOTE" with types and quantities of expendables prior to each flight. The applicable "INFO NOTE" will be retained in the aerospace vehicle forms until munitions are removed and/or expended.

5.7.3.17 "DISCOVERED BY." Print first name initial and last name for each discrepancy recorded.

5.7.3.17.1 A discovered by is not required for MIS generated jobs that are part of a job package (i.e. isochronal inspections, -6 inspections, TCTO, Debrief, etc.).

5.7.3.18 "EMPLOYEE NO/USERID." Maintenance personnel will enter their employee/USERID/FAA certification number or equivalent.

5.7.3.18.1 An employee number is not required for MIS generated jobs that are part of a job package (i.e. isochronal inspections, -6 inspections, TCTO, Debrief, etc.).

5.7.3.19 "CORRECTIVE ACTION." When a discrepancy on the AFTO Form 781A is completed, document the corrective action taken.

5.7.3.19.1 For Red X discrepancies, include a complete TO reference to determine the work performed (e.g. TO number and paragraph/figure number for conventional TOs, function number/fault code for MIDAS based TOs, System/Sub-System/Subject Number (SSSN) or equivalent reference) in the "CORRECTIVE ACTION" block.

5.7.3.19.2 When a temporary/partial repair is accomplished that warrants changing the symbol entered for the discrepancy, and the final repair action is deferred, enter the temporary/partial repair corrective action. Close out the original discrepancy and enter a new discrepancy, with the appropriate symbol and description of the work to be accomplished in the next open block of the AFTO Form 781A. The original entry "CORRECTIVE ACTION" block and new entry "DISCREPANCY" block must refer to each other by the entries "see JCN" and/or "see page __, item __".

BY ORDER OF THE COMMANDERS
60th/349th MAINTENANCE GROUPS

60/349 MXGOI 21-101

3 DECEMBER 2013

Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Supersedes: 60/349 MXGOI 21-101, dated 22 January 2013

Pages: 121

This Operating Instruction implements the following: Air Force Policy Directive (AFPD) 21-1, *Managing Aerospace Equipment Maintenance*; Air Force Instruction (AFI) 21-101 and Air Mobility Command Supplement (AMCSUP) 1, *Aerospace Equipment Maintenance Management*; Technical Order (TO) 00-20-2, *Reporting Requirements for Cannibalization Actions;* AFI 91-203, *Air Force Consolidated Occupational Safety Instruction;* AFI 91-204, *Safety Investigations and Reports;* TO 00-20-2, *Maintenance Data Documentation;* TO 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells*; National Fire Protection Association (NFPA) Article 410E; AFI 23-110, *USAF Supply Manual;* AMCI 21-107, *Engine Monitoring Program (EMP);* TO 33-1-37, *Joint Oil Analysis Laboratory Manuals;* TO 00-5-1 AF Technical Order System; AMCI 21-108, *Logistics Support Operations;* Travis Air Force Base (TAFB) Instruction 91-202, *Mishap Prevention Program Commander's Guide.* This instruction establishes procedures for the management of the IFF Mode IV Program. This operating instruction pertains to all personnel assigned or attached to the 60th/349th Maintenance Groups. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at https://www.my.af.mil/gcss-af61a/afrims/afrims/. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

Chapter 16

REPEAT, RECUR, AND CND PROCEDURES

16.1. Repeat/Recur Procedures.

16.1.1. Debrief Will.

16.1.1.1. Maintain G08l Repeat/Recur Discrepancy product (9032C) in the aircraft debrief folder.

16.1.1.2. Review the 9032C from the aircraft debrief folder and compare with the aircraft forms to determine repeat and recur discrepancies.

16.1.1.3. Upon determining a discrepancy is a Repeat/Recur, identify G081 entries by entering Repeat/Recur in the narrative description on appropriate screens, referencing the previous job control number.

16.1.1.4. Maintenance Supervision will be informed of the repeat/recur discrepancy. The entry on the AFTO Form 781A will be marked in the same manner as Paragraph 16.1.1.3. The words repeat/recur will be entered, or underlined for pre-printed forms in red in the discrepancy block of the 781A.

16.1.1.5. If G081 is not operational; discrepancies will be identified using AMC Form 278, *Debriefing and Recovery Preplan*, or locally developed Debriefing and Recovery Preplan.

16.1.2. Maintenance Work Centers will.

16.1.2.1. On the first repeat/recur discrepancy, a 90-day history of the discrepancy will be reviewed prior to performing any maintenance.

16.1.2.2. A second repeat/recur discrepancy will require lead technician involvement by assisting in troubleshooting and signing off the discrepancy in the “Inspected By” block of the AFTO Form 781A when the discrepancy is repaired.

16.1.2.3. A third repeat/recur discrepancy will require the MOO, MX SUPT, or civilian equivalent to assign a team to troubleshoot and repair the discrepancy. The MOO, MX SUPT, or civilian equivalent will also notify QA of the third repeat/recur. QA will monitor maintenance activities and advise as necessary. The MOO, MX SUPT, or civilian equivalent will review and validate all corrective actions taken. Afterwards, QA will conduct a final review of the aircraft forms.

16.1.2.4. A fourth repeat/recur discrepancy that is a grounding item or safety of flight issue constitutes grounds for impoundment as determined by the MXG/CC.

16.1.3. Multiple Work Centers Involved.

16.1.3.1. Aircraft forms entry will be upgraded to a Red "X" condition.

16.1.3.2. Each additional work center (e.g., hydro, elen, aero-repair, etc) involved will make a duplicate entry in the aircraft forms referencing the original discrepancy. Work accomplished by each work center will be detailed in this manner.

16.1.3.3. After all other work centers involved have properly cleared their entries, the primary work center (as determined by MOC-1) will clear the original discrepancy.

See AFGM 1

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-2KC-10, VOLUME 3

30 AUGUST 2011

Incorporating Change 1, 9 AUGUST 2013

Flying Operations

KC-10 OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Certified by: AF/A3O-A
(Col Jeffrey R. McDaniels)

Pages: 207

Supersedes: AFI11-2KC-10V3,
18 January 2006

This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircraft Rules and Procedures* and references AFI 11-202, Volume 3, *General Flight Rules,* as well as Air Force Tactics Techniques and Procedures (AFTTP) 3-3.KC-10. It establishes policy for the operation of the KC-10 aircraft to safely and successfully accomplish worldwide mobility missions. This instruction applies to all commanders, operations supervisors, and aircrew assigned or attached to all flying activities of commands operating KC-10 aircraft. It applies to Air Force Reserve Command (AFRC) units, but does not apply to the Air National Guard (ANG). This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records* and disposed of in accordance with the *Air Force Records Disposition Schedule (RDS)* located at https://www.my.af.mil/afrims/afrims/afrims/rims.cfm. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 10 *United States Code*, Chapter 857 and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, 30 Nov 1943, as amended. Forms affected by the PA have an appropriate PA statement. System of records notice F011 AF XO, *Aviation Resource Management System* (ARMS) (December 26, 2002, 67 FR 78777) applies. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate functional's chain of

end of the runway do not count. Two ILSs that use the same frequencies/antennas do not qualify as two independent approaches.

6.21. Adverse Weather.

6.21.1. Flight into areas of forecast or reported severe turbulence is prohibited.

6.21.1.1. The KC-10 is a category III aircraft for turbulence. Crews should confirm the type of aircraft the forecast turbulence applies to, or what type of aircraft reported the encounter, to gain a more accurate picture for their route of flight. Turbulence category charts are found in Air Force Weather Agency technical note AFWA/TN 98/002, *Meteorological Techniques*.

6.21.1.2. The PIC is responsible for ensuring all passengers are seated, with seat belts fastened, when areas of moderate or greater turbulence are encountered or anticipated. ***WARNING:*** Serious injury may occur if passengers do not have their seat belts fastened and the aircraft encounters moderate or severe turbulence.

6.21.2. Flight into areas of forecast or reported severe icing is prohibited. Prolonged operation, such as cruise flight or holding, in areas of moderate icing should be avoided. ***NOTE:*** Air Force Weather Agency technical note AFWA/TN 98/002, *Meteorological Techniques*, states that freezing drizzle is equivalent to moderate icing and freezing rain is equivalent to severe icing. When freezing fog is forecast or reported, aircrews will confirm with weather agencies what type (if any) icing is associated with the freezing fog.

6.21.2.1. Do not takeoff under conditions of freezing rain. Do not takeoff under conditions of freezing drizzle except when aircraft has been properly de-iced/anti-iced IAW flight manual procedures.

6.21.2.2. Freezing precipitation, snow, freezing fog, or temperatures near 0°C, may cause ice or frost to accumulate on aircraft surfaces. When an aircraft requires de-icing/anti-icing prior to takeoff, refer to the following:

6.21.2.2.1. Aircrews will only use de-ice and anti-ice fluids listed in their respective flight manual. Aircrews will be familiar with, and follow all restrictions in their associated flight manual with respect to anti-ice/de-ice procedures and holdover times.

6.21.2.2.2. MIL-A-8243 Type I and Type II de-icing fluids provide little anti-icing benefit, and therefore have limited holdover times. As a guide, for approved fluids, crews may use published holdover times IAW TO 42C-1-2, Aircraft Anti-icing Procedures, and AFFSA holdover tables located at the AFFSA/A3OF Flight Directives Division website. The holdover time begins when anti-icing fluid is first applied and the PIC shall use time, temperature, and dilution of mixture to determine when times are exceeded and re-apply fluid if required.

6.21.2.2.3. In all cases, PICs will ensure a visual inspection of the aircraft is completed within 5 minutes of departure.

6.21.3. Do not fly directly above (within 2,000 feet) thunderstorms or cumulonimbus clouds. If unable to vertically clear thunderstorms or cumulonimbus clouds by at least 2000 feet, avoid them by at least:

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-202,VOLUME 3

10 AUGUST 2016

Flying Operations

GENERAL FLIGHT RULES

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This instruction implements AFPD 11-2, *Aircrew Operations*, by prescribing general flight rules that govern the operation of USAF aircraft (manned and unmanned) flown by USAF pilots, pilots of other services, foreign pilots, and civilian pilots. This instruction applies to Air Force activities operating aircraft on loan or lease, to the extent stipulated in the loan or lease agreement; Air Force Reserve Command (AFRC) units; and to Air National Guard (ANG) units. Public Aircraft Operations (PAO) under government contract for Air Force operations will comply with stipulations documented in written declaration of public aircraft status, applicable Title 14 Code of Federal Regulations (CFR) and this regulation. Waiver information, in accordance with AFI 33-360 tiering, may be found in Chapter 1. Non-tiered compliance items in this instruction that are targeted for units above the wing or equivalent and above DRUs/FOAs may be waived by the MAJCOM/CC (delegable no lower than the MAJCOM Director), with the concurrence of HQ USAF/A35 unless otherwise noted. This publication may be supplemented, but all supplements above wing or equivalent level must be routed to HQ AFFSA/XOF for coordination prior to certification and approval. Air Force Instruction (AFI) 11-2 Mission Design Series (MDS) Specific, Volume 3 instructions (e.g., AFI 11-2KC-10, Volume 3) may contain specific operational guidance unique to individual aircraft and crew positions. MDS-specific, Volume 3 instructions will not be less restrictive than this instruction. Address questions concerning this instruction to Headquarters Air Force Flight Standards Agency (HQ AFFSA) at HQ AFFSA/XOF, 6500 S. MacArthur Blvd, Bldg 4, Room 240, Oklahoma City, OK 73169, email: **hqaffsa.xof@us.af.mil.** See Attachment 1 for a list of terms and abbreviations. Use AF Form 847, *Recommendation for Change of Publication*, to recommend changes to this instruction in accordance with (IAW) AFI 11-215, *USAF Flight Manuals Program (FMP).*The reports in this directive are exempt from licensing according to AFI 33-324, *The Air Force*

Chapter 2

FLIGHT READINESS

2.1. Crew Rest. Crew rest is compulsory for aircrew members prior to performing any duties involving aircraft operations and is a minimum of 12 non-duty hours before the Flight Duty Period (FDP) begins (T-2). Crew rest is free time and includes time for meals, transportation, and rest. This time must include an opportunity for at least 8 hours of uninterrupted sleep. Crew rest period cannot begin until after the completion of official duties.

2.1.1. Aircrew members are individually responsible to ensure they obtain sufficient rest during a crew rest period.

2.1.2. Once crew rest begins, any official business interrupts the crew rest period. If crew rest is interrupted, individuals will immediately inform appropriate leadership or command and control (C2) and will either begin a new crew rest period or not perform flight duties (T-2). **Exception:** PIC (or designee) may initiate mission-related communication with official agencies without interrupting crew rest.

2.1.3. **Exceptions to the 12-Hour Minimum Crew Rest Periods**. For continuous operations when basic aircrew FDPs are between 12 to 14 hours, subsequent crew rest may be reduced to a minimum of 10 hours by the PIC in order to maintain a 24-hour work/rest schedule (T-2). "Continuous operations" is defined as three or more consecutive FDPs of at least 12 hours duration with minimum crew rest period.

2.1.3.1. The 10-hour crew rest exception shall only be used to keep crews in 24-hour clock cycles, not for scheduling convenience or additional sortie generation (T-2).

2.1.3.2. Any reduction from 12-hour crew rest requires pre-coordination for transportation, meals, and quarters so that crewmembers are provided an opportunity for at least 8 hours of uninterrupted sleep (T-2).

2.2. Flight Duty Period (FDP) (see Table 2 1). FDP may be waived by MAJCOM/A3 when an ORM assessment determines that mission requirements justify the increased risk. At MAJCOM/A3 discretion, waiver authority may be further delegated to no lower than the operations group commander (or equivalent).

2.2.1. FDP begins when an aircrew member reports for a mission, briefing, or other official duty and ends at final engine shutdown after the final flight of the completed mission. FDP for UAS aircrew member ends at final engine shutdown, final in-flight handover briefing, or final crew swap, whichever occurs last.

2.2.2. When authorized by the waiver authority, the PIC may extend FDP a maximum of 2 hours to compensate for mission delays.

2.3. Post-Flight Duties. If official post-flight duties are anticipated to exceed 2 hours, commanders should consider reducing the FDP to ensure the safe completion of those duties.

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FACTSHEETS

CC1. Air Mobility Command Factsheet CC-2

CC2. 60th Air Mobility Wing Factsheet CC-8

CC3. 9th Air Refueling Squadron Factsheet CC-11

CC4. 660th Aircraft Maintenance Squadron Factsheet CC-13

CC5. 60th Maintenance Squadron Mission Statement CC-14

CC6. KC-10 Extender Factsheet CC-15

Air Mobility Command

Published August 11, 2005

PRINT | E-MAIL

Air Mobility Command was activated June 1, 1992, with headquarters at Scott Air Force Base, Illinois, and is one of 10 major Air Force commands. On Oct. 1, 2016, AMC consolidated with Military Air Command making AMC the oldest major command in the Air Force tracing its history to the establishment of the Air Corps Ferrying Command on May 29, 1941. As the air component of the U.S. Transportation Command, AMC is comprised of a Total Force effort to execute Rapid Global Mobility and enable Global Reach –the ability to respond anywhere in the world in a matter of hours. This is accomplished through AMC's four core mission areas – Airlift, Air Refueling, Air Mobility Support and Aeromedical Evacuation. AMC also provides support to the nuclear enterprise.

Airlift provides the capability to deploy U.S. armed forces anywhere in the world within hours and help sustain them in a conflict. AMC also supports presidential and senior leader airlift. Air Refuelers are the backbone of Global Reach, increasing coalition and U.S. aircraft's range mid-air. Aeromedical evacuation ensures the wounded warriors get the care they deserve and today have sustained the survival rate of 97 percent. In addition to enabling the force to respond to an enemy attack and sustain operations, Rapid Global Mobility brings humanitarian supplies and assistance to those in need who may live in austere locations.

Vision

Unrivaled Global Reach for America ALWAYS!

Mission

AMC's mission is to provide air mobility: Right Effects, Right Place, Right Time.

Priorities

- Execute and Sustain Rapid Global Mobility
- Enhance Mobility Partnerships
- Prepare Mobility Forces for Tomorrow
- Develop and Care for Airmen and Families

Personnel and Resources

AMC has nearly 49,000 active-duty and civilians, 42,000 Air Reserve Component military and 35,000

Air National Guard. The command operates the C-5 Galaxy, KC-10 Extender, C-17 Globemaster III, C-130 Hercules, C-130J Super Hercules and KC-135 Stratotanker. Operational support aircraft are the VC-25 (Air Force One), C-20, C-21, C-32, C-37, and C-40.

Organization

AMC includes the U.S. Air Force Expeditionary Center, one numbered air force and the 618th Air Operations Center. The command operates 10 wings installations and has two premier bands, the USAF Band of Mid-America and USAF Band of the Golden West.

AMC Installations

Joint Base Charleston, South Carolina

Dover AFB, Deleware

Fairchild AFB, Washington

Grand Forks AFB, North Dakota

Little Rock AFB, Arkansas

MacDill AFB, Florida

Joint Base Lewis-McChord, Washington

Joint Base McGuire-Dix-Lakehurst., New Jersey

McConnell AFB, Kansas

Scott AFB, Illinois

Travis AFB, California

In addition, the 89th Airlift Wing at Andrews AFB, Maryland, 43rd Air Mobility Operations Group, Pope Army Airfield, North Carolina, the 521st Air Mobility Operations Group, Ramstein Air Base, Germany; 515th Air Mobility Operations Group, Joint Base Pearl Harbor-Hickam, Hawaii; and the 317th Airlift Group at Dyess AFB, Texas, are assigned to AMC.

Numbered Air Force

The 18th Air Force, headquartered at Scott AFB, is charged with tasking and executing all air mobility

missions. It shapes the battlespace by synchronizing forecast and emerging requirements, crisis response efforts, and the no-fail nuclear mission to create a consistent battle rhythm and set the theater for execution. Eighteenth Air Force manages the global air mobility enterprise through the 618th Air Operations Center, 11 wings and two stand-alone groups.

The 618th AOC, located at Scott AFB, serves as the organization's air operations hub, planning and directing tanker and transport aircraft operations around the world.

USAF Expeditionary Center

The U.S. Air Force Expeditionary Center is the Air Force's Center of Excellence for advanced mobility and combat support training and education. Located at Joint Base McGuire-Dix-Lakehurst, New Jersey, the center also has direct oversight for en route and installation support, contingency response and partner capacity-building mission sets within the global mobility enterprise.

The center provides administrative control for six wings and two groups within Air Mobility Command, to include the 87th Air Base Wing and the 621 Contingency Response Wing at Joint Base McGuire-Dix-Lakehurst, the 319th Air Base Wing at Grand Forks AFB the 515 Air Mobility Operations Wing at Joint Base Pearl Harbor-Hickam; the 521 Air Mobility Operations Wing at Ramstein AFB; the 628th Air Base Wing at Joint Base Charleston; the 43rd Airlift Group at Pope Field; and 627th Air Base Group at Joint Base Lewis-McChord;

Both the 87th Air Base Wing and the 628th Air Base Wing are Air Force-lead organizations on joint bases that host AMC flying units, along with other Department of Defense partners. The 43rd Airlift Wing and 627th Air Base Group enjoy unique partnerships with the U.S. Army, while the 319th Air Base Wing supports the Department of Homeland Defense and Air Combat Command emerging missions.

The 515th and 521st AMOWs, along with the 621st CRW, are responsible for en route and expeditionary combat support, contingency response and partner capacity building mission sets around the globe. The reorganization of these units enables them to effectively partner with the center from training and exercises all the way through execution.

The two Contingency Response Groups 821st CRG located at Travis AFB and 621st CRG, provide the core cadre of expeditionary command and control, airlift and air refueling operations, aerial port, and aircraft maintenance personnel for deployment worldwide as mobility control teams and airfield assessment teams. These teams rapidly survey, assess and establish contingency air base lodgments and expand existing AMC support infrastructure worldwide. Each CRG has a two Contingency Response Squadrons and a Contingency Response Support Squadron.

The Contingency Response Support Squadrons deploy contingency response forces to locations where

the en route support for AMC's global air mobility operations is insufficient or nonexistent. In garrison, each CRSS manages and maintains the wing's assigned equipment as well as facilitating training for and equipping 621st CRW assigned personnel.

The 621st Air Mobility Advisory Group contains the 571st and 818th Mobility Support Advisory Squadrons, 321st and 621st Air Mobility Operations Squadrons and the 621st Mobility Support Operations Squadron.

Each MSAS unit focuses on the mutual exchange of air mobility concepts and procedures with partner nations in the development of their air mobility systems--the 818th MSAS is primarily focused on operations in Africa, while the 571st MSAS is trained to operate in Central and South America.

The 321st and 621st and 321st Air Mobility Operations Squadrons provide operational, level-of-war planning and execution of theater airlift, air refueling, and aeromedical evacuation missions. The squadrons accomplish this role by augmenting existing Air Mobility Divisions or Air and Space Operations Centers within the theater, or by standing up an independent AMD in austere environments. While performing AMD duties, AMOS personnel synchronize scheduling of all theater-owned air frames and aircrew to meet the theater commanders' mobility objectives.

The 621st Mobility Support Operations Squadron is comprised of Air Mobility Liaison Officers who provide air mobility expertise to their aligned Army/Marine brigade and division and corps level commanders. Entirely dispersed across different 20 locations and 18 time zones, AMLOs of the 621st MSOS are embedded to support any exercise, deployment or contingency tasked to their Army and Marine Corps hosts. AMLO operating locations include: Fort Drum, New York; Fort Bragg and Camp Lejeune, North Carolina; Fort Stewart and Fort Benning, Georgia; Fort Campbell and Fort Knox, Kentucky; Fort Carson, Colorad; Fort Riley, Kansas; Joint Base Lewis-McChord; Fort Hood, Texas; Fort Bliss, Texas; Fort Polk, Louisianna.; Wiesbaden and Kaiserslautern, Germany; Vicenza, Italy; Okinawa, Japan, and the Republic of Korea.

History

A new era in air power history began on June 1, 1992, when the Air Force reorganized by inactivating MAC and the Strategic Air Command (SAC) and formed from the elements of these two historic organizations the Air Mobility Command (AMC). AMC melded a worldwide airlift system with a tanker force that had been freed from its strategic commitments by the collapse of the Soviet Union. While AMC does not possess all the Air Force’s mobility aircraft, it is the lead command for airlift, air refueling, and aeromedical evacuation, and provides operational guidance to other commands.

The men and women of AMC successfully demonstrated their skills in both peace and war in the 1990s. On four occasions from November 1997 through December 1998, air mobility aircrews deployed additional troops and equipment to Southwest Asia in response to threats from Iraq’s dictator Saddam Hussein. In 1999, AMC’s Airmen helped end Serbian repression in the province of Kosovo.

Since the years following the September 11, 2001 terrorist attacks on America, AMC has completed more than 875,000 airlift sorties supporting overseas contingency operations such as Iraqi Freedom, Enduring Freedom, Odyssey Dawn, Inherent Resolve and Freedom Sentinel. These organic aircraft and contracted commercial aircraft operating in the AMC system transported more than 25 million passengers and 15 million tons of cargo. During this same period, KC-135 and KC-10 air refuelers transferred approximately 19.78 billion pounds of fuel (2.95 billion gallons) while aeromedical evacuation crews conducted 50,000 sorties resulting in 235,000 patient movements. The command's aircrews have also responded to humanitarian needs in the former Soviet Union, Turkey, Honduras, Haiti and Afghanistan.
Also see the Rapid Global Mobility Vision.

From the time the inactive SAC was redesignated and activated as the Air Force Global Strike Command (AFGSC) in 2009, the Air Force Historical Research Agency had periodically proposed consolidating AMC with MAC and Air Combat Command (ACC) with the Tactical Air Command (TAC). This consolidation would justify AMC's use of the MAC emblem and would give AMC an additional 51 years of honorable service. It would also align three of the Air Force's current operational commands (AMC, AFGSC and ACC) with three of its traditional operational commands (MAC, SAC, and TAC).

On October 1, 2016, upon approval of the Secretary of the Air Force, the Air Force consolidated AMC with MAC. This action allowed AMC members to trace the organization's genealogy back to 1941, instead of beginning in 1992. AMC also now shares in the honors and campaign streamers earned by MAC. All of this does not lesson the creation of AMC in 1992 which still highlights the merger of AMC's airlift and aeromedical evacuation with SAC's air refueling force creating the strong mobility team that has been so successful in meeting today's global peacetime, contingency, and humanitarian missions.

http://www.amc.af.mil/News/Article-Display/Article/785752/amc-commander-releases-rapid-global-mobility-vision

PHOTO DETAILS / DOWNLOAD HI-RES

Air Mobility Command (AMC) shield (color), U.S. Air Force graphic. In accordance with Chapter 3 of AFI 84-105, commercial reproduction of this emblem is NOT permitted without the permission of the proponent organizational/unit commander.

60th Air Mobility Wing

Published February 12, 2016

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The 60th Air Mobility Wing is the largest air mobility organization in terms of personnel in the Air Force with a versatile all-jet fleet of C-5M Super Galaxy and C-17 Globemaster III cargo aircraft and KC-10 Extender refueling aircraft. As the host unit of Travis Air Force Base, Calif., the wing controls more than $11 billion in total resources, including 6,455 acres, 403 buildings and about 1,320 military family housing units. It handles more cargo and passengers than any other military air terminal in the United States. Travis is the West Coast terminal for aeromedical evacuation aircraft returning sick or injured patients from the Pacific area.

Part of the Air Mobility Command, the 60th AMW is responsible for strategic airlift and air refueling missions circling the globe. The unit's primary roles are to provide rapid, reliable airlift of American fighting forces anywhere on earth in support of national objectives and to extend the reach of American and allied air power through mid-air refueling. Wing activity is primarily focused in the Pacific and Indian Ocean area, including Alaska and Antarctica. However, the 60th AMW crews can fly support missions anywhere in the world to fulfill its motto of being "America's First Choice" for providing true Global Reach.

The wing maintains a work force of approximately 7,063 active-duty military and 3,268 civilian personnel, including personnel from the Department of Defense, Department of Homeland Security and Department of Veterans Affairs. In addition, more than 3,078 reservists assigned to the associate 349th AMW combine with their active duty and civilian counterparts to form a fully integrated total force team. The massive Travis work force makes an economic impact in the local community of more than $4.5 million daily.

The 60th AMW is organized into four groups: Operations, Maintenance, Mission Support and Medical. Additionally, the wing commander has the support of 17 staff agencies.

The 60th AMW staff is made up from a variety of functions. These functions include command section administration, legal, plans and programs, safety, command and control, chapel, public affairs, equal opportunity office, protocol, manpower and quality, treaty compliance, history and the museum.

The 60th Operations Group is responsible for four flying squadrons -- the 21st Airlift Squadron which fly the C-17 Globemaster III and 22nd Airlift Squadron which fly the C-5M Super Galaxy, and the 6th and 9th Refueling Squadrons which fly the KC-10 Extender. The 60th Operations Support Squadron handles such functions as weather, airfield management, training and scheduling.

The 60th Maintenance Group meets the responsibility of aircraft maintenance with the 60th

Maintenance Squadron, 60th Aircraft Maintenance Squadron, 660th Aircraft Maintenance Squadron, 860th Aircraft Maintenance Squadron and 60th Aerial Port Squadron. These five squadrons are comprised of over 2,200 military and civilian personnel.

The 60th Mission Support Group leads six units and is comprised of more than 1700 civilian and military personnel. It includes the 60th Civil Engineer Squadron, 60th Logistics Readiness Squadron, 60th Contracting Squadron, 60th Communications Squadron, 60th Security Forces Squadron, the 60th Force Support Squadron, and the 60th Logistics Readiness Squadron. They are responsible for mission readiness, aerial port operations and the day-to-day activities which help Travis run like its own city.

The 60th Medical Group manages DGMC and is composed of seven squadrons: the 60th Aerospace Medicine Squadron, 60th Dental Squadron, 60th Diagnostics and Therapeutics Squadron, 60th Inpatient Squadron, 60th Medical Operations Squadron, 60th Medical Support Squadron and 60th Surgical Operations Squadron.

David Grant USAF Medical Center is a state-of-the-art medical facility that was completed in 1988. The 60th Medical Group at David Grant U.S. Air Force Medical Center is at the forefront of military and regional healthcare facilities. Named after Maj. Gen. (Dr.) David Norvell Walker Grant, the first air surgeon of the U.S. Army Air Corps and U.S. Army Air Forces during World War II, DGMC is the flagship of 75 military treatment facilities in the Air Force Medical Service. It provides a full spectrum of care to a prime service area of more than 130,000 TRICARE eligible patients in the immediate San Francisco-Sacramento vicinity and 500,000 Department of Veterans Affairs Northern California Health Care System patients, covering more than 40,000 square miles and 17 counties. A staff of more than 2,400 military and civilian personnel work at David Grant USAF Medical Center.

PHOTO DETAILS / DOWNLOAD HI-RES

60th Air Mobility Wing

9th Air Refueling Squadron

Published July 25, 2006

PRINT | E-MAIL

The 9th Air Refueling Squadron mobilizes and deploys 12 KC-10 aircraft with over 140 combat-ready personnel and equipment to worldwide forward operating locations. Ensures global reach for America by generating 24-hour-a-day strategic airlift and aerial-refueling sorties supporting U.S. and allied forces during contingency operations. Provides training for 24 aircrews tasked to support and sustain Joint Chiefs of Staff directed missions. Executes an 8,000+ flying hour program and $580,000 budget. The world's "peerless" air refuelers off-loaded more than 70 million pounds of fuel on 1,420+ sorties last year flying strategic airlift for the Travis Team effort and delivery of over 64,000 tons of critical cargo and passengers.

HISTORY

The 9th Air Refueling Squadron was initially activated on Aug. 1, 1951, under the 9th Bombardment Wing at Travis AFB, Calif. However, the squadron actually flew its KB-29 tanker aircraft out of Davis-Monthan AFB, Ariz., until 1953. The squadron then relocated to Mountain Home AFB, Idaho. On Sept. 15, 1954, the squadron received its first KC-97G air refueling tankers. During this period in the 1950's, the 9th helped thrust the Air Force and Strategic Air Command (SAC) into the early stages of global air capability. Consequently, the 9th's history included numerous deployments to such far-flung locations as French Morocco and Guam.

Following a deactivation period from 1965 to 1970, the 9th flew the KC-135Q all jet tanker at Beale AFB, Calif. It was one of only two squadrons to refuel the record-breaking Lockheed SR-71 Blackbird. With its KC-135s, the 9th participated in several special operations involving flights to Southeast Asia. The KC-135 was the most capable tanker aircraft in the world for over 20 years until the development of the McDonnell-Douglas KC-10A Extender.

In order to transition to the new tanker-cargo aircraft, the 9th went through a short deactivation period early in 1982. The 9th relocated to March AFB, Calif., and was reactivated on Aug. 1, 1982. Since that time, the 9th was called upon to protect our national interests in Operations ARID FARMER, EL DORADO CANYON, GIANT SCALE, JUST CAUSE, DESERT SHIELD, DESERT STORM, and PROUD RETURN. During SOUTHERN WATCH, the 9th has been vital to enforcing the no-fly zone over Iraq. By escorting and refueling Marine aircraft to Aviano AB, Italy, the 9th has assisted in Operation DENY FLIGHT. The 9th demonstrated another Air Force mission, humanitarian relief, by delivering desperately needed food and supplies to Somalia in Operation RESTORE HOPE.

With its move to Travis AFB in July 1994, the 9th continues to support its mission of "GLOBAL REACH-GLOBAL POWER". In September 1996, 9th aircrews were called upon to provide fuel to the B-52s supporting DESERT STRIKE, the cruise missile attack on Iraq. Recently, the 9th mobilized in

support of Operations PHOENIX SCORPION I II, III, & IV, the rapid movement of forces into Southwest Asia. In 1997, the 9th orchestrated the first sixteen-ship mixed-cell refueling formation in Air Mobility Command's history for Operation CENTRAZ BAT, the longest airdrop mission in aviation history, projecting eight C-17s delivering 540 paratroopers and equipment nearly 8,000 miles. In 1998, the 9th supported numerous PHOENIX BANNER (presidential support) missions while celebrating the 50th anniversary of the Berlin Airlift, by recreating the German flyby. The year 1999 past as 9th aircrews led the first ever "air power" dominated victory in Operation ALLIED FORCE in the former Yugoslavia and continued and simultaneous operations in Operations DESERT FOX in over Iraq.

The 9th ARS patch logo, "UNIVERSAL," is truly appropriate for the squadron, as is its motto, "Proud To Serve" represents a heritage rich in total involvement and huge successes!

Mission, Lineage, and Honors History

of the

660th AIRCRAFT MAINTENANCE SQUADRON (AMC)

MISSION DESCRIPTION
Provide combat-ready maintenance personnel and organizational support to inspect, service, and repair all transient and assigned KC-10 aircraft, 46% of DoD's inventory. Generate aerial refueling and strategic airlift to support four aerial refueling squadrons, in addition to all AMC missions. Maintain aircraft, personnel and equipment for worldwide deployment supporting the largest wing in AMC.

MISSION STATEMENT
Build Leaders and Expert Maintainers who Maintain and Generate the KC-10 anywhere in the world.

LINEAGE
Constituted 660th Air Materiel Squadron on 22 Nov 1944.
Activated on 15 Apr 1945.
Inactivated on 21 Dec 1945.
Disbanded on 8 Oct 1948.
Reconstituted, redesignated 660th Aircraft Generation Squadron, and activated, on 1 Apr 1995.
Redesignated 660th Aircraft Maintenance Squadron on 1 Oct 02.

HONORS:

SERVICE STREAMERS. World War II European-African-Middle Eastern Theater
CAMPAIGN STREAMERS. None.
DECORATIONS. Air Force Outstanding Unit Awards: [1 Apr 1995]-31 Jul 1995; 1 Aug 1995-30 Jul 1997; 1 Jul 1997-30 Jun 1999; 1 Jul 1999-30 Jun 2000; 1 Jul 2000-30 Jun 2001; 1 Jul 2001-30 Jun 2003; 1 Jul 2003-30 Jun 2004; 1 Jul 2004-30 Jul 2005; 1 Jul 2007-30 Jun 2009; 1 Jul 2009-30 Jun 2010; 1 Jul 2010-30 Jun 2012; 1 Jul 2012-30 Jun 2013; 1 Jul 2013-30 Jun 2014; 1 Jul 2014-30 Jun 2015.

ASSIGNMENTS:
410th Air Service Group, 15 Apr-21 Dec 1945.
60th Logistics Group, 1 Apr 1995.
60th Maintenance Group, 1 Oct 02 – Present.

STATIONS:
Bury St Edmunds, England, 15 Apr 1945.
Raydon, England, 20 Oct-c. 12 Dec 1945.
Camp Kilmer, NJ, 20-21 Dec 1945.
Travis AFB, CA, 1 Apr 1995 – Present.

EMBLEM: Approved on 17 Jan 1996.

DATE PREPARED: 2 May 1998. [AMC/HO updated Decorations on 24 Mar 2016.]

PREPARED BY: Judy G. Endicott

From:
To:
Subject:
Date:

Sir,

Below is the 60 MXS "mission statement"

"Provides organizational and field-level maintenance, repair, and manufacture capability for effective on- and off-equipment maintenance, inspection, and refurbishment of C-5, KC-10 and C-17 aircraft. Inspects, services, and overhauls aerospace ground equipment worth over $8 million. Manages and stores all base munitions. Provides mission capable aircraft in direct support of AMC's global mission."

Very Respectfully,

60 AMXS/ Asst AMU OIC
Travis AFB, CA

KC-10 Extender

Published October 01, 2003

PRINT | E-MAIL

Mission
The KC-10 Extender is an Air Mobility Command advanced tanker and cargo aircraft designed to provide increased global mobility for U.S. armed forces. Although the KC-l0's primary mission is aerial refueling, it can combine the tasks of a tanker and cargo aircraft by refueling fighters and simultaneously carry the fighter support personnel and equipment on overseas deployments. The KC-10 is also capable of transporting litter and ambulatory patients using patient support pallets during aeromedical evacuations.

Features
The KC-10 can transport up to 75 people and nearly 170,000 pounds (76,560 kilograms) of cargo a distance of about 4,400 miles (7,040 kilometers) unrefueled.

In addition to the three main DC-10 wing fuel tanks, the KC-10 has three large fuel tanks under the cargo floor, one under the forward lower cargo compartment, one in the center wing area and one under the rear compartment. Combined, the capacity of the six tanks carries more than 356,000 pounds (160,200 kilograms) of fuel - almost twice as much as the KC-135 Stratotanker.

Using either an advanced aerial refueling boom, or a hose and drogue centerline refueling system, the KC-10 can refuel a wide variety of U.S. and allied military aircraft within the same mission. The aircraft is equipped with lighting for night operations.

The KC-10's boom operator controls refueling operations through a digital, fly-by wire system. Sitting in the rear of the aircraft, the operator can see the receiver aircraft through a wide window. During boom refueling operations, fuel is transferred to the receiver at a maximum rate of 1,100 gallons (4,180 liters) per minute; the hose and drogue refueling maximum rate is 470 gallons (1,786 liters) per minute. The automatic load alleviation and independent disconnect systems greatly enhance safety and facilitate air refueling. The KC-10 can be air-refueled by a KC-135 or another KC-10A to increase its delivery range.

The large cargo-loading door can accept most air forces' fighter unit support equipment. Powered rollers and winches inside the cargo compartment permit moving heavy loads. The cargo compartment can accommodate loads ranging from 27 pallets to a mix of 17 pallets and 75 passengers.

Background
A modified Boeing Company DC-10, the KC-10A entered service in 1981. Although it retains 88 percent of systems commonality with the DC-10, it has additional systems and equipment necessary for

its Air Force mission. These additions include military avionics; aerial refueling boom and aerial refueling hose and drogue; seated aerial refueling operator station; and aerial refueling receptacle and satellite communications.

Twenty KC-10s were modified to add wing-mounted pods further enhancing their aerial refueling capabilities. Ongoing modifications include the addition of communications, navigation and surveillance equipment to meet future civil air traffic control needs, and the incorporation of service bulletins to maintain Federal Aviation Administration certification.

The KC-10A is operated by the 305th Air Mobility Wing at Joint Base McGuire-Dix-Lakehurst, N.J.; and the 60th Air Mobility Wing, Travis Air Force Base, Calif. Air Force Reserve Associate units are assigned to the 349th Air Mobility Wing at Travis, and the 514th Air Mobility Wing at JB McGuire-Dix-Lakehurst.

During operations Desert Shield and Desert Storm in 1991, the KC-10 fleet provided in-flight refueling to aircraft from the U.S. armed forces as well as those of other coalition forces. In the early stages of Operation Desert Shield, in-flight refueling was key to the rapid airlift of materiel and forces. In addition to refueling airlift aircraft, the KC-10, along with the smaller KC-135, moved thousands of tons of cargo and thousands of troops in support of the massive Persian Gulf buildup. The KC-10 and the KC-135 conducted about 51,700 separate refueling operations and delivered 125 million gallons (475 million liters) of fuel without missing a single scheduled rendezvous.

In March 1999, a NATO air campaign, Operation Allied Force, was launched against the government of Yugoslavia. The mobility portion of the operation began in February and was heavily tanker dependent. By early May 1999, some 150 KC-10s and KC-135s deployed to Europe where they refueled bombers, fighters and support aircraft engaged in the conflict. The KC-10 flew 409 missions throughout the entire Allied Force campaign and continued support operations in Kosovo.

Since Sept. 11, 2001, KC-10s have played a prominent role. The KC-10 has flown more than 350 missions guarding U.S. skies as a part of Operation Noble Eagle. During operations Enduring Freedom and Iraqi Freedom, KC-10s flew more than 1,390 missions delivering critical air refueling support to numerous joint and coalition receiver aircraft.

General Characteristics
Primary Function: Aerial tanker and transport
Contractor: The Boeing Company
Power Plant: Three General Electric CF6-50C2 turbofans
Thrust: 52,500 pounds, each engine
Length: 181 feet, 7 inches (54.4 meters)
Height: 58 feet, 1 inch (17.4 meters)
Wingspan: 165 feet, 4.5 inches (50 meters)
Speed: 619 mph (Mach 0.825)

Ceiling: 42,000 feet (12,727 meters)
Maximum Takeoff Weight: 590,000 pounds (265,500 kilograms)
Range: 4,400 miles (3,800 nautical miles) with cargo; 11,500 miles (10,000 nautical miles) without cargo
Maximum Cargo Payload: 170,000 pounds (76,560 kilograms)
Pallet Positions: 27
Maximum Fuel Load: 356,000 pounds (160,200 kilograms)
Crew: Four (pilot, co-pilot, flight engineer and boom operator) Certain missions may require additional crew members. In aeromedical evacuation missions, a basic crew of five (two flight nurses and three medical technicians) is added. Medical crew may be altered as required.
Unit Cost: $88.4 million (fiscal 1998 constant dollars)
Date Deployed: March 1981
Inventory: Active force, 59; Air National Guard, 0; Air Force Reserve, 0

(Current as of May 2014)

PHOTO DETAILS / DOWNLOAD HI-RES

PHOTO DETAILS / DOWNLOAD HI-RES

OPERATION ENDURING FREEDOM -- A KC-10 from McGuire AFB, N.J. resumes its flight pattern after receiving fuel from a KC-135 Stratotanker over Afghanistan March 17. The KC-135 crew, from the 931st Air Refueling Group, McConnell Air Force Base, Kan., is currently assigned to the 405th Air Expeditionary Wing, in support of Operation Enduring Freedom. (U.S. Air Force photo by Staff Sgt. Cherie A. Thurlby)

SOUTHWEST ASIA (AFPN) -- A KC-10 Extender rests on a parking ramp Jan. 25 waiting for its next refueling mission to support coalition aircraft supporting Operation Enduring Freedom, Operation Iraqi Freedom and the Combined Joint Task Force-Horn of Africa. (U.S. Air Force photo by Staff Sgt. Christopher J. Matthews)

PHOTO DETAILS / DOWNLOAD HI-RES

KC-10 Extenders and C-17 Globemaster IIIs from McGuire Air Force Base, N.J., taxi down the flightline during an emergency response exercise elephant walk. This is the first time C-17s and KC-10s have been paired in an exercise. Sixteen aircraft launched from McGuire on Friday, June 30, as part of the exercise. (U.S. Air Force photo/Brian Dyjak)

PHOTO DETAILS / DOWNLOAD HI-RES

MCGUIRE AIR FORCE BASE, N.J. (AFPN) -- A KC-10A Extender aircraft parks on the flightline at sunset. The KC-10 is an advanced tanker and cargo aircraft designed to provide increased global mobility for U.S. armed forces. It can transport up to 75 people and nearly 170,000 pounds of cargo. It has three large fuel tanks that carry more than 356,000 pounds of fuel. (U.S. Air Force photo by Denise Gould)

ROYAL AIR FORCE MIDENHALL, England -- A KC-10 Extender from Travis Air Force Base, Calif., takes off on a mission. The 100th Air Refueling Wing here provides operational support, and the base serves as a transiting point for personnel, aircraft and equipment destined for Europe, Africa and Southwest Asia. (U.S. Air Force photo by Airman 1st Class Meghan Geis)

INTENTIONALLY

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TAB DD

MAINTENANCE REPORT, RECORDS AND DATA NOT INCLUDED IN TAB D

DD1. KC-10A Aircraft 83-0080 Screen 8040 for Closed Jobs with 46G WUC DD-2

DD2. KC-10A Aircraft 83-0080 781As Dated 20161005 to 20161006 ..... DD-6

DD3. KC-10A Aircraft 83-0080 781As Date 20161006 to 20161009..... DD-29

DD4. KC-10A Aircraft 83-0080 October Flight Schedule..... DD-65

DD5. KC-10A Maintenance and Utilization Schedule for October DD-66

DD6. Personal Evaluation on Boom Installation DD-67

DD7. Personal Evaluation on Gimbal Assembly Installation DD-68

DD8. KC-10A Aircraft 83-0080 Debrief Packet 11 Oct 16 ..... DD-69

DD9. KC-10A Aircraft 83-0080 Debrief Packet 12 Oct 16 ..... DD-78

DD10. KC-10A Aircraft 83-0080 Debrief Packet 30 Oct 16 ..... DD-83

DD11. KC-10A Blank Debrief Form DD-96

DD12. KC-10A Aircraft 83-0080 Screen 9050 Open Discrepancy 162861258 ..... DD-97

DD13. KC-10A Aircraft 83-0080 Screen 9050 Open Discrepancy 163031259 ..... DD-98

DD14. Air Mobility Command Programming Message xx May 15 ..... DD-99

DD15. KC-10A Fleet-Wide Boom Part Replacement Listing DD-107

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8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  1
********************************************************************************

  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
161761263      XDAT/16176/2051     XDAT/16277/0337 QH1AE  D              99  /
A2ASE-BOOM VALVE FLOW BAR INOP; INDICATION ONLY

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2ASE 16277  B 46GF9       G  080                      01        2      1.0
CA: R2 BULB O/C/G
TO REF: 2-33
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162571319 001  XDAT/16278/1129     XDAT/16278/1146 QH1AP  F      74307       X
A2ASP-BOOM LOWERED TO FOM

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2ASP 16278  B 46GAN       X  799                      01        4       .8
CA: BOOM RAISED
TO REF: 48CL
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8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  2
********************************************************************************

  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162641423 001  PTFL/16264/0637     PTFL/16264/0722 QH900  F      73421       X
A2DEP-BOOM LWRD FOR BPO

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2DEP 16264  Y 46GAN       X  799                      01        1       .2
CA: BOOM RAISED
TO REF: 2-28CL-1 SEC III PG 3-1 - 3-3
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162641423 003  PTFL/16264/0638     PTFL/16264/0721 QH900  F      73421       X
A2DEP-BOOM DRIVE LOCK INST

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2DEP 16264  Y 46GA9       X  799                      01        1       .2
CA: LOCK REM
TO REF: 2-28-70-00 PG 208 PARA 4B
--------------------------------------------------------------------------------

8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  3
********************************************************************************

  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162775404      XDAT/16267/1155     XDAT/16277/1650 QH1AP  F      74307       X
A2ASP-BOOM LOWERED FOR INSP

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2ASP 16277  B 46GAN       S  800                      01        3      3.6
CA: BOOM RAISED
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TO REF: 2-28CL-1
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162800001      XDAT/16279/1858     XDAT/16280/1356 RH1AM  Q      46811       X
A2ACC-BOOM LOWERD FOR HORIZ STAB INSP/2EA CB'S COLLARD1EA WT'S INSTALLED IAW 1C
-10(K)A-28CL-1 PG 2-1 PARA C NOTE:DON'T OPER BOOM HOIST HANDLE/DON'T XMIT HF RA
*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   A2ACC 16280  S 46GAN       S  800                      01        3      3.0
CA: BOOM RAISED C/B REMOVED 1 EA TAG REMOVED
TO REF: IAW 1C-10KA-2-28CL SECT 3 PG 3
--------------------------------------------------------------------------------

8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  4
********************************************************************************

  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162851256      XDAT/16285/1502     XDAT/16285/1715 QE810  D              999 /
HYDR -BOOM ROLL GAUGE SHOWS 8 DEGREES RIGHT WHEN BOOM IS CENTERED AT 0 DEGREES

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16285  B 46GB0       K  127                      01        4      1.6
CA: ADJUSTED DRVT. OPS CHECK GOOD
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162861259      XDAT/16286/0058     XDAT/16288/2340 QE810  D              999 /
HYDR -BOOM WAS ABOUT 4-5 DEG TO THE LEFT AND ROLL GAUGE WAS SHOWING 11-12 DEG T
O THE RIGHT WHEN LOWERED
*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16287  B 46GAN       R  135                      01        5     45.0
CA: BOOM GIMBAL R2 OPS CHECK GOOD
TO REF: 2-28
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM

8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  5
********************************************************************************

162861259 003  XDAT/16286/0519     XDAT/16287/1912 QE810  F      67210       X
HYDR -BOOM ROLL DRVT REMOVED TO FOM

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16287  B 46GBQ       S  800                      01        4     24.0
CA: DRVT REINSTALLED OPS CHECK GOOD
TO REF: 2-28
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162861259 008  XDAT/16286/1405     XDAT/16287/1913 QE810  F      67210       X
HYDR -BOOM REMOVED TO FOM

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16287  B 46GAN       S  800                      01        5     40.0
CA: BOOM INSTALLED LEAK AND OPS CHECK GOOD
TO REF: 2-28
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
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8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  6
********************************************************************************

162861259 016  XDAT/16286/1412     XDAT/16287/1916 QE810  F      67210       X
HYDR -BOOM FUEL FLEX LINE REMOVED TO FOM

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16287  B 46GAB       S  800                      01        4      8.0
CA: BOOM FUEL FLEW LINE REINSTALLED
TO REF: 2-28
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
162861259 018  XDAT/16286/1413     XDAT/16287/1918 QE810  F      67210       X
HYDR -BOOM GIMBLE REMOVED FOR R2

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16287  B 46GAF       R  135                      01        5     45.0
CA: BOOM GIMBAL R2. OPS CHECK GOOD
TO REF: 2-28
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM

8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  7
********************************************************************************

16288W202      XDAT/16288/0551     XDAT/16289/1137 Q9925  Q                  X
WASH -AR BOOM LOWERED AND SUSPENDED ON THE LONG CABLE FOR WASH. NOTE: WARNING T
AG INSTALLED ON BOOM HOIST   HANDLE.
*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
16289W202      XDAT/16288/1446     XDAT/16289/1139 Q9925  3                  X
WASH -AR BOOM LOWERED AND SUSPENDED ON THE LONG CABLE FOR WASH. NOTE: WARNING T
AG INSTALLED ON BOOM HOIST   HANDLE.
*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
16291A078      XDAT/16291/1534     XDAT/16291/1657 QE730  M              E   /
MTECH-2EA STUCK SCREWS ON THE BOOM GIMBLE PNL ACFT RT

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   MTECH 16291  P 46GAN       G  135                      01        2      2.0
CA: REMOVED 2 EA S/S AS REQ.
TO REF: 1-1A-8

8070 CLSD WUC-46G  JOBS A/C 83000080 FROM 16263 TO 17014 12JAN17/1247CDB PG  8
********************************************************************************

--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
16291A081      XDAT/16291/1552     XDAT/16292/1204 QE241  M              E   /
ISO2 -ACFT RH AND LH BOOM GIMBAL HOSES REQ F4 TAPE

*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   ISO2  16292  E 46GAN       R  020                           2      2.0
```

```
CA: REPLACED F4 TAPE
--------------------------------------------------------------------------------
  JCN      OPN BASE/DATE /TIME CLS BASE/DATE /TIME W/C   W/D S-R INSP ZONE SYM
163031259      XDAT/16304/1819     XDAT/16305/0450 QE810  D                   /
HYDR -DURING BOOM LOWERING, BOOM FLEW TO 5 DEG W/NO INPUT BY THE OPERATOR. SMAL
L CORRECTIONS WERE MADE TO ALIGN BOOM. THE BOOM THEN FLEW TO 32 DEG OR GREATER.
*** W/C  DATE  TM WUC/REFDES A/T HM   MAN NR   USERID   UNITS  CREW SIZE  HOURS

   HYDR  16304  B 46GB0       X  799                      01        3     11.7
CA: LOWERED BOOM. VISUAL CHECK FLT CNTRLS. RAN ARB TESTER, RAN PREFLIGHT
--------------------------------------------------------------------------------


**************************** END OF MESSAGE   8070 ******* TOTAL JOBS:00017 ***
```

660th AMXS AFTO 781 SERIES TRANSCRIBED FORMS REVIEW

AIRCRAFT SERIAL NUMBER: 3080

781 FORMS DATE FROM: 20161005 **TO:** 20161006

INDIVIDUAL TRANSCRIBING FORMS

NAME: _____ RANK: WG-10 EMPLOYEE #: _____

DATE COMPLETED: _____

1. INDIVIDUAL PULLING THE 781 SERIES FORMS IS **ULTIMATELY RESPONSIBLE** THAT ALL BLOCKS ON THE PULLED FORMS IS PROPERLY FILLED OUT IAW 00-20-01. THIS INCLUDES SOME OF THE FOLLOWING:

   A. FROM and TO DATES ON ALL FORMS.
   B. PAGE NUMBERS ARE CORRECT.
   C. SERVICING DATA and ENGINE TIMES ON 781H AND 781J TRANSFERRED CORRECTLY.
   D. DATES, JOB CONTROL NUMBERS, WHEN DISCOVERED CODES, and WORK UNIT CODES BLOCKS ARE FILLED OUT.
   E. OPEN WRITE-UPS TRANSCRIBED CORRECTLY.
   F. ANNOTATION OF ANY UPDATED ITEMS ON 781A TRANSCRIBED TO NEW 781A OR NEW 781K.

2. INDIVIDUAL WILL INSURE ALL SIGNED OFF WRITE-UPS IN 781A's ARE SIGNED OFF CORRECTLY AND CLOSED OUT IN G081 USING SCREEN 8035.

3. ATTACH THIS FORM IN FRONT OF PULLED 781 FORMS

4. LEAD TECH, SECTION CHIEF OR PRODUCTION & DEBRIEF WILL REVIEW AIRCRAFT FORMS PRIOR TO FILING AND TURNING IN TO PLANS AND SCHEDULING.

Forms Discrepancies Found		
Discrepancy	Page/Item #	Initials

LEAD TECH, SECTION CHIEF, OR PRODUCTION:

NAME: _____ RANK: SSgt EMPLOYEE #: _____

DATE COMPLETED: 20161013

DEBRIEF (Reviewed and filed):

NAME: _____ RANK: _____ PLEASE

1. FROM	2. TO	3. MDS	4. SERIAL NUMBER
20161005	20161005	KC010A	83000080

5. Certification of PR, PR/BPO, PR/TH, TH, BPO, QT, ICT, WAI, PLI

TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME	TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME
		20161001	0900Z				
		20161005	0700Z				

6. STATUS DATA

SEE AFTO FORMS 781A AND 781K FOR EXPLANATION OF THE STATUS SYMBOLS

	STATUS TODAY		BOX NO	EXCEPTIONAL RELEASE (Enter Box No)	STATUS TODAY		BOX NO	EXCEPTIONAL RELEASE (Enter Box No)
1	X	13			25	37		
2		14			26	38		
3		15			27	39		
4		16			28	40		
5		17			29	41		
6		18			30	42		
7		19			31	43		
8		20			32	44		
9		21			33	45		
10		22			34	46		
11		23			35	47		
12		24			36	48		

7. AIRFRAME TIME	8. LANDINGS FULL STOP	8. LANDINGS TOTAL	9. CART/JFS STARTS NO	9. CART/JFS STARTS ENG	9. CART/JFS STARTS NO	9. CART/JFS STARTS ENG	10. ENGINE CYCLE DOCUMENTATION NO 1 ENG	NO 2 ENG	NO 3 ENG	NO 4 ENG	NO 5 ENG	NO 6 ENG	NO 7 ENG	NO 8 ENG
PREVIOUS 29457.5	5792	15376												
FLIGHTS 1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
29,457.5 TOTAL	5792	15376					0	0	0					

AFTO FORM 781H, 20100915 PREVIOUS EDITION IS OBSOLETE

AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE

DATE FROM: 2016/10/05 TO 20161006	MDS: KC010A	SERIAL NUMBER: 83000080	NOTES PAGE 1 of 1

NOTE NUMBER		NOTE VERBIAGE
0001	-	--IAW AFI 11-2KC-10V3 ITEM 33, T.O. 1C-10KA-1-3 (FAULT REPORTING) REQUIRED ON EVERY AIRCRAFT. THIS T.O . IS NOT IN THE USAF T.O. INVENTORY. AWT 55-10 UP
0002	-	-*****AIRCRAFT 83000080 SUPPORT GENERAL JOB**********N UMBER: 0-2-0-8**********
0011	-	-NOTE: SUPPORT GENERAL (0027)
0012	-	-NOTE: PRE-LAUNCH (0750-0759)
0013	-	-NOTE: PRE-FLIGHT (0530-0549)
0014	-	-NOTE: THRUFLIGHT (0550-0569)
0015	-	-NOTE: BASIC POSTFLIGHT (0570-0599)
0016	-	-NOTE: #2 ENGINE ANTI ICE DISAGREE LIGHT SLOW TO TURN OFF WHEN SIWTCHED TO OFF POSITION. SYSTEMS OPERAT E NORMAL.
0017	-	-DENT IN #3 ENG TAILCONE DENT WITHIN LIMITS

DATE FROM: 2016/10/05 TO 20161006 | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF 12 PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	160775749	2016/03/17	SEE JCN 160901257	☑	☐	

WUC/REF DESIGNATOR: 62C00 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ASC-RIU #1 AND #2 SHOWS DEGRADED ON CDU *REQS 136294

59, 13629984, 13629986* SEALANT & SATCOM HARNESS (2) O

/O

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO | CORRECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA60959005	BQ	PR1440B2	SEALANT	0
J001CA60959027	BQ	11A-01-8010-05	SATCOM HARNESS	1
J001CA60959026	BQ	11A-01-8010-02	SATCOM HARNESS	1

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	160901257	2016/03/30	SEE JCN 160775749	☑	☐	

WUC/REF DESIGNATOR: 68CA0 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ASC-SATCOM INOP NOTE: DISPLAYS NGO FOR DATALINK AS W

ELL AS VOICE AVAIL. INOP PLACARD INSTALLED

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO | CORRECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	161751362	2016/06/23	REQ# 13831657	☑	☐	

WUC/REF DESIGNATOR: 41AEM | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ASE-#1 INS FLOW OFF LT ILLUM INS/ISS WARN CB P&C NOT

E: DO NOT RESET CB SYS DEACTIVATED FOR FLIGHT

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO | CORRECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA62779004	BQ	207640-34	INS FAN	1

AFTO FORM 781A — MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 2 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	161921450	2016/07/12	AWT EVAL + 4HRS T/S R# 13836330	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
46B26			

DISCREPANCY

FUEL -FWD ALT ISO V/V WILL NOT OPEN (POWER AT PIN B &C WITH SWITCH IN CLOSED POSITION)

SEQ#

CORRECTED BY _____ EMPLOYEE NO _____

DISCOVERED BY (PRINT) _____ EMPLOYEE NO _____ INSPECTED BY _____ EMPLOYEE NO _____

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162221256	2016/08/09		☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
44A13			

DISCREPANCY

A2ASE-2 SEGMENTS ON FE'S ANNUNICATOR PANEL INOP - BLANK SEGMENTS AWAITING DOWNTIME.

See pg 8 it 2+3

SEQ#

CORRECTED BY _____ EMPLOYEE NO _____

DISCOVERED BY (PRINT) _____ EMPLOYEE NO _____ INSPECTED BY _____ EMPLOYEE NO _____

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162251250	2016/08/12	KNOWN ISSUE AWT DOWN TIME	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
51FA0			

DISCREPANCY

A2ASG-WINDSHEAR LIGHT ILLUMINATED INTERMITTENTLY IN A PHASES OF FLT WINDSHEAR FAIL LT ILLUMINATED INTERM DURING ALL PHASES OF FLIGHT

SEQ#

CORRECTED BY _____ EMPLOYEE NO _____

DISCOVERED BY (PRINT) _____ EMPLOYEE NO _____ INSPECTED BY _____ EMPLOYEE NO _____

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 3 OF _____ PAGES

SYM	JCN-WES	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162251250-001	2016/08/12	JCN CONTINUATION	☐	☐	2016 1005

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			Deferred Not Req

DISCREPANCY

A2ACC-SUPERVISORY REVIEW DUE: JCN 162251250 EAMU OIC/M

AINTENANCE SUPERINTENDANT OR DESIGNATED REP

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162351251	2016/08/21	AWT EVAL + 4HRS T/S	☐	☐	20161005

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
46BBQ			r2'd switch ocg

DISCREPANCY

FUEL -#1 TANK TIP PUMP LOW LIGHT DOES NOT ILLUMINATE W

HEN TRANS PUMP OVRD IS SELECTED LIGHT DOES TEST GOOD

See pg 10 of 1+2

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY O | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162591250	2016/09/15	FAI REQ 13834887 13834882	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
71DC0			

DISCREPANCY

A2ASC-#1 RADIO ALTIMETER WAS INOP (FLAG IN VIEW) INTE

RMITTENTLY THROUGH OUT FLIGHT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY	SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA62789021	BQ	2070057-0701	ANTENNA	1	J001CA62789022	BQ	2070057-0701	ANTENNA	1

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 4 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
[redacted]	162591694	2016/09/15	RAFT IN TNB/DUE 31 OCT	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
91AAQ			

DISCREPANCY

A2ACC-REPLACE DOOR SLIDE/RAFT IAW

APPROPIATE T.O.

GIVE SER.# AND DOI TO P&S LOC:RT

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
[redacted]	162601606	2016/09/16	CORE VIBE RE-INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
23DP0			

DISCREPANCY

A2ASP-PERFORM CORE VIBE RE-INSPECTION IAW SB 72-1313

EVERY 350 ENGINE CYCLES

LOC:01

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
[redacted]	162601607	2016/09/16	CORE VIBE RE-INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
23DP0			

DISCREPANCY

A2ASP-PERFORM CORE VIBE RE-INSPECTION IAW SB 72-1313

EVERY 350 ENGINE CYCLES

LOC:02

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 5 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
---	162601608	2016/09/16	CORE VIBE RE-INSP	☑	☐	

WUC/REF DESIGNATOR: 23DP0 | FAULT CODE: | STA CODE:

DISCREPANCY

A2ASP-PERFORM CORE VIBE RE-INSPECTION IAW SB 72-1313

EVERY 350 ENGINE CYCLES

LOC:03

SEQ#

DISCOVERED BY (PRINT): G081 GENERATED JOB | EMPLOYEE NO:

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY / | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	162711260	2016/09/27	REC# 13831619	☐	☐	20161005

WUC/REF DESIGNATOR: 51ECA | FAULT CODE: | STA CODE:

DISCREPANCY

A2ASG-CO PILOTS THOUSANDTHS MACH NUMBER IN THE AIR SPE

ED INDICATOR IS IN "8"

See pg 9 & 2+3

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO: 58100

CORRECTIVE ACTION

Copilots Mach speed indicator R2, DLG

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA62779001	BQ	2594466-901	MACH A/S IND	0

SUPPLY DOC NBR UJC PART NBR/FSN NOMENCLATURE QTY

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162721619	2016/09/28	DUE 9 OCT 16 3HRWAG	☐	☐	20161006

WUC/REF DESIGNATOR: 11LAE | FAULT CODE: | STA CODE:

DISCREPANCY

NDIS -(NDI) C/W 90 DAY INSP IAW 6WC-5-1 CARD 10TC-230

HORZ STAB CONSTANT & OUTER SECTIONS MACHINED SKIN

PANELS - FLYABLE LIMIT CRACK INSPECTION LOC:RZ

See pg 11 Blk 1-3 SEQ#

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO:

CORRECTIVE ACTION

NDI C/W No progression NO new cracks

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 6 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
[illegible]	162721620	2016/09/28	DUE 9 OCT 16	☐	☐	20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
11LKA		

DISCREPANCY

NDIS -(NDI) C/W 90 DAY INSP IAW 6WC-5-1 CARD 10TC-251

CHECK HORIZONTAL STAB SPAR CAP ATTACHMENT BOLTS. ONLY

THE BOLTS NEAREST THE CRACKED PANLES NEED TO BE LOC:AR

See pg 11 Blk 1-3 SEQ#

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

NDI C/W no cracked bolts noted

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X X	162770751	2016/10/02	PRELAUNCH INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
0413C		

DISCREPANCY

A2ACC-#1 AND #3 INLET AND EXHAUST REQUIRE

INSPECTION PRIOR TO NEXT FLIGHT

SEQ#

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
[illegible]	162770752	2016/10/02	PRELAUNCH INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
04170		

DISCREPANCY

A2ACC-TECH ORDER AND TOOL BOX INVENTORY

REQUIRED PRIOR TO NEXT FLIGHT

SEQ#

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 7 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
---	162770753	2016/10/02	PRELAUNCH INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
04119			

DISCREPANCY

A2ACC-AIRCRAFT FUEL SUMPS REQUIRE DRAINING PRIOR

TO NEXT FLIGHT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X X	162770754	2016/10/02	PRELAUNCH INSP	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			

DISCREPANCY

A2ACC-3 EA PITOT TUBE COVERS INSTALLED AND 3 EA C/B

PULLED & COLLARED IAW 1C-10(K)A-2-10-10-00 P208

PARA 6A STEP 2 NOTE: DO NOT OPERATE PITOT HEAT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	162771256	2016/10/02		☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
65B00			

DISCREPANCY

A2ASC-DURING TAKEOFF TCAS SHOWED STBY ON BOTH VVI'S. C

ONTROLLER TOLD US OUR MODE C WAS NOT ABLE TO BE SEEN.

AT ABOUT 10K FEET IT BEGAN TO WORK PROPERLY.

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 8 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	162775414	2016/10/03		☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
23HCB			

DISCREPANCY

A2ACC-#3 FWD FAN COWL ROD BRKN REQ R2

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY / | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16222 1256001	20161005		☐	☐	20161005

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
44AEC			r²d annunciator unit IAW IC-10(K)A-2-33-15-02 pg 201-203 para 2A + 2B all steps ops chk bad

DISCREPANCY FE's annunciator unit rem for replacement

see pg 2 it 2, 8 it 3

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16222 12560002	20161005		☐	☐	20161005

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			6 ea CB reset IAW IC-10(K)A-2-33-15-02 pg 202-203 para 2B step 6

DISCREPANCY 6 ea CB P+C IAW IC-10(K)A-2-33-15-02 pg 201 para 2A step 1

~~Note: dpn operate master W rng/caution sys til mx c/w shock hazard~~

see pg 2 it 2, 8 it 2

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 20161005 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 9 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16192145 0 001	20161005				20161005

WUC/REF DESIGNATOR: 46626 | FAULT CODE | STA CODE

DISCREPANCY: Fwd Body Alt Xfer v/v shroud cover removed for fuel sys mx

CORRECTIVE ACTION: Fwd Body Alt Xfer v/v shroud cover reinstalled IAW TO 1C-10(K)A-2-28 BJ03 28-21-19 T&C 3(B) 5

Sug 2 EI

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16271 1260 001	20161005				20161005

WUC/REF DESIGNATOR: 07000 | FAULT CODE | STA CODE

DISCREPANCY: 2 EA C/Bs P+C IAW 1C-10(K)A-2-34-13-01 pg 201 para 2A step 1.

Note: Do not reset c/b. Shock Hazard

SEE Pg 5 +2 pg 9 +3

CORRECTIVE ACTION: 2 EA C/Bs reset and tagged IAW 1C-10(K)A-2-34-13-01 pg 202 para 2B All steps

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16271 1260 002	20161005				20161005

WUC/REF DESIGNATOR: 51ECA | FAULT CODE | STA CODE

DISCREPANCY: Copilots Mach Indicator removed for R&I IAW 1C-10(K)A-2-34-13-01 pg 201 para 2A all steps

SEE Pg 5 +2 pg 9 +2

CORRECTIVE ACTION: Copilots Mach Spare Indicator Installed OCG IAW 1C-10(K)A-2-34-13-01 pg 202 para 2B All steps

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A | MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161005 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 10 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
A	16235 1251001	20161005		☐	☐	20161005

WUC/REF DESIGNATOR: 46BBQ | FAULT CODE | STA CODE

DISCREPANCY: #1 tank tip pump switch rem for replacement

see pg 3 it 2, 10 it 2

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION: r2'd #1 tank tip pump switch IAW 1C-10(K)A-2-33-00-00 pg 201-202 para 3A + 3B all steps ccg

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
A	16235 1251002	20161005		☐	☐	20161005

WUC/REF DESIGNATOR: 07000 | FAULT CODE | STA CODE

DISCREPANCY: 1 ea cb p+c IAW 1C-10(K)A-2-110-28-43-01 pg 5 sheet 2

~~Note: do not operate wing tip fuel pump til rem c/w shock hazard~~ see pg 3 it 2, 10 it 1

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION: 1 ea cb reset IAW 1C-10(K)A-2-110-28-43-01 pg 5 sht 2.

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161005		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE

DISCREPANCY: INFO NOTE BLOCK NOT USED

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X	162800001	2016/10/05	HORIZ STAB INSPECTION			20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
46GAN		

DISCREPANCY

A2ACC-BOOM LOWERD FOR HORIZ STAB INSP/2EA CB'S COLLARD

1EA WT'S INSTALLED IAW 1C-10(K)A-28CL-1 PG 2-1 PARA C

NOTE: ~~DON'T OPER BOOM HOIST HANDLE/DON'T XMIT HF RADIOS~~

SEQ# See pg5 Blk 3 Pg 6 Blk 1

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

BOOM RAISED 2ea C/B REMOVED 1ea tarp REMOVED IAW 1C-10(K)A-28CL-1 SECT III pg 3-1 thru 3-5

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X	162800002	2016/10/05	HORIZ STAB INSPECTION			20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
07000		

DISCREPANCY

A2ACC-2EA CB'S COLLARD/~~1EA~~ 2EA WT'S INSTALLED FOR HORIZ

STAB INSP IAW 1C-10(K)A-6WC-5-1, CARD 10TC-230

NOTE: ~~DON'T OPER HYD SYSTEM CRUSH HAZARD~~ See pg5 Blk 3

SEQ# Pg 6 Blk 1

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

2ea CB reset 2ea WARNING TAPE Removed IAW 1C-10(K)A-6WC-5-1 CARD 10TC-25 CAUTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X	162800003	2016/10/05	HORIZ STAB INSPECTION			20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
11D00		

DISCREPANCY

A2ACC-ACCESS DOORS 392AZ, 392BZ, 310AB REMOVED FOR

HORIZONTAL STABILIZER INSPECTION

NOTE: ~~DON'T OPER HYD SYSTEM CRUSH HAZARD~~ See pg5 Blk 3

SEQ# Pg 6 Blk 1

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

Access door installed PANELS INSTALLED IAW 1C-10(K)A-6WC-5-1 card 10TC-25 | Step 5 & 6

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

OPEN ITEMS CARRIED FORWARD TO NEW AFTO FORM 781K. SIGNATURE AND EMPLOYEE NUMBER

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161005 TO 20160006 | MDS: KC010A | SERIAL NUMBER: 83-3080 | PAGE 12 OF 12 PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16279162E	20161006		☑	☐	

WUC/REF DESIGNATOR: 46H00 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: 4W3 PREPARATION OF CONTACT TANKER (CENTER DROGUE) CHECK LIST THROUGH STEPS 10 ACCOMPLISH POST A/R (CENTER) CHECK LIST IN ITS ENTIRETY

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161006		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: INFO NOTE: BLOCK NOT USED

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161006		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: INFO NOTE: BLOCK NOT USED

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/05 TO 20161005	MDS: KC010A	SERIAL NUMBER: 83000080	PAGE 1 OF 5 PAGES

A. AEROSPACE INSPECTION STATUS				B. ENGINE STATUS			
NEXT PERIODIC, MAJOR, OR PHASED INSPECTION DUE NO.				PSN	ENG SER NO	ENG CHANGE DUE TIME	
TYPE	COMPL	NEXT DUE		1	517740		
A-CHECK	2013/09/13	*ERROR 9188	NEXT A-CHECK #00	2	528365		
C-CHECK	2016/04/15	2016/10/21	NEXT C-CHECK #01 NEXT SCHD C-CHECK 2016/10/21	3	530336		
PDM	2015/04/03	2017/04/28	NEXT PDM #02 NEXT SCHD PDM 2017/04/28	4			

BPO Due: 20161004 (+/- 1Day)

C.	CALENDAR AND HOURLY INSPECTION SCHEDULE			PAGE 2 OF _____ PAGES		
INSPECTION	FREQUENCY	NEXT DUE		NEXT DUE	NEXT DUE	NEXT DUE
A2ASH-DROGUE HOSE INSP (ITR DROG)	0 WEEKS	DUE 2016/12/25				
NDIS -HORZ STAB INSP (ITR HORZ)	90 DAYS	DUE 2016/10/09	JCN:162721619			
NDIS -SPAR CAP INSP (ITR SPAR)	90 DAYS	DUE 2016/10/09	JCN:162721620			
A2ASC-60 DAYMODE IV CHECK (ITRMD4)	60 DAYS	DUE 2016/11/12				
SCHED-60 DAY DOC REVIEW (ITR01C)	60 DAYS	DUE 2016/11/15				
A2ASP-CORE VIBE RE-INSP (ITR13A01)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601606			
A2ASP-CORE VIBE RE-INSP (ITR13A02)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601607			
A2ASP-CORE VIBE RE-INSP (ITR13A03)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601608			
A2ASP-#1 BOWING RE-INSPECT (ITR13B01)	0 WEEKS	DUE 2016/10/21				
DEPOT-RH WING DAMAGE (ITR80A)	24 MONTHS	DUE 2017/08/31				
NDIS -FUEL COMP PROBE #8 (ITR80B)	1000 HOURS	OVERDUE BY 63				
A2ACC-WGT AND BALANCE (I1101WGT)	36 MONTHS	DUE 2018/06/12				
A2ACC-28 DAY DROGUE CHECK (I1912805)	28 DAYS	DUE 2016/10/11				
A2ASP-FAN LUBE #1 ENG (I23 #101)	0 CYCLES	DUE IN 479 CYCLES				
A2ASP-FAN LUBE #2 ENG (I23 #202)	0 CYCLES	DUE IN 479 CYCLES				
A2ASP-FAN LUBE,#3 ENG (I23 #303)	0 CYCLES	DUE IN 483 CYCLES				
DEPOT-CARGO DOOR HINGE (I831)	15000 LANDS	OVERDUE BY 376 LANDS	JCN:162561695			
A2ASP-L/H WING ENG TCI (R2301A01)	0 CYCLES	DUE IN 2410 CYCLES				
A2ASP-TAIL #2 ENG TCI (R2301B02)	0 CYCLES	DUE IN 2697 CYCLES				
A2ASP-R/H WING ENG TCI (R2301C03)	0 CYCLES	DUE IN 3699 CYCLES				
A2ASP-APU DUE TIME CHANGE (R2401A01)	0 CYCLES	DUE IN 8983 CYCLES				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#1)	3 YEARS	DUE 2019/10/03				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#2)	3 YEARS	DUE 2018/12/30				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#3)	3 YEARS	DUE 2018/08/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A01)	20 YEARS	DUE 2025/08/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A02)	20 YEARS	DUE 2016/09/30	JCN:162301623			
A2ASE-R2 CHEM O2 GENERATOR (R4723A04)	20 YEARS	DUE 2016/09/30	JCN:162301624			
A2ASE-R2 CHEM O2 GENERATOR (R4723A06)	20 YEARS	DUE 2016/09/30	JCN:162301625			
A2ASE-R2 CHEM O2 GENERATOR (R4723A07)	20 YEARS	DUE 2016/09/30	JCN:162301626			
A2ASE-R2 CHEM O2 GENERATOR (R4723A3A)	20 YEARS	DUE 2016/09/30	JCN:162301627			
A2ASE-R2 CHEM O2 GENERATOR (R4723A3B)	20 YEARS	DUE 2025/06/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A5A)	20 YEARS	DUE 2020/06/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A5B)	20 YEARS	DUE 2029/01/31				
A2ASE-FIRE EXT BOTTLE (R4921B11)	60 MONTHS	DUE 2019/04/30				
A2ASE-FIRE EXT BOTTLE (R4921B12)	60 MONTHS	DUE 2019/12/31				
A2ASE-FIRE EXT BOTTLE (R4921B21)	60 MONTHS	DUE 2017/07/31				
A2ASE-FIRE EXT BOTTLE (R4921B22)	60 MONTHS	DUE 2020/08/31				
A2ASE-FIRE EXT BOTTLE (R4921B31)	60 MONTHS	DUE 2019/10/31				
A2ASE-FIRE EXT BOTTLE (R4921B32)	60 MONTHS	DUE 2019/12/31				
A2ASC-ELT BATTERY (DOM) (R6620A01)	5 YEARS	DUE 2018/08/31				
A2ASC-ELT BATTERY (DOM) (R6620A02)	5 YEARS	DUE 2017/07/31				

INSPECTION	FREQUENCY	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE
A2ASC-PORTABLE ELT BATTERY(R6620B)	5 YEARS	DUE 2018/03/31			
A2ASC-UNDERWATER BEAC BATT(R7234ALT)	6 YEARS	DUE 2019/05/31			
A2ASC-UNDERWATER BEAC BATT(R7234ART)	6 YEARS	DUE 2019/07/31			
A2ACC-DOOR SLIDE/RAFT (R9125ALT)	3 YEARS	DUE 2016/10/31 JCN:162301628			
A2ACC-DOOR SLIDE/RAFT (R9125ART)	3 YEARS	DUE 2016/12/31 JCN:162591694			
A2ASE-DROGUE GUILL CART (R97DG1LT)	30 MONTHS	DUE 2018/03/08			
A2ASE-DROGUE GUILL CART (R97DG1RT)	30 MONTHS	DUE 2018/03/08			
A2ASE-SQUIB CART(DOI/DOM) (R9718A1A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A1B)	120 MTH INSTAL	DUE 2019/08/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2B)	120 MTH INSTAL	DUE 2017/07/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2C)	120 MTH INSTAL	DUE 2017/06/30 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2D)	120 MTH INSTAL	DUE 2017/07/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A3A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A3B)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
ISO2 -A-CHECK (SIS01A)	0 WEEKS	DUE 2016/10/21			
DEPOT-C-CHECK (SPD01C)	0 WEEKS	DUE 2017/04/28			

DATE FROM: 2016/10/05	TO 20161006	MDS: KC010A	SERIAL NUMBER: 83000080	PAGE 4 OF 4 PAGES

SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM / UJC / QTY / STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER

D. DELAYED DISCREPANCIES, URGENT ACTION, AND OUTSTANDING ROUTINE TCTO'S

SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM / UJC / QTY / STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER
	150571256	A2ASE-ARO FLOOR LIGHT RHEOSTAT INOP	J001CA50579003 BQ 1 B/O	44FA0	
	152049667	DEPOT-FUEL-TANK INSPEC&REPLACE WIRE SHIELDI CW TCTO 1C-10(K)A-1285 WB/NA P		0112282 2019/11/01	
	152785610	DEPOT-CENTER GEAR EMER RELEASE LEVER REQ SHOT P EN. CARRY FWD TO NEXT ARM REMOVAL AWT NEXT C-CH CK	-	13CH0	
	161295643	SMCO -1 EA SCREW HAS BROKEN SCREW HEAD INBD #3 ND V PANEL	AWT PNL REMOVAL+2HRS	11EAJ	
	161329625	DEPOT-INST LAV OVERSERVICE S/O VALVE CW TCTO 1C-10(K)A-1298 W-B APPL P		0101529 2020/02/06	
	161821350	SMCO -#3 ENG I/B SAIL BOAT PNL HAS 1 EA BAD NUT LATE	AWT PNL RMVL + 2HRS	11EA5	
	161901209	A2ACC-CO PILOT MAP LIGHT INOP		71EH0	
	161921417	A2ACC-RT RUNWAY T/O LT INOP		44DC0	
	161971250	A2ACC-REFRIGERATOR DOES NOT WORK	AD# 13758780	12CAH	
	162211442	A2ACC-FWD RT WING FORMATION LIGHT B/O		44DKB	
	162211444	A2ACC-BOOM MARKER LT BURNT OUT		4476A	
	162251241	A2ACC-DROGUE FLOODLIGHT REQUIRES SEALANT		44HE3	
	162251251	A2ACC-ARO SIDE VIEWING DOORS WILL NOT LOCK IN P ACE		11ML9	
	162301623	A2ASE-REPLACE CHEMICAL OXYGEN GENERATOR (DOUBLE . IAW 1C-10(K)A-6 REPLACEMENT SCHEDULE	R2 CHEM O2 GENERATOR	47BBF	
	162301624	A2ASE-REPLACE CHEMICAL OXYGEN GENERATOR (DOUBLE . IAW 1C-10(K)A-6 REPLACEMENT SCHEDULE	R2 CHEM O2 GENERATOR	47BBF	
	162301625	A2ASE-REPLACE CHEMICAL OXYGEN GENERATOR (DOUBLE . IAW 1C-10(K)A-6 REPLACEMENT SCHEDULE	R2 CHEM O2 GENERATOR	47BBF	

DATE FROM: 2016/10/05 TO 20161006 | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 5 OF 5 PAGES

SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM UJC QTY STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER
---	162301626	A2ASE-REPLACE CHEMICAL OXYGEN GENERATOR (DOUBLE . IAW 1C-10(K)A-6 REPLACEMENT SCHEDULE	R2 CHEM O2 GENERATOR	47BBF	
---	162301627	A2ASE-REPLACE CHEMICAL OXYGEN GENERATOR (DOUBLE . IAW 1C-10(K)A-6 REPLACEMENT SCHEDULE	R2 CHEM O2 GENERATOR	47BBF	
---	162301628	A2ACC-REPLACE DOOR SLIDE/RAFT IAW APPROPIATE T.O. GIVE SER.# AND DOI TO P&S	DOOR SLIDE/RAFT	91AAQ	
/	162381240	SMCO -1 EA BROKEN NUT PLATE FWRD ACCESSORY COMP PANEL	AWT PNL RMVL + 2 HRS	11DEJ	
---	162561695	DEPOT-UPPER CARGO DOOR HINGE PIN & LOBE HOLES *INITIAL INSP @ 15000 LANDS AND EVERY 7500 LANDS THEREAFTER IAW 1C-10(K)A-	C/F TO C-CK	11CDS	
/	162611250	A2ACC-LEFT LOGO LIGHT INOP		44DHA	
/	162640911	A2ACC-RIGHT LOGO LIGHT INOP		44DHA	
/	162729872	DEPOT-FUEL SYSTEM CHANGE FUEL PUMP CONTRO; CW TCTO 1C-10(K)A-1299 W-B APPL P		0101771 2020/07/03	
/	162749905	DEPOT-ENG FUEL SUPPLY REPLACE PUMP RELAYS CW TCTO 1C-10(K)A-1300 W-B APPL P		0101772 2020/07/03	
/	162749932	DEPOT-FUEL-ENGINE FUEL SUPPLY-REPLACE FUEL PUM CW TCTO 1C-10(K)A-1302 WB/NA P		0101938 2020/07/03	

OPEN ITEMS CARRIED FORWARD TO NEW AFTO FORM 781K. SIGNATURE AND EMPLOYEE NUMBER

AFTO FORM 781K MAINTENANCE DISCREPANCY AND WORK DOCUMENT

G081D7046-1 TCTO STATUS REPORT FOR AIRCRAFT: 83000080 CURRENT AS OF 0536 PACIFIC 05/OCT/16 PAGE 1 of

NOTE: THE FOLLOWING CODES ARE USED IN THIS LISTING:
C/W = TCTO HAS BEEN COMPLIED WITH. (STAT-CD = 01, 02, 03)
" " = TCTO NOT AGAINST ENG.
NCW = TCTO HAS NOT BEEN COMPLIED WITH. (STAT-CD = 06-18, 20, 21)
N/R = TCTO HAS NOT BEEN RELEASED BY THE DEPOT FOR INSL ON THE A/C. (ST-CD = 19)
N/A TCTO S ARE NOT APPLICABLE. (STAT-CD = 04, 05, 22)
E = AFTER THE AIRCRAFT STATUS CODE INDICATES EXPIRED A/C TCTO.
E = AFTER THE ENGINE 4 STATUS CODE INDICATES EXPIRED ENG TCTO.
A = AFTER THE ENG SER NUM MEANS 3000 TO 5000 HOUR ENGINE.
C = AFTER THE ENG SER NUM MEANS 5000 HOUR UNLIMITED MODULAR ENG.

									ENG 1	ENG 2	ENG 3	ENG 4
									7740	8365	0336	
AIRCRAFT TCTO NUMBER	TCTO DATACD	AIRCRAFT TCTO NOMENCLATURE	GR DATE	STATUS CODE	EX TIM	ENGINE TCTO NUMBER	TCTO DATACD	ENGINE TCTO NOMENCLATURE				
1C-10(K)A-1285	0112282	FUEL-TANK INSPEC&REPLACE	19305	NCW	999							
1C-10(K)A-1298	0101529	INST LAV OVERSERVICE S/O	20037	NCW	146							
1C-10(K)A-1299	0101771	FUEL SYSTEM CHANGE FUEL	20185	NCW	146							
1C-10(K)A-1300	0101772	ENG FUEL SUPPLY REPLACE	20185	NCW	146							
1C-10(K)A-1302	0101938	FUEL-ENGINE FUEL SUPPLY-	20185	NCW	999							
1KC-10A-001	Y141001	INSPECTION OF THE FLAP H		N/A	030							
1C-10(K)A-1268	0112389	TCTO 1C-10(K)A-1268: INS		C/W	999							
1C-10(K)A-1267	0196993	TCTO 1C-10(K)A-1267: INS		C/W	999							
1C-10(K)A-1294	0112307	MOD REMOVE HYDR AIR ELIM		C/W	999							
KC-10 LOTI	L060601	LOTI FOR INSPECTION OF B		C/W	180							
KC-10 LOTI	L060602	LOTI OF KC-10A AUXILIARY		C/W	010							
1C-10(K)A-1292	0112304	REPLACE APU DOOR ACTUATI		C/W	999							
1C-10(K)A-1297	0112311	OPEN&PERMANENT COLLAR PO		C/W	999							
1C-10(K)A-1296	0112310	STABILIZERS-HORIZ STAB/C		C/W	999							
1C-10(K)A-1277	0112411	INSTALLATION OF WASTE WA		C/W	999							
1C-10(K)A-1291	0112303	TCTO1C-10(K)A-1291COM,NA		C/W	999							

***** END OF LIST *****

PCN:67089-04 DATE: 2016/10/05 - 20161006 MDS: C010A PAGE 1 OF 4 PAGES

PREVIOUS AIRCREW DISCOVERED DISCREPANCIES

WUC/REFDES A HOW W ---------DATE---------
MMN/FC T MAL D DISCOVERED COMPLETED JCN DISCREPANCY

ACT

SYMBOL: / MAN NUM: **

44AE0

52EA9

/ XDAT

71EFF

SYMBOL: / MAN NUM: **CORRECTIVE ACTION: RECYCLED SYSTEM POWER O/C/G ** ACT BASE: PTFL

DATE FROM: 2016/10/05 TO 20161006 | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF 1 PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED (~~HALF PINTS~~, PINTS, QUARTS)

				NO 1 POSITION SER # 517740/ OIL CHANGE TIME 0 DUE CHG N/A			NO 2 POSITION SER # 528365/ OIL CHANGE TIME 0 DUE CHG N/A			NO 3 POSITION SER # 530336/ OIL CHANGE TIME 0 DUE CHG N/A			NO 4 POSITION SER # / OIL CHANGE TIME 0 DUE CHG				
DATE FLOWN	CUM TOTAL HOURS FLOWN	CUM. GEAR CYCL	OIL SMP	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	TOTAL LANDS	FULL STOP LANDS
PREV TOTAL	29432.7	9315			24933.8	14052.0		25968.7	13251.0		25661.1	12408.0		1.8	0.0	15373	5789
2016/09/28	6.9	1			6.9	1.0		6.9	1.0		6.9	1.0		0.0	0.0	1	1
TOTAL	29439.6	9316			24940.7	14053.0		25975.6	13252.0		25668.0	12409.0		5.1	0.0	15374	5790
2016/10/01	6.4	1			6.4	1.0		6.4	1.0		6.4	1.0		0.0	0.0	1	1
TOTAL	29446.0	9317			24947.1	14054.0		25982.0	13253.0		25674.4	12410.0		11.5	0.0	15375	5791
2016/10/02	11.5	1			11.5	1.0		11.5	1.0		11.5	1.0		0.0	0.0	1	1
TOTAL	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0		11.5	0.0	15376	5792
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
CARRIED FORWARD	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0		11.5	0.0	15376	5792

AFTO FORM 781J

AEROSPACE VEHICLE - ENGINE FLIGHT

660th AMXS AFTO 781 SERIES TRANSCRIBED FORMS REVIEW

AIRCRAFT SERIAL NUMBER: 830080

781 FORMS DATE FROM: 20161006 **TO:** 20161009

INDIVIDUAL TRANSCRIBING FORMS

NAME: _____ RANK: SrA EMPLOYEE #: _____

DATE COMPLETED: 20161009

1. INDIVIDUAL PULLING THE 781 SERIES FORMS IS **ULTIMATELY RESPONSIBLE** THAT ALL BLOCKS ON THE PULLED FORMS IS PROPERLY FILLED OUT IAW 00-20-01. THIS INCLUDES SOME OF THE FOLLOWING:

   A. FROM and TO DATES ON ALL FORMS.
   B. PAGE NUMBERS ARE CORRECT.
   C. SERVICING DATA and ENGINE TIMES ON 781H AND 781J TRANSFERRED CORRECTLY.
   D. DATES, JOB CONTROL NUMBERS, WHEN DISCOVERED CODES, and WORK UNIT CODES BLOCKS ARE FILLED OUT.
   E. OPEN WRITE-UPS TRANSCRIBED CORRECTLY.
   F. ANNOTATION OF ANY UPDATED ITEMS ON 781A TRANSCRIBED TO NEW 781A OR NEW 781K.

2. INDIVIDUAL WILL INSURE ALL SIGNED OFF WRITE-UPS IN 781A's ARE SIGNED OFF CORRECTLY AND CLOSED OUT IN G081 USING SCREEN 8035.

3. ATTACH THIS FORM IN FRONT OF PULLED 781 FORMS

4. LEAD TECH, SECTION CHIEF OR PRODUCTION & DEBRIEF WILL REVIEW AIRCRAFT FORMS PRIOR TO FILING AND TURNING IN TO PLANS AND SCHEDULING.

Forms Discrepancies Found		
Discrepancy	Page/Item #	Initials

LEAD TECH, SECTION CHIEF, OR PRODUCTION:

NAME: _____ RANK: SSgt EMPLOYEE #: _____

DATE COMPLETED: 20161013

DEBRIEF (Reviewed and filed):

_____ RANK: _____ PLEASE FILE

1. FROM	2. TO	3. MDS	4. SERIAL NUMBER
20161006	20161009	KC010A	83000080

5. Certification of PR, PR/BPO, PR/TH, TH, BPO, QT, ICT, WAI, PLI

TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME	TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME
		20161003	0230Z				
		20161009	2300Z				

6. STATUS DATA

SEE AFTO FORMS 781A AND 781K FOR EXPLANATION OF THE STATUS SYMBOLS

	STATUS TODAY		BOX NO	EXCEPTIONAL RELEASE (Enter Box No)	STATUS TODAY		BOX NO	EXCEPTIONAL RELEASE (Enter Box No)
1	1	13			25	37		
2	2	14			26	38		
3	3	15			27	39		
4	4	16			28	40		
5	5	17			29	41		
6	6	18			30	42		
7	7	19			31	43		
8	8	20			32	44		
9	9	21			33	45		
10	10	22			34	46		
11	11	23			35	47		
12	12	24			36	48		

7. AIRFRAME TIME	8. LANDINGS		9. CART/JFS STARTS				10. ENGINE CYCLE DOCUMENTATION							
	FULL STOP	TOTAL	NO	ENG	NO	ENG	NO 1 ENG	NO 2 ENG	NO 3 ENG	NO 4 ENG	NO 5 ENG	NO 6 ENG	NO 7 ENG	NO 8 ENG
PREVIOUS 29,457.5	5792	15,376												
FLIGHTS 1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
29457.5 TOTAL	5792	15376												

AFTO FORM 781H, 20100915 PREVIOUS EDITION IS OBSOLETE

AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE

DATE FROM: 2016/10/06 TO 20161009	MDS: KC010A	SERIAL NUMBER: 83000080	NOTES PAGE 1-1

NOTE NUMBER		NOTE VERBIAGE
0001	-	--IAW AFI 11-2KC-10V3 ITEM 33, T.O. 1C-10KA-1-3 (FAULT REPORTING) REQUIRED ON EVERY AIRCRAFT. THIS T.O. IS NOT IN THE USAF T.O. INVENTORY. AWT 55-10 UP
0002	-	-*****AIRCRAFT 83000080 SUPPORT GENERAL JOB**********N UMBER: 0-2-0-8**********
0011	-	-NOTE: SUPPORT GENERAL (0027)
0012	-	-NOTE: PRE-LAUNCH (0750-0759)
0013	-	-NOTE: PRE-FLIGHT (0530-0549)
0014	-	-NOTE: THRUFLIGHT (0550-0569)
0015	-	-NOTE: BASIC POSTFLIGHT (0570-0599)
0016	-	-NOTE: #2 ENGINE ANTI ICE DISAGREE LIGHT SLOW TO TURN OFF WHEN SIWTCHED TO OFF POSITION. SYSTEMS OPERATE NORMAL.
0017	-	-DENT IN #3 ENG TAILCONE DENT WITHIN LIMITS

AFTO FORM 781A (INFORMATIONAL NOTES) MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO 20161009 | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF 26 PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	160775749	2016/03/17	SEE JCN 160901257	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
62C00			

DISCREPANCY

A2ASC-RIU #1 AND #2 SHOWS DEGRADED ON CDU *REQS 136294

59, 13629984, 13629986* SEALANT & SATCOM HARNESS (2) O

/O

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA60959005	BQ	PR1440B2	SEALANT	0
J001CA60959027	BQ	11A-01-8010-05	SATCOM HARNESS	1
J001CA60959026	BQ	11A-01-8010-02	SATCOM HARNESS	1

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	160901257	2016/03/30	SEE JCN 160775749	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
68CA0			

DISCREPANCY

A2ASC-SATCOM INOP NOTE: DISPLAYS NGO FOR DATALINK AS W

ELL AS VOICE AVAIL. NOTE INOP PLACARD INSTALLED

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	161751362	2016/06/23	REQ# 13831657	☐	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
41AEM			

DISCREPANCY

A2ASE-#1 INS FLOW OFF LT ILLUM INS/ISS WARN CB P&C NOT

E: DO NOT RESET CB SYS DEACTIVATED FOR FLIGHT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA62779004	BQ	207640-34	INS FAN	1

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 2 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	161921450	2016/07/12	REQ # 13836330	☑	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
46B26		

DISCREPANCY

A2ASE-FWD ALT ISO V/V WILL NOT OPEN (POWER AT PIN B &C WITH SWITCH IN CLOSED POSITION)

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/PSN	NOMENCLATURE	QTY
J001CA62809014	BQ	10648DC20-2	SWITCH	1

SUPPLY DOC NBR UJC PART NBR/PSN NOMENCLATURE QTY

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	162221256	2016/08/09		☐	☐	2-16100D

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
44A13		

DISCREPANCY

A2ASE-2 SEGMENTS ON FE'S ANNUNICATOR PANEL INOP - BLAN K SEGMENTS AWAITING DOWNTIME.

Segments 1 & 2,3

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

2 FA wires swapped to Collect location

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
S	162251250	2016/08/12	KNOWN ISSUE AWT DOWN TIME	☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
51FA0		

DISCREPANCY

A2ASG-WINDSHEAR LIGHT ILLUMINATED INTERMITTENTLY IN A PHASES OF FLT WINDSHEAR FAIL LT ILLUMINATED INTERM DUR ING ALL PHASES OF FLIGHT

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

Associated equipment malfunction, See JCN 162251250, R2 #1 & #2 Radio Altitude Antennas Ops ck good EGPWS system Ops ck good

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 3 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162591250	2016/09/15	FAI REQ 13834887 13834882			20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
71DC0		

DISCREPANCY

A2ASC-#1 RADIO ALTIMETER WAS INOP (FLAG IN VIEW) INTE

RMITTENTLY THROUGH OUT FLIGHT

See p.3 10 Item 2 & 3

see p.3 11 Item 1 & 2

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

R2 Radio Alt #1 & #2 Antennas o/c/f

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SUPPLY DOC NBR	UJC	PART NBR/FSN	NOMENCLATURE	QTY
J001CA62789021	BQ	2070057-0701	ANTENNA	0
J001CA62789022	BQ	2070057-0701	ANTENNA	0

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
---	162591694	2016/09/15	RAFT IN TNB/DUE 31 OCT			

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
91AAQ		

DISCREPANCY

A2ACC-REPLACE DOOR SLIDE/RAFT

APPROPIATE T.O.

GIVE SER.# AND DOI TO P&S

LOC:RT

SEQ#

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162601606	2016/09/16	CORE VIBE RE-INSP			20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
23DP0		

DISCREPANCY

A2ASP-PERFORM CORE VIBE RE-INSPECTION IAW SB 72-1313

EVERY 350 ENGINE CYCLES

LOC:01

SEQ#

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

Core Vibe chk on #1 eng

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A

MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 5 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
---	162770752	2016/10/02	PRELAUNCH INSP			

WUC/REF DESIGNATOR: 04170 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ACC-TECH ORDER AND TOOL BOX INVENTORY

REQUIRED PRIOR TO NEXT FLIGHT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
---	162770753	2016/10/02	PRELAUNCH INSP			

WUC/REF DESIGNATOR: 04119 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ACC-AIRCRAFT FUEL SUMPS REQUIRE DRAINING PRIOR

TO NEXT FLIGHT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X X X X	162770754	2016/10/02	PRELAUNCH INSP			

WUC/REF DESIGNATOR: 01000 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

A2ACC-3 EA PITOT TUBE COVERS INSTALLED AND 3 EA C/B

PULLED & COLLARED IAW 1C-10(K)A-2-10-10-00 P208

PARA 6A STEP 2 NOTE: DO NOT OPERATE PITOT HEAT

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 6 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162771256	2016/10/02		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
65B00		

DISCREPANCY

A2ASC-DURING TAKEOFF TCAS SHOWED STBY ON BOTH VVI'S. C
ONTROLLER TOLD US OUR MODE C WAS NOT ABLE TO BE SEEN.
AT ABOUT 10K FEET IT BEGAN TO WORK PROPERLY.

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

associated equipment Malfunction
R2 Radio A11 #1 tx and Rx
Antennas o/c/b

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162775414	2016/10/03	Req#13838928	☒	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
23HCB		

DISCREPANCY

A2ACC-#3 FWD FAN COWL ROD BRKN REQ R2

SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162791628	2016/10/05	28 DAY DROGUE CHECK	☒	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
46H00		

DISCREPANCY

A2ACC-C/W PREPARATION OF CONTACT TANKER (CENTERLINE DR
OGUE) CHECKLIST THROUGH STEP 10 ACCOMPLISH POST A/R
(CENTERLINE DROGUE) CHECKLIST IN ITS ENTIRETY LOC:05

SEQ#

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO

CORRECTIVE ACTION

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 7 OF ___ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
W	161971250	20161006	AF# 13757780	☐	☐	20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
12CAH			Refrigerator R2 OCG

DISCREPANCY: refrigerator does not work

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
W	161971250 001	20161006		☐	☐	20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
12CAH			

DISCREPANCY: 3 ea. C/b pulled and reset for refrigerator R2 IAW 1C-10(A)A-2-25-37-03 pg 201 Item 2 Step 2 ~~WARNING: DO NOT operate refrigerator if power to unit is interrupted. Shock hazard exists.~~

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY: 3ea cb reset IAW 1C-10(A)A-2-25-37-03 pg 201 Item 2 para B step 6 | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	162251 251	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
11ML9			ARO slide ~~ve~~ Doors aligned

DISCREPANCY: A2ACC - ARO slide ~~ve~~ Door will not lock in Place

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83-0080 | PAGE 8 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
C	16281 SS42			☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
11ML9			Iaw 2/S Left ARO Lower window siding door removed as req.

DISCREPANCY: Iaw stuck screw Left ARO Lower window siding door

See pg. 7 item 3

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	161901 209	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
7LEWC			R&R R2

DISCREPANCY: REAC - Co pilots Map light Inop

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	162211 144	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
4476A			R&R R2 ops ck good

DISCREPANCY: REAC - Room Marker Lt Burnt out

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83-0080 | PAGE 1 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
D	162211 44003	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			Boom Raised and Stowed IAW

DISCREPANCY: Boom Drive lock installed to FOM

~~NOTE: DO NOT VAULT ANY HF PANELS (RF HWL)~~ 1C-10(K)2-23C1-1 2-1 thru 2-3 para C

see pg 8 item 3

ZONE: CARD: SEQ#

CORRECTED BY — EMPLOYEE NO

DISCOVERED BY (PRINT) EMPLOYEE NO

INSPECTED BY EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
D	162211 44002	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			C/B Reset IAW 1C-10(K)A-2-23C1-1 pg 2-3 PARA 5 ST 17

DISCREPANCY: See pg 1 for complete discrepancy

HF-Com-1, HF-Com-2, Avionics DC Bus 1, Right Emerg AC Bus ~~Note: Do not reset C/B until fault is found~~

IAW 1C-10(K)A-2-23C1 pg 2-1 thru 2A See pg 9 item 1

ZONE: CARD: SEQ#

CORRECTED BY — EMPLOYEE NO

DISCOVERED BY (PRINT) EMPLOYEE NO

INSPECTED BY EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
D	162211 44003	20161007		☐	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			Boom Drive lock Removed

DISCREPANCY: Boom Drive lock installed to FOM

IAW 1C-10(K)A 2-23C1-1 4-3 para C step 11 complete

see pg 8 item 3

ZONE: CARD: SEQ#

CORRECTED BY — EMPLOYEE NO

DISCOVERED BY (PRINT) EMPLOYEE NO

INSPECTED BY EMPLOYEE NO

AFTO FORM 781A / MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER 830-00080 | PAGE 10 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
D	16221 444004	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			C/B Reset IAW IC-10(K)A 2-20-77-01 step 2

DISCREPANCY: 1ea c/b p/c to fem Boom mkr light R2. Boom lights mkr.; Loc: Row C col 9 # B1-1898 IAW IC-10(K)A-2-33-77-01 step 2 ~~Note: Do not reset~~ see pg 8 item 3

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16259 1250 OH	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
7DCC			#1 Radio Altimeter tx installed IAW IC-10(K)A-7-34-42-01 pg 202A para 3B A/L Steps

DISCREPANCY: Radio Alt #1 tx antenna removed for R2 IAW IC-10(K)A-2-34-42-01 pg 202 para 3A Step 1 see pg 3 Item 1

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16259 1257 CB	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			1 ea c/b reset + collar removed IAW IC-10(K)A-2-34-42-01 pg 205 para 3B Step 7

DISCREPANCY: 1 EA CB pulled and collared TO PERM IAW IC-10(K)A 2-34-42-01 pg 202 para 3A Step 1 ~~A/C TO BE RESET CB WHEN COMPLETE MX~~

ZONE: TERMINAL CARD: SEQ# see pg 7 Item 1 | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 87-00080 | PAGE 1 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16259 1250 013	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
71DCC			Installed #1 Radio Altimeter Rx antenna IAW 1C-10WA-2-34-42-01 pg 202A para 3B ALL Steps

DISCREPANCY: Radio Alt #1 Rx Antenna removed for R2 IAW 1C-10WA-2-34-42-01 pg 202 para 3A All Steps
see pg 3 Item 1

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16259 1250 014	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07008			TEA warning tag removed IAW 1C-10WA-2-34-42-01 pg 205 3B Step 7

DISCREPANCY: TEA warning tag installed to Ram IAW 1C-10WA-2-34-42-01 pg 205 for para 3A Step 1 ~~NOTE: Do not remove TEA until entire group of RAT STRUCK THRU~~
see pg 3 Item 1

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16284 5647	20161007				20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			cure check cpn no defects noted

DISCREPANCY: cure check due on Radio Alt #1 antennas @ 0600 Local time

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A | MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 12 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	16261 1250	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
440HA			LT O/C/G N/D/N

DISCREPANCY: Left Logo Light Insp

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	16264 0911	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
440HA			LT O/C/G N/D/N

DISCREPANCY: Right Logo Light Insp

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16T92 1417	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
440LO			rr light IAW 11-10(K)A-2-33-43-00 pg 401 para E All steps O/C/G

DISCREPANCY: RT Cursory taxiway light insp removed for rr IAW 11-10(K)A-2-33-43-00 pg 401 para A All steps

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 13 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16192 1417 DD1	20161007		☐	☐	20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			Iso clb reset and collars removed IAW 11-10(k)A-2-33-43-00 pg 401 para B Stp 5

DISCREPANCY: Iso clb pulled and collard IAW 11-10(k)A-2-33-43-00 pg 401 para A Stp 1
Note: Do Not reset clb shock hazard

ZONE: CARD: SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	16232 5400	20161007		☐	☐	20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
23001			core side C(ca)

DISCREPANCY: #1 Eng rep Core Vibe Insp

ZONE: CARD: SEQ# Cg 13 B1k1 Cg 14 B1k1-2

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16232 5400 DD1	20161007		☐	☐	20161006

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			#1 Core case closed 1.5 x 10^-2 ml pg 93 para D

DISCREPANCY: #1 Eng Core Coat open to FOM

ZONE: CARD: Cg 14 B1k1 SEQ# Cg 13 B1k2

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A / MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 830080 | PAGE 1 OF 4 PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162825400 002	20161007		☐	☐	20161007

WUC/REF DESIGNATOR: 07000 | FAULT CODE | STA CODE

DISCREPANCY: Zero W/T Scale all pulled/collared [illegible] IAW MM 11-101(2)AE-711 ; Pg 9-1-9-2 Step 1-2 ~~Note: Do not operate flaps/slats, TE2, or stow 4th LH Mx Eng thrust rod~~

CORRECTIVE ACTION: Req ultrasonic [illegible] IAW MM 11-30-1 Pg 9-3 para D all steps

ZONE: CARD: SEQ# Pg 13 Blk 2-7

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY [illegible] | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162825400 003	20161007		☐	☐	20161007

WUC/REF DESIGNATOR: 23001 | FAULT CODE | STA CODE

DISCREPANCY: #1 Eng has core vibe equipment installed

CORRECTIVE ACTION: #1 eng core vibe equip removed IAW SB 72-1313 all steps

ZONE: CARD: SEQ# Pg 13 Blk 2

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY [illegible] | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162825401	20161007		☐	☐	20161008

WUC/REF DESIGNATOR: 21003 | FAULT CODE | STA CODE

DISCREPANCY: #3 Eng req Core Vibe insp

CORRECTIVE ACTION: #3 core vibe clr

ZONE: CARD: SEQ# Pg 15 Blk 1-3

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY AA | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

930080

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: ~~87000119~~ | PAGE 15 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
M	162925401 001	20161007		☐	☐	20161009

WUC/REF DESIGNATOR: 01000 | FAULT CODE | STA CODE

DISCREPANCY: #3 Eng Core Cowl open to FOM

CORRECTIVE ACTION: #3 core cowl closed IAW 1C16V1A 2-71 CWP pg 9-3 par D

DISCOVERED BY (PRINT): Pg 150 Blk 2 SEQ# Pg 148 Blk 3 | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162925401 002	20161007		☐	☐	20161009

WUC/REF DESIGNATOR: 07000 | FAULT CODE | STA CODE

DISCREPANCY: 2 cm V/T installed seal c/b pulled/ collared IAW 1C-1614A2-21CL-1 pg 9-1-9-2 Step 1-2 Note: Do not operate flaps/slats, TR per close c/b's & cowl. Proximity has

CORRECTIVE ACTION: Seal removed & seal charge IAW 1C work card pg 9-3 par D all steps

DISCOVERED BY (PRINT): Pg 150 Blk 1 SEQ# Pg 148 Blk 3 | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162925401 003	20161007		☐	☐	20161009

WUC/REF DESIGNATOR: 23003 | FAULT CODE | STA CODE

DISCREPANCY: #3 Eng has rear Vibraquip installed

CORRECTIVE ACTION: #3 eng rear vibraquip removed IAW 1C engine 1-50 SB 72-1373 all steps

SEQ# Pg 148 Blk 3

DISCOVERED BY (PRINT) | EMPLOYEE NO

CORRECTED BY | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

235080

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: ~~07000119~~ | PAGE 16 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
P	162825402	20161007				20161008

WUC/REF DESIGNATOR: 23002 | FAULT CODE | STA CODE

DISCREPANCY: #2 Eng req Core Vibe insp

CORRECTIVE ACTION: #2 core vibe c/o

SEQ# Pg16 Blk 2-3 Pg17 Blk 1-2

CORRECTED BY: AI | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~P~~	162825402 001	20161007				20161009

WUC/REF DESIGNATOR: 01000 | FAULT CODE | STA CODE

DISCREPANCY: #2 Eng Fan Cowl open to Fom

CORRECTIVE ACTION: #2 fan cowl closed IAW MM 71-11-1 pg 8-7 par F all steps

SEQ# Pg16 Blk1

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~P~~	162825402 002	20161007				20161007

WUC/REF DESIGNATOR: 01000 | FAULT CODE | STA CODE

DISCREPANCY: #2 Eng Core Cowl open to Fom

CORRECTIVE ACTION: #2 core cowl closed IAW MM 71-11-1 pg 9-3 par F all steps

Pg17 Blk 1 SEQ# Pg16 Blk1

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 830080 | PAGE 17 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162825402 003	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
07000			leg cat removed & seg CB reset IAW 32-11-00 rev 2-7-14 pg 9-3 part D all steps

DISCREPANCY: leg W/T installed Seal clb pulled / collared IAW 32-11-00-710-814 pg 9-1-02 step 1-L Note: Do not ~~operate T/R etc~~ close clb tel ax after crush has been ~~done~~

ZONE: CARD: SEQ# pg 16 BHA

DISCOVERED BY (PRINT) EMPLOYEE NO

CORRECTED BY EMPLOYEE NO

INSPECTED BY AA EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781K	XF 781K	DATE CORRECTED
X	162825402 004	20161007				20161007

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
L3002			cont fiber equipment removed IAW SB 72-1313 all steps

DISCREPANCY #2 Eng has cont fiber equip installed

ZONE: CARD: SEQ# pg 16 BHA

DISCOVERED BY (PRINT) EMPLOYEE NO

CORRECTED BY EMPLOYEE NO

INSPECTED BY AA EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
/	16240 5403	20161003		X		

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
44PCD			

DISCREPANCY #1 [illegible] Hold Leg Broker terminal post; shorting bracket

ZONE: CARD: SEQ#

DISCOVERED BY (PRINT) EMPLOYEE NO

CORRECTED BY EMPLOYEE NO

INSPECTED BY EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 16 OF ___ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~8~~	16288 SU04	20161007		☐	☐	20161000

WUC/REF DESIGNATOR: 01000 | FAULT CODE | STA CODE

CORRECTIVE ACTION: R&R flyaway fitting off L. sealed

DISCREPANCY: R/H flyaway fitting light wiring

Sealant

see pg 17 item 3

ZONE: CARD: SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161008		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE

CORRECTIVE ACTION

DISCREPANCY: Info Note: Block NOT USED

ZONE: CARD: SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161008		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE

CORRECTIVE ACTION

DISCREPANCY: Info Note: Block Not USED

ZONE: CARD: SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/~~08~~06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
B	162820530	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Insp c/w

DISCREPANCY

A2ACC-COMBINED PREFLIGHT/BPO INSPECTION DUE

IAW 1C-10(K)A-6WC-1

(LAST UPDATE: 25 NOV 09

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
L	162820531	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Insp c/w

DISCREPANCY

A2ACC-C/W "ALL AREA" INSPECTION WORKCARDS

IAW 1C-10(K)A-6WC-1, PAGES 2-6.

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~X~~	162820532	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Flaps and slats raised, 1ea tag removed IAW 1C-10(K) A-2-27A00-00 pg. 202A-203 Para C

DISCREPANCY

A2ACC-FLAPS/SLATS LOWERED FOR PR/BPO INSP.

1EA WARNING TAG INSTALLED

~~NOTE: DO NOT OPERATE FLAP/SLAT HANDLE~~

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/~~08~~ 06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 2 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162820533	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
03215		

DISCREPANCY

A2ACC-UARRSI DOOR SAFETY LOCK INSTALLED FOR PR/BPO INSPECTION IAW 1C-10(K)A-6WC-1.

CORRECTIVE ACTION

UARRSI door safety lock removed IAW 1C-10(K)A-2-28-41-02 Pg 228 Step 8

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162820534	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
03215		

DISCREPANCY

A2ACC-LEFT & RIGHT MLG DOOR SAFETY LOCKS INSTALLED FOR PR/BPO INSPECTION IAW 1C-10(K)A-6WC-1.

SEQ#

CORRECTIVE ACTION

Left + Right MLG Door safety locks removed IAW 1C-10(K)A-2-32-00-00 Pg. 204 Para E Step 1

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162820535	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE
03215		

DISCREPANCY

A2ACC-A/R BOOM LOWERED & EXTENDED FOR PR/BPO 1EA TAG INSTALLED/2EA C/B PULLED/COLLARED IAW28CL-1 PG2-1 STEP 2A ~~NOTE: DON'T OP BOOM HANDLE/TRANSMIT ON HF RADIOS~~

SEQ#

CORRECTIVE ACTION

Boom retracted and raised, 1 ea tag removed, 2 ea cb collars removed and closed IAW 1C-10(K)A-2-28CL-1 Pg. 3-1-3-3 Sec 3 All steps

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO

INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/~~08~~ 06	TO	MDS: KC010A	SERIAL NUMBER: 83000080	PAGE 21 OF ____ PAGES

SYM	JCN-WES	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162820535-001	2016/10/08	JCN CONTINUATION			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Drive lock panel installed drive lock removed IAW 1C-10(K) A-2-28-70-00 Pg 206A Caution

DISCREPANCY

A2ACC-A/R BOOM TELESCOPE DRIVE LOCK PANEL(910AR)

REMOVED TELESCOPE DRIVE LOCK INSTALLED

(SEE PG 20 ITEM 3)

SEQ#

DISCOVERED BY (PRINT)	EMPLOYEE NO	CORRECTED BY	EMPLOYEE NO
G081 GENERATED JOB		INSPECTED BY	EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
P	162820536	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Insp C/W IAW 1C-10 (K)A-6WC-1 pg. 7-21, 55-81

DISCREPANCY

A2ACC-C/W AREA 1 & 4 INTERIOR INSPECTION WORKCARDS

IAW 1C-10(K)A-6WC-1, PAGES 7-21 & 55-81.

SEQ#

DISCOVERED BY (PRINT)	EMPLOYEE NO	CORRECTED BY	EMPLOYEE NO
G081 GENERATED JOB		INSPECTED BY	EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
S	162820537	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Insp C/W

DISCREPANCY

A2ACC-C/W AREA 1 & 4 EXTERIOR INSPECTION WORKCARDS

IAW 1C-10(K)A-6WC-1, PAGES 23-33 & 83-89.

SEQ#

DISCOVERED BY (PRINT)	EMPLOYEE NO	CORRECTED BY	EMPLOYEE NO
G081 GENERATED JOB		INSPECTED BY	EMPLOYEE NO

DATE FROM: 2016/10/~~00~~ 06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 22 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
2	162820538	2016/10/08	BPO/PREFLIGHT			

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Inspection C/W cards IAW 1C-10(K)A-6WC-1 pg 35-44

DISCREPANCY

A2ACC-C/W AREA 2 (LEFT WING) INSPECTION WORKCARDS

IAW 1C-10(K)A-6WC-1, PAGES 35-44.

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
5	162820539	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Insp C/W

DISCREPANCY

A2ACC-C/W AREA 3 (RIGHT WING) INSPECTION WORKCARDS

IAW 1C-10(K)A-6WC-1, PAGES 45-54.

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
2	162820540	2016/10/08	BPO/PREFLIGHT			20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
01000			Tire pressure c/w MLG: 185 NLG: 185 CLG: 155

DISCREPANCY

A2ACC-TIRE PRESSURES CHECKS AS FOLOWS

NL 185 NR 185 1 185 2 185 3 185 4 185

5 185 6 185 7 185 8 185 9 185 10 185

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/~~00~~ 06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 23 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
2	162820541	2016/10/08	BPO/PREFLIGHT	☐	☐	20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
03215			Sumps Drained & Insp IAW

DISCREPANCY

A2ACC-ALL AIRCRAFT FUEL SUMPS & WING POD FUEL SUMPS

(IF INSTALLED) REQUIRE DRAINING OF ACCUMULATED WATER

IAW 1C-10(K)A-6WC-1 & 1C-10(K)A-2-12CL-1.

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT)
G081 GENERATED JOB | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162825644 1901	20161006		☐	☐	20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
0413C			IAW 1C-10(K)A-2-12CL-1 pg 2-1 steps

DISCREPANCY
#1 and #3 Eng pre I's and E's inspection

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
~~M~~	162825645 002	20161006		☐	☐	20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
0413C			IAW 1C-10 T.O. REF 2-1-10 pgs 14-19-2 4

DISCREPANCY
#1 and #3 Eng post I's & E's inspection

SEQ#

CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

OPEN ITEMS CARRIED FORWARD TO NEW AFTO FORM 781K. SIGNATURE AND EMPLOYEE NUMBER

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 8300008O | PAGE 24 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	162825680	20161008		☐	☐	20161009

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
11NRF			Rt wing fairing installed IAW IC-10(K)A-2-20-00-00 Pg 201 Para 1 step A&B

DISCREPANCY: Dent discovered on Right Wing inboard Center Flap fairing; removed for R2

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
R	162825651	20161008		☐	☐	2016 10 09

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
14YAF			Rec FLT Controls discrepancy multiple times no part noted

DISCREPANCY: EOL on Right Wing outboard aileron dampner see pg 25 item 1

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
C	116225 1241	20161008		☐	☐	20161008

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
44HG5			DISCREPANCY ENTERED IN ERROR LIGHT DOES NOT REQUIRE SEALANT IAW IL-10(N)A-2-28-85-01 Pg 201 to 202 PARA B

DISCREPANCY: DRIVE FLOOD LIGHT REQUIRES SEALANT

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 25 OF ____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16282 5651001	20161008		☐	☐	2016 1009

WUC/REF DESIGNATOR: 01000
FAULT CODE:
STA CODE:

DISCREPANCY:
Right outboard aileron actuator access panel open to FOM
see pg 201 ent 2

CORRECTIVE ACTION:
Right OB fwd aileron access panel closed IAW 2-20-00-00 Page Para 1B

ZONE: CARD:
DISCOVERED BY (PRINT) EMPLOYEE NO
CORRECTED BY EMPLOYEE NO
INSPECTED BY EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16277 1356 005	20161008		☐	☐	20161008

WUC/REF DESIGNATOR: 44AFC
FAULT CODE:
STA CODE:

DISCREPANCY:
FE's Annunciator Rem Fail R2
See Pg 355 ent 3

CORRECTIVE ACTION:
FE's Annunciator R2 IAW 1C-10K-1A-2-33-15 Pg 201-203 Para 2A + 2B All Steps

ZONE: CARD: SEQ# 45 ent 2
DISCOVERED BY (PRINT) EMPLOYEE NO
CORRECTED BY EMPLOYEE NO
INSPECTED BY EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
X	16272 1356 006	20161008		☐	☐	20161008

WUC/REF DESIGNATOR: 07400
FAULT CODE:
STA CODE:

DISCREPANCY:
LEA CIB PK IAW 1C-10K-1A-2-33-15 Pg 201 Para 2A step 1 Verify Do Not ~~(CB) CIB~~ stuck [illegible]
See Page Pg 355 ent 2

CORRECTIVE ACTION:
LEA CIB reset IAW 1C-10K-1A-2-33-15 Pg 202-203 Para 2B Step b

ZONE: CARD: SEQ#
DISCOVERED BY (PRINT) EMPLOYEE NO
CORRECTED BY EMPLOYEE NO
INSPECTED BY EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161006 TO _____ | MDS: KC010A | SERIAL NUMBER: 830080 | PAGE 26 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16283 5404	20161009		☐	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION
44DC0			

DISCREPANCY: Rt. runway turnoff lt. Sealant
Cure check due @ 14001

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
				☐	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION

DISCREPANCY

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
				☐	☐	

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION

DISCREPANCY

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO 20161009	MDS: KC010A	SERIAL NUMBER: 83000080	PAGE 1 OF 5 PAGES

A. AEROSPACE INSPECTION STATUS				B. ENGINE STATUS			
NEXT PERIODIC, MAJOR, OR PHASED INSPECTION DUE NO.				PSN	ENG SER NO	ENG CHANGE DUE TIME	
TYPE	COMPL	NEXT DUE		1	517740		
A-CHECK	2013/09/13	*ERROR 9188	NEXT A-CHECK #00	2	528365		
C-CHECK	2016/04/15	2016/10/21	NEXT C-CHECK #01 NEXT SCHD C-CHECK 2016/10/21	3	530336		
PDM	2015/04/03	2017/04/28	NEXT PDM #02 NEXT SCHD PDM 2017/04/28	4			

BPO DUE ~~20161004~~ (+/- 1 DAY)
20161022

C.	CALENDAR AND HOURLY INSPECTION SCHEDULE			PAGE 2 OF _____ PAGES		
INSPECTION	FREQUENCY	NEXT DUE		NEXT DUE	NEXT DUE	NEXT DUE
A2ASH-DROGUE HOSE INSP (ITR DROG)	0 WEEKS	DUE 2016/12/25				
NDIS -HORZ STAB INSP (ITR HORZ)	90 DAYS	DUE 2017/01/04				
NDIS -SPAR CAP INSP (ITR SPAR)	90 DAYS	DUE 2017/01/04				
A2ASC-60 DAYMODE IV CHECK (ITRMD4)	60 DAYS	DUE 2016/11/12				
SCHED-60 DAY DOC REVIEW (ITR01C)	60 DAYS	DUE 2016/11/15				
A2ASP-CORE VIBE RE-INSP (ITR13A01)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601606			
A2ASP-CORE VIBE RE-INSP (ITR13A02)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601607			
A2ASP-CORE VIBE RE-INSP (ITR13A03)	0 CYCLES	DUE IN 30 CYCLES	JCN:162601608			
A2ASP-#1 BOWING RE-INSPECT (ITR13B01)	0 WEEKS	DUE 2016/10/21				
DEPOT-RH WING DAMAGE (ITR80A)	24 MONTHS	DUE 2017/08/31				
NDIS -FUEL COMP PROBE #8 (ITR80B)	1000 HOURS	DUE IN 1000 HRS @ 30457				
A2ACC-WGT AND BALANCE (I1101WGT)	36 MONTHS	DUE 2018/06/12				
A2ACC-28 DAY DROGUE CHECK (I1912805)	28 DAYS	DUE 2016/10/11	JCN:162791628			
A2ASP-FAN LUBE #1 ENG (I23 #101)	0 CYCLES	DUE IN 479 CYCLES				
A2ASP-FAN LUBE #2 ENG (I23 #202)	0 CYCLES	DUE IN 479 CYCLES				
A2ASP-FAN LUBE,#3 ENG (I23 #303)	0 CYCLES	DUE IN 483 CYCLES				
DEPOT-CARGO DOOR HINGE (I831)	15000 LANDS	OVERDUE BY 376 LANDS	JCN:162561695			
A2ASP-L/H WING ENG TCI (R2301A01)	0 CYCLES	DUE IN 2410 CYCLES				
A2ASP-TAIL #2 ENG TCI (R2301B02)	0 CYCLES	DUE IN 2697 CYCLES				
A2ASP-R/H WING ENG TCI (R2301C03)	0 CYCLES	DUE IN 3699 CYCLES				
A2ASP-APU DUE TIME CHANGE (R2401A01)	0 CYCLES	DUE IN 8983 CYCLES				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#1)	3 YEARS	DUE 2018/12/31				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#2)	3 YEARS	DUE 2018/12/30				
A2ASE-GOX CYL HYDR-STAT CK (R47OXY#3)	3 YEARS	DUE 2018/08/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A01)	20 YEARS	DUE 2025/08/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A02)	20 YEARS	DUE 2036/03/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A04)	20 YEARS	DUE 2036/03/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A06)	20 YEARS	DUE 2036/09/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A07)	20 YEARS	DUE 2036/09/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A3A)	20 YEARS	DUE 2036/03/31				
A2ASE-R2 CHEM O2 GENERATOR (R4723A3B)	20 YEARS	DUE 2025/06/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A5A)	20 YEARS	DUE 2020/06/30				
A2ASE-R2 CHEM O2 GENERATOR (R4723A5B)	20 YEARS	DUE 2029/01/31				
A2ASE-FIRE EXT BOTTLE (R4921B11)	60 MONTHS	DUE 2019/04/30				
A2ASE-FIRE EXT BOTTLE (R4921B12)	60 MONTHS	DUE 2019/12/31				
A2ASE-FIRE EXT BOTTLE (R4921B21)	60 MONTHS	DUE 2017/07/31				
A2ASE-FIRE EXT BOTTLE (R4921B22)	60 MONTHS	DUE 2020/08/31				
A2ASE-FIRE EXT BOTTLE (R4921B31)	60 MONTHS	DUE 2019/10/31				
A2ASE-FIRE EXT BOTTLE (R4921B32)	60 MONTHS	DUE 2019/12/31				
A2ASC-ELT BATTERY (DOM) (R6620A01)	5 YEARS	DUE 2018/08/31				
A2ASC-ELT BATTERY (DOM) (R6620A02)	5 YEARS	DUE 2017/07/31				

INSPECTION	FREQUENCY	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE
A2ASC-PORTABLE ELT BATTERY(R6620B)	5 YEARS	DUE 2018/03/31			
A2ASC-UNDERWATER BEAC BATT(R7234ALT)	6 YEARS	DUE 2019/05/31			
A2ASC-UNDERWATER BEAC BATT(R7234ART)	6 YEARS	DUE 2019/07/31			
A2ACC-DOOR SLIDE/RAFT (R9125ALT)	3 YEARS	DUE 2016/10/31 JCN:162301628			
A2ACC-DOOR SLIDE/RAFT (R9125ART)	3 YEARS	DUE 2016/12/31 JCN:162591694			
A2ASE-DROGUE GUILL CART (R97DG1LT)	30 MONTHS	DUE 2018/03/08			
A2ASE-DROGUE GUILL CART (R97DG1RT)	30 MONTHS	DUE 2018/03/08			
A2ASE-SQUIB CART(DOI/DOM) (R9718A1A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A1B)	120 MTH INSTAL	DUE 2019/08/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2B)	120 MTH INSTAL	DUE 2017/07/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2C)	120 MTH INSTAL	DUE 2017/06/30 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A2D)	120 MTH INSTAL	DUE 2017/07/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A3A)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
A2ASE-SQUIB CART(DOI/DOM) (R9718A3B)	120 MTH INSTAL	DUE 2017/01/31 FROM DOM			
ISO2 -A-CHECK (SIS01A)	0 WEEKS	DUE 2016/10/21			
DEPOT-C-CHECK (SPD01C)	0 WEEKS	DUE 2017/04/28			

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 4 OF _____ PAGES

SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM UJC QTY STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER
		D. DELAYED DISCREPANCIES, URGENT ACTION, AND OUTSTANDING ROUTINE TCTO'S			
SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM UJC QTY STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER
	150571256	A2ASE-ARO FLOOR LIGHT RHEOSTAT INOP	J001CA50579003 BQ 1 B/O	44FA0	
	152049667	DEPOT-FUEL-TANK INSPEC&REPLACE WIRE SHIELDI CW TCTO 1C-10(K)A-1285 WB/NA P		0112282 2019/11/01	
	152785610	DEPOT-CENTER GEAR EMER RELEASE LEVER REQ SHOT P EN. CARRY FWD TO NEXT ARM REMOVAL AWT NEXT C-CH CK		13CH0	
	161295643	SMCO -1 EA SCREW HAS BROKEN SCREW HEAD INBD #3 ND V PANEL	AWT PNL REM+2HRS	11EAJ	
	161329625	DEPOT-INST LAV OVERSERVICE S/O VALVE CW TCTO 1C-10(K)A-1298 W-B APPL P		0101529 2020/02/06	
	161821350	SMCO -#3 ENG I/B SAIL BOAT PNL HAS 1 EA BAD NUT LATE	AWT PNL REM+2HRS	11EA5	
	161901209	A2ACC-CO PILOT MAP LIGHT INOP		71EH0	
	161921417	A2ACC-RT RUNWAY T/O LT INOP		44DC0	
	161971250	A2ACC-REFRIGERATOR DOES NOT WORK	AD# 13758780	12CAH	
	162211442	A2ACC-FWD RT WING FORMATION LIGHT B/O	Req # 13840430	44DKB	
	162211444	A2ACC-BOOM MARKER LT BURNT OUT		4476A	
	162251241	A2ACC-DROGUE FLOODLIGHT REQUIRES SEALANT		44HE3	
	162251251	A2ACC-ARO SIDE VIEWING DOORS WILL NOT LOCK IN P ACE		11ML9	
	162301628	A2ACC-REPLACE DOOR SLIDE/RAFT IAW APPROPIATE T.O. GIVE SER.# AND DOI TO P&S	DOOR SLIDE/RAFT	91AAQ	
	162381240	SMCO -1 EA BROKEN NUT PLATE FWRD ACCESSORY COMP PANEL	AWT PNL REM+2HRS	11DEJ	
	162561695	DEPOT-UPPER CARGO DOOR HINGE PIN & LOBE HOLES *INITIAL INSP @ 15000 LANDS AND EVERY 7500 LANDS THEREAFTER IAW 1C-10(K)A-	C/F TO C-CK	11CDS	

AFTO FORM 781K MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 5 OF _____ PAGES

SYM	JOB CONTROL NUMBER	TCTO NUMBER AND PUBLICATION DATE	SUPPLY INFORMATION DOC NUM / UJC QTY STA	TCTO DATA CODE WUC/REFDES GROUND DATE	TRNSFR BY EMPLOYEE NUMBER
//	~~162611250~~	~~A2ACC-LEFT LOGO LIGHT INOP~~		~~44DHA~~	
//	~~162640911~~	~~A2ACC-RIGHT LOGO LIGHT INOP~~		~~44DHA~~	
//	162729872	DEPOT-FUEL SYSTEM CHANGE FUEL PUMP CONTRO; CW TCTO 1C-10(K)A-1299 W-B APPL P		0101771 2020/07/03	
//	162749905	DEPOT-ENG FUEL SUPPLY REPLACE PUMP RELAYS CW TCTO 1C-10(K)A-1300 W-B APPL P		0101772 2020/07/03	
//	162749932	DEPOT-FUEL-ENGINE FUEL SUPPLY-REPLACE FUEL PUM CW TCTO 1C-10(K)A-1302 WB/NA P		0101938 2020/07/03	

OPEN ITEMS CARRIED FORWARD TO NEW AFTO FORM 781K. SIGNATURE AND EMPLOYEE NUMBER

AFTO FORM 781K MAINTENANCE DISCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/06 TO 20161009 | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF 1 PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE ~~AND OIL ADDED (HALF PINTS, PINTS, QUARTS)~~

				NO 1 POSITION SER # 517740/ OIL CHANGE TIME 0 DUE CHG N/A			NO 2 POSITION SER # 528365/ OIL CHANGE TIME 0 DUE CHG N/A			NO 3 POSITION SER # 530336/ OIL CHANGE TIME 0 DUE CHG N/A			NO 4 POSITION SER # OIL CHANGE TIME 0 DUE CHG				
DATE FLOWN	CUM TOTAL HOURS FLOWN	CUM. GEAR CYCL	OIL SMP	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	TOTAL LANDS	FULL STOP LANDS
PREV TOTAL	29432.7	9315			24933.8	14052.0		25968.7	13251.0		25661.1	12408.0		1.6	0.0	15373	5789
2016/09/28	6.9	1			6.9	1.0		6.9	1.0		6.9	1.0		0.0	0.0	1	1
TOTAL	29439.6	9316			24940.7	14053.0		25975.6	13252.0		25668.0	12409.0		5.1	0.0	15374	5790
2016/10/01	6.4	1			6.4	1.0		6.4	1.0		6.4	1.0		0.0	0.0	1	1
TOTAL	29446.0	9317			24947.1	14054.0		25982.0	13253.0		25674.4	12410.0		11.5	0.0	15375	5791
2016/10/02	11.5	1			11.5	1.0		11.5	1.0		11.5	1.0		0.0	0.0	1	1
TOTAL	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0		11.5	0.0	15376	5792
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
CARRIED FORWARD	29457.5	9316			24958.6	14055		25993.5	13259		25685.9	12411		0	0	15376	5792

AFTO FORM 781J

AEROSPACE VEHICLE - ENGINE FLIGHT

G081D7046-1 TCTO STATUS REPORT FOR AIRCRAFT: 83000080 CURRENT AS OF 1416 PACIFIC 06/OCT/16 PAGE 1

NOTE: THE FOLLOWING CODES ARE USED IN THIS LISTING:
C/W = TCTO HAS BEEN COMPLIED WITH. (STAT-CD = 01, 02, 03)
" " = TCTO NOT AGAINST ENG.
NCW = TCTO HAS NOT BEEN COMPLIED WITH. (STAT-CD = 06-18, 20, 21)
N/R = TCTO HAS NOT BEEN RELEASED BY THE DEPOT FOR INSL ON THE A/C. (ST-CD = 19)
N/A TCTO S ARE NOT APPLICABLE. (STAT-CD = 04, 05, 22)
E = AFTER THE AIRCRAFT STATUS CODE INDICATES EXPIRED A/C TCTO.
E = AFTER THE ENGINE 4 STATUS CODE INDICATES EXPIRED ENG TCTO.
A = AFTER THE ENG SER NUM MEANS 3000 TO 5000 HOUR ENGINE.
C = AFTER THE ENG SER NUM MEANS 5000 HOUR UNLIMITED MODULAR ENG.

AIRCRAFT TCTO NUMBER	TCTO DATACD	AIRCRAFT TCTO NOMENCLATURE	GR DATE	STATUS CODE	EX TIM	ENGINE TCTO NUMBER	TCTO DATACD	ENGINE TCTO NOMENCLATURE	ENG 1 7740	ENG 2 8365	ENG 3 0336	ENG 4
1C-10(K)A-1285	0112282	FUEL-TANK INSPEC&REPLACE	19305	NCW	999							
1C-10(K)A-1298	0101529	INST LAV OVERSERVICE S/O	20037	NCW	146							
1C-10(K)A-1299	0101771	FUEL SYSTEM CHANGE FUEL	20185	NCW	146							
1C-10(K)A-1300	0101772	ENG FUEL SUPPLY REPLACE	20185	NCW	146							
1C-10(K)A-1302	0101938	FUEL-ENGINE FUEL SUPPLY-	20185	NCW	999							
1KC-10A-001	Y141001	INSPECTION OF THE FLAP H		N/A	030							
1C-10(K)A-1268	0112389	TCTO 1C-10(K)A-1268: INS		C/W	999							
1C-10(K)A-1267	0196993	TCTO 1C-10(K)A-1267: INS		C/W	999							
1C-10(K)A-1294	0112307	MOD REMOVE HYDR AIR ELIM		C/W	999							
KC-10 LOTI	L060601	LOTI FOR INSPECTION OF B		C/W	180							
KC-10 LOTI	L060602	LOTI OF KC-10A AUXILIARY		C/W	010							
1C-10(K)A-1292	0112304	REPLACE APU DOOR ACTUATI		C/W	999							
1C-10(K)A-1297	0112311	OPEN&PERMANENT COLLAR PO		C/W	999							
1C-10(K)A-1296	0112310	STABILIZERS-HORIZ STAB/C		C/W	999							
1C-10(K)A-1277	0112411	INSTALLATION OF WASTE WA		C/W	999							
1C-10(K)A-1291	0112303	TCTO1C-10(K)A-1291COM,NA		C/W	999							

***** END OF LIST *****

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PTFL

-6

MAMR8038 FLYING HOUR DETAIL FOR A/C 83000080

AS OF 01/30/17 23.07.46 ZULU - DATA SOURCE: IMS

DATE FLOWN	TAKEOFF TIME	TAKEOFF ICAO	LANDING TIME	LANDING ICAO	HOURS FLOWN	UPDATE BASE	MISSION SYMBOL	MISSION NUMBER	UPDATE DATE	SQUAD	ASSIGNED STATUS	TOTAL LANDINGS	FULL STOPS
01 OCT 16	1036	OMAM	1702	ETAR	6.4	XDAT	P7AA	6MR52QH02275	16277	L&	CA	01	1
02 OCT 16	1308	ETAR	0040	KSUU	11.5	XDAT	P7AA	6MR52QH02275	16277	L&	CA	01	1
11 OCT 16	1533	KSUU	2102	KSUU	5.5	XDAT	T2AT	6UN52TI63285	16285	L&	CA	18	1
12 OCT 16	0305	KSUU	0657	KSUU	3.9	XDAT	T3MA	6UN52TC23286	16286	L&	CA	07	1
23 OCT 16	1628	KSUU	1731	KSUU	1.1	XDAT	T3OC	6JH420W23297	16305	L&	CA	01	1
23 OCT 16	2006	KSUU	0021	PAEI	4.3	XDAT	T3OC	6JH420W23297	16305	L&	CA	01	1
30 OCT 16	1809	PAEI	0001	KSUU	5.9	XDAT	T3OC	6PH420W23300	16305	L&	CA	01	1
01 NOV 16	1546	KSUU	1756	KMUO	2.2	XDAT	T3MA	6UN52TC22306	16327	L&	CA	01	1
22 NOV 16	1955	KMUO	2331	KGSO	3.6	XDAT	O30A	6CN52MX80327	16333	L&	CA	01	1

TOTAL

44.4

KC 10A, T/N 83-000080, 1 November 2016
DD-65

KC-10 MAINTENANCE AND UTILIZATION SCHEDULE

60 AMW - 2016

Aircraft / Remarks	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
	1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct
	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305
83-0060WC		SWA DEP	BLK			TNO HS/SC			HS/SC		FF		TNO	PD/DR	WA		1A/3A TCI			PDV/DR	1A/3A BQ		FXC	CW-420 P	>	>	>	>	BLK		

KC 10A, T/N 83-000080, 1 November 2016
DD-66

COLOR LEGEND
TACC
LOCAL
NON-POSSESSE
DEPLOYED

Site Details 763114

Site:	60 MXS [AMC]	**Date:**	10/13/2016 9:45:00 AM	**Tags:** NO
Flight:	Accessory	**QLF Findings:**	0	**Forms:** NO
Section:	Hydraulics	**REFDES/WUC:**	46GAN	**KTL:** N
Shift:	8hr Days	**Equip/Acft:**	83-0080	
		Equip Type:	KC-10	

Evaluation Details

Eval Topic: OBSERVED EVENT - CONDITIONS / TECHNICAL VIOLATIONS

QA Evaluator: MM12

Eval Type: PE

Eval Item: AIRCRAFT MAINTENANCE

Emp Supervisor:

PE Type: IE

Eval SubItem: HYDRAULICS

Rating: PASS

Eval Area: Boom (removal/installation)

AQL: 1

Narrative:
Performed PE on boom install.

Critical: N

Finding	Emp Name	Emp Num	Status	AFSC	Skill	Cause Code	Category	Remarks
748802	MM3		AD	2A6X5	7		NONE	Zero Defects Noted.

Site Details 759599

Site:	60 MXS [AMC]	**Date:**	10/13/2016 2:30:00 AM	**Tags:**	YES
Flight:	Accessory	**QLF Findings:**	0	**Forms:**	YES
Section:	Hydraulics	**REFDES/WUC:**	46GAF	**KTL:**	N
Shift:	12hr Nights	**Equip/Acft:**	83000080 spot 210		
		Equip Type:	KC10		

Hydro

Evaluation Details

Eval Topic: LOCAL ONLY 60 MXS

QA Evaluator:

Eval Type: PE

Eval Item: GENERAL

Emp Supervisor:

PE Type: IE

Eval SubItem: HYDRO BACKSHOP

Rating: PASS

Eval Area: MINOR COMPONENT

AQL: 1

Narrative:
Conducted a PE on R2 of boom gimbal. TBA check good.

Critical: N

Finding	Emp Name	Emp Num	Status	AFSC	Skill	Cause Code	Category	Remarks
744743	MM2		AD	2A6X5	7		NONE	Zero Defects Noted.

Day

MAMR8038 FLYING HOUR DETAIL FOR A/C 83000080

AS OF 10/11/16 21.44.21 ZULU - DATA SOURCE: IMS

DATE FLOWN	TAKEOFF TIME	TAKEOFF ICAO	LANDING TIME	LANDING ICAO	HOURS FLOWN	UPDATE BASE	MISSION SYMBOL	MISSION NUMBER	UPDATE DATE	SQUAD	ASSIGNED STATUS	TOTAL LANDINGS	FULL STOPS
01 OCT 16	1036	OMAM	1702	ETAR	6.4	XDAT	P7AA	6MR52QH02275	16277	L&	CA	01	1
02 OCT 16	1308	ETAR	0040	KSUU	11.5	XDAT	P7AA	6MR520H02275	16277	L&	CA	01	1
11 OCT 16	1533	KSUU	2102	KSUU	5.5	XDAT	T2AT	6UN52TI63285	16285	L&	CA	18	1

TOTAL

23.4

KC 10A, T/N 83-000080, 1 November 2016

DD-70

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I

MISSION DATA

1. DATE (DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION
11 OCT 2016	KC010A	83-0080	60 TH AMW (AMC)/ XDAT	TRAVIS AFB, CA

FLT SEQ 6	MISSION NUMBER 7	MISSION SYMBOL 8	FROM (ICAO) 9	TO (ICAO) 10	TAKE OFF TIME (Z) 11	LAND TIME (Z) 12	TOTAL TIME 13	14. LANDINGS TOUCH & GO	14. LANDINGS FULL STOP	14. LANDINGS TOTAL	SORTIES 15	SPECIAL USE 16
a.	6LUN52TJ63285	T2AT	KSUU	KSUU	1535	2102	5.5	17	1	18	1	
b.												
c.												
d.												
e.												
f.												

CONVERSION Minutes	Dur
1 ~ 2	= .0
3 ~ 8	= .1
9 ~ 14	= .2
15 ~ 20	= .3
21 ~ 26	= .4
27 ~ 33	= .5
34 ~ 39	= .6
40 ~ 45	= .7
46 ~ 51	= .8
52 ~ 57	= .9
58 ~ 60	= Next

17. FLIGHT AUTH #	18. ISSUING UNIT	GRAND TOTALS	5.5	17	1	18	1
17-0007	0009 ARS/ FTU						

II

AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	FLIGHT CONDITIONS NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	RESV STATUS 38
0009			IP			5.5			5.5	1									
0006			MP						5.5	1									
0009			FPN						5.5	1									
0009			UP						5.5	1									
0009			MF	5.5					5.5	1									
0009			IB			5.5			5.5	1									
0006			UB	5.5					5.5	1									

39. MAINT REVIEW	40. PILOT REVIEW (If different, AC for each Flt Seq should initial)	41. SARM REVIEW	42. ARMS INPUT DATE:	ARMS INPUT INITIALS	ARMS AUDIT DATE	ARMS AUDIT INITIALS:
	b. c. d. e. f.					

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out.

Printed Name: _____ Rank: _____ Branch of Svc: _____ DSN: _____ Signature: _____

AFTO FORM 781, 20080911 PREVIOUS EDITION IS OBSOLETE ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT

DATE FROM: 20161009 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 6 OF _____ PAGE

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16285 1236	20161011		☐	☐	

WUC/REF DESIGNATOR: 46GB0 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: Boom roll gauge shows 8 degrees right when boom is centered at 0 degrees

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) IBO | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16285 1257	20161011		☐	☐	

WUC/REF DESIGNATOR: 52DE0 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: AUTO SPOILER DO NOT USE LIGHT ILLUMINATED WHILE SPOILERS WERE DISARMED.

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16285 1258	20161011		☐	☐	20161011

WUC/REF DESIGNATOR: 71BC0 | FAULT CODE | STA CODE | CORRECTIVE ACTION: Reset system logic OK 16.

DISCREPANCY: EAD1 PITCH DEGREE SCALE GOES AWAY DURING POWER SWAPS

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

PCN:67089-04 DATE: 2016/10/09 MDS: C010A PAGE 1 OF ___ PAGES

PREVIOUS AIRCREW DISCOVERED DISCREPANCIES

WUC/REFDES A HOW W --------DATE--------
MMN/FC T MAL D DISCOVERED COMPLETED DISCREPANCY

AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES

AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES

24DA0 X 799 D 2016/09/27 2016/10/04 162711256 A2ASP-APU USING BAT POWER LIGHT WILL NOT EXTINGUISH AF
TER APU SHUT DOWN

SYMBOL: / MAN NUM: **CORRECTIVE ACTION: APU GOOD NO DEFECT NOTED ** ACT BASE: PTFL

AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES

AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES

71EFF

/ **

DATE FROM: 2016/10/09 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF ____ PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE ~~AND OIL ADDED (HALF PINTS, PINTS~~, QUARTS)

				NO 1 POSITION SER # 517740/ OIL CHANGE TIME 0 DUE CHG N/A			NO 2 POSITION SER # 528365/ OIL CHANGE TIME 0 DUE CHG N/A			NO 3 POSITION SER # 530336/ OIL CHANGE TIME 0 DUE CHG N/A			NO 4 POSITION SER # / OIL CHANGE TIME 0 DUE CHG				
DATE FLOWN	CUM TOTAL HOURS FLOWN	CUM. GEAR CYCL	OIL SMP	OAT IN LD	ENGINE TIME	ENGINE CYCLES	OAT IN LD	ENGINE TIME	ENGINE CYCLES	OAT IN LD	ENGINE TIME	ENGINE CYCLES	OAT IN LD	ENGINE TIME	ENGINE CYCLES	TOTAL LANDS	FULL STOP LANDS
PREV TOTAL	29432.7	9315			24933.8	14052.0		25968.7	13251.0		25661.1	12408.0		1.8	0.0	15373	5789
2016/09/28	6.9	1			6.9	1.0		6.9	1.0		6.9	1.0		0.0	0.0	1	1
TOTAL	29439.6	9316			24940.7	14053.0		25975.6	13252.0		25668.0	12409.0		5.1	0.0	15374	5790
2016/10/01	6.4	1			6.4	1.0		6.4	1.0		6.4	1.0		0.0	0.0	1	1
TOTAL	29446.0	9317			24947.1	14054.0		25982.0	13253.0		25674.4	12410.0		11.5	0.0	15375	5791
2016/10/02	11.5	1			11.5	1.0		11.5	1.0		11.5	1.0		0.0	0.0	1	1
TOTAL	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0			0.0	15376	5792
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
CARRIED FORWARD																	

AFTO FORM 781J

AEROSPACE VEHICLE - ENGINE FLIGHT

KC-10 In-flight Drogue Check Worksheet

(Circle all applicable answers)

ACFT Number: 83000080

MSN Number:

JCN: 162791628

MSN Symbol:

Was in flight drogue check accomplished?

1) (Yes) (procede to # 3) No

Reason In Flight drogue check was not accomplished.

2)

What were the results of the check?

3) (Pass) (procede to end) Fail

At what airspeed and altitude did you start?

4)

Did drogue control "Ready Light" come on?

5) (Yes) No

Did hose reel response inoperative light come on?

6) Yes (No)

Was hose reel response inoperative light on steady or flickering?

7) Steady Flickering N/A

What step in the checklist was the hose reel monitor switch turned on?

8)

With the hose reel monitor switch turned on and the test switch in the system position what were the results?

9)

This form was completed by: Pilot Copilot Engineer Debrief (Boom) IBO

Date: 11 OCT 16

Time: 1100 L

Name SSgt

Aircraft:	Date:	Debriefer:
30-080	20161012	

Prior to Debriefing: Review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies

Scheduled Flight Hours:	6.5	Flying Squadron
Actual Flight Hours:	5.5	
Reason Late/Early By (+/- .5 Hrs)	Tank AR N/A	6th - LC 79th - LB 76th - L$ 9th - L& 2nd - L" 78th - L% 70th - L' 32nd - L#

Training Complete:	Yes (No)	Percentage Complete:	80%
Reason Training Was Not Completed		Type Of Training Not Completed	
BOOM ROLL CAGE MALFUNCTION		TANKER WORK C17	
Recievers Hit / Missed (How many Each Type?)		Type Of Training Completed (If < 50%)	
KC10 / C17 IEA			

If UARRSI Contacts were wet, ensure aircrew has documented AF Form 664

UARRSI:	4	Boom Cycles:	2	Boom Contacts:	10
		Drogue Cycles:	1	Drogue Contacts	0
Fuel Offload:	0	Left Warp Cycles:	0	Left Warp Contacts:	0
		Right Warp Cycles:	0	Right Warp Contacts:	0

Was Drogue Check Done?	(Yes) No
Reason check was not accomplished:	
Was an engine coupon done?	Yes (No)
Reason engine coupon wasn't documented:	NO TIME

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Repeat/Recur:	Yes (No)	Pro Super	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
Original JCN:			
Repeat/Recur JCN:			
Code 3:	Yes No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
JCN:			
Air Abort:	Yes No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
JCN:			
Bird Strike:	Yes No	Pro Super	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
JCN:			
Thrust Reverser Discrepancies:	Yes No	Pro Super	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
JCN:			
Engine Shutdown:	Yes No	Pro Super	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
JCN:			
Engine:	#1 #2 #3	Pro Super	
Engine Serial Number:			
Engine Hours:			
Shutdown Location ICAO:			
Uncommanded flight control input:	Yes No	Pro Super	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures
JCN:			
Dropped Objects:	Yes No	Pro Super	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
JCN:			
Volcanic Ash:	Yes No	Pro Super	If yes, make an entry in the 781 A's, and document information on G081 screen F9090 with WUC 04293 to create the volcanic ash discrepancy.
JCN:			
Low Level Salt Water:	Yes No	Pro Super	If yes, comply with T.O. 1-1-691, *Aircraft Weapon System Cleaning and Corrosion Control*.
JCN:			
Foot & Mouth Disease:	Yes (No)	Pro Super	If yes, Ensure ALL locations where the aircraft stopped and was chemically disinfected for Foot and Mouth Disease, that an entry is made in the 781A's. Debriefers will document this information in G081 using screen 9051, with work unit code (WUC) 02400 to create the Foot and Mouth Decontamination discrepancy. Report this information to HQ AMC/ A4MJS: DSN 779-2622 / Commercial 618-229-2622.
JCN:			

Prior to debrief:	Print out & prep Pre-launch package. Fill out Debrief worksheet heading with Date, Tail number, & Mission number
During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
Check AFTO Form 781 for:	Blocks 1-15 filled out. Correct date, Tail Number, Mission Number, Mission Symbol, ensure dates, and times are in Zulu, and the Pilots initials are in the Review Block.
Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13 Servicing Data is correctly filled out.
Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
Complete 9050 Screen:	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
Complete 9070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
Fax/email Appropriate Documents	Fax/ email any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

2 YEAR LOCAL KC-10 DEBRIEF CHECKLIST OA REVIEW I.A.W AFI21-101_AMCSUP_2_CL-2 14 FEBRUARY 2011

RANK/NAME:

SIGN:

DATE:

AIR FORCE WILDLIFE STRIKE REPORT

1. UNIT--WING/SQUADRON
60 AMW
60 AMXS

2. AIRCRAFT *(alphanumeric designation)*
KC-10

3. TAIL NUMBER/REGISTRATION
83-0080

4. DATE *(dd mmm yyyy)*
12 Oct 2016

5. TIME *(local)*
0030

6. DAILY PERIOD
- ☐ UNKNOWN
- ☐ DAWN
- ☐ DAY
- ☐ DUSK
- ☒ NIGHT

7a. AIRPORT
NAME Travis AFB
ICAO KSUU
HOST ID *(FAA IDENT)* —
RUNWAY —
OTHER

7b. SPECIAL USE AIRSPACE
- ☐ ALERT
- ☐ DANGER
- ☐ MILITARY OPERATIONS AREA
- ☐ PROHIBITED
- ☐ RESTRICTED
- ☐ TEMPORARY RESERVED AIRSPACE
- ☐ RESTRICTED
- ☒ UNKNOWN

NAME:

7c. LOW-LEVEL ROUTE
- ☐ INSTRUMENT ROUTE IR
- ☐ SLOW ROUTE SR
- ☐ VISUAL ROUTE VR
- ☒ UNKNOWN

OTHER:

8. STRIKE AWARENESS IN FLIGHT
- ☐ YES
- ☒ NO
- ☐ UNKNOWN

9. LATITUDE *(DDMM.M)*
N
S —

10. LONGITUDE *(DDMM.M)*
E —
W

11. EFFECT ON FLIGHT
- ☐ UNKNOWN
- ☐ ABORTED TAKE-OFF
- ☐ ENGINES SHUTDOWN
- ☒ NONE
- ☐ OTHER
- ☐ PRECAUTIONARY LANDING

12. SPEED *(KIAS)* —

13. ALTITUDE *(ft AGL)* —

14. PHASE OF OPERATION
- ☒ UNKNOWN
- ☐ PARKED
- ☐ TAXIING
- ☐ TAKEOFF ROLL
- ☐ TAKEOFF INITIAL CLIMB
- ☐ CRUISE CLIMB
- ☐ CRUISE
- ☐ CRUISE LOW LEVEL
- ☐ RANGE OPS
- ☐ CRUISE DESCENT
- ☐ HOVER
- ☐ LANDING FINAL APPROACH

14. PHASE OF OPERATION (cont)
- ☐ LANDING TRAFFIC PATTERN
- ☐ LANDING FLARE ROLLOUT
- ☐ MISSED APPROACH/TOUCH & GO
- ☐ OTHER

15. BIRD AVOIDANCE MODEL
- ☒ UNKNOWN
- ☐ NO REPORT
- ☐ LOW
- ☐ MODERATE
- ☐ SEVERE

16. BIRD WATCH CONDITIONS
- ☒ UNKNOWN
- ☐ NO REPORT
- ☐ LOW
- ☐ MODERATE
- ☐ SEVERE

17. WILDLIFE STRUCK
- ☐ UNKNOWN
- ☐ NONE
- ☒ ONE
- ☐ 2-11
- ☐ 11-100
- ☐ MORE THAN 100

18. AVIAN HAZARD ADVISORY SYSTEM
- ☒ UNKNOWN
- ☐ NO REPORT
- ☐ LOW
- ☐ MODERATE
- ☐ SEVERE

19. REMARKS ON LOCATION
Left Wing at root between fuselage and # 1 eng.

AF IMT 853, 20051015, V2

AIR FORCE WILDLIFE STRIKE REPORT

20. COST ESTIMATE

- [x] NOT APPLICABLE
- [ ] ESTIMATED COST *(not yet known)*
- [ ] ACTUAL COST

$

21. CLASS

- [x] CLASS A
- [ ] CLASS B
- [ ] CLASS C
- [ ] CLASS E

22. IMPACT POINTS

(description of impact points and struck or damaged; if list is not representative of the strike, please explain in the remarks section)

	S	D
UNKNOWN	☐	☐
INSIDE ENGINE	☐	☐
INSIDE ENGINE 2	☐	☐
INSIDE ENGINE 3	☐	☐
INSIDE ENGINE 4	☐	☐
INSIDE ENGINE 5	☐	☐
INSIDE ENGINE 6	☐	☐
INSIDE ENGINE 7	☐	☐
INSIDE ENGINE 8	☐	☐
OUTSIDE ENGINE 1	☐	☐
OUTSIDE ENGINE 2	☐	☐
OUTSIDE ENGINE 3	☐	☐
OUTSIDE ENGINE 4	☐	☐
OUTSIDE ENGINE 5	☐	☐
OUTSIDE ENGINE 6	☐	☐
OUTSIDE ENGINE 7	☐	☐
OUTSIDE ENGINE 8	☐	☐
FUSELUGE/ANTENNA/SKIN	☐	☐
RADOME/NOSE	☐	☐
WINDSHIELD/CANOPY	☐	☐
WINDSHIELD PENETRATION	☐	☐
TAIL/STABILIZER/RUDDER	☐	☐
WEAPONS/MISSILE POD	☐	☐
LANDING GEAR	☐	☐
LIGHTS	☐	☐
WING/ROTOR	☒	☐
FUEL TANKS	☐	☐
PROPELLER	☐	☐
ECM PODS/PYLONS	☐	☐
OTHER	☐	☐

23. REMAINS FOUND

- [x] YES, remains found on aircraft
- [ ] YES, remains found on runway *(aircraft struck known)*
- [ ] YES, remains found on runway *(aircraft struck unknown)*
- [ ] NO

24. DATE REMAINS SENT TO SMITHSONIAN INSTITUTION

(dd mmm yyyy)

25. ADDITIONAL REMARKS

26. SHIPPING WILDLIFE REMAINS

IAW AFMAN 91-223, 5.4.2, feather remains from every bird strike (if available) must be sent to the Smithsonian National Museum of Natural History for identification. Send feathers or feather fragments and a copy of the corresponding AFSAS report to:

Smithsonian Institution
Feather Identification Lab
NHBE 610 MRC 116
PO BOX 37012
Washington, DC 20013-7012

Send as much material as possible to include feet, beak, wing, tail, breast, and back feathers. For wildlife strikes other than birds, send samples of skin, fur, teeth, other non-fleshy remains, or a picture if possible, along with the corresponding AFSAS report to the Smithsonian for identification.

In the event that remains are found on the runway as the result of a suspected strike, they should also be sent to the Smithsonian.

For overnight shipping of a specimen, wrapping the remains in newspaper and freezing it entirely should be adequate. If you collect a whole bird carcass, freeze it per the above instructions and contact the Smithsonian at to see if they could use the specimen in their collection. For overnight shipping send the remains to:

Smithsonian Institution
Feather Identification Lab
ATTN:
NHBE

Washington DC 20560

AF IMT 853, 20051015, V2 (REVERSE)

MAMR8038 FLYING HOUR DETAIL FOR A/C 83000080

AS OF 10/12/16 07.28.37 ZULU - DATA SOURCE: IMS

DATE FLOWN	TAKEOFF TIME	TAKEOFF ICAO	LANDING TIME	LANDING ICAO	HOURS FLOWN	UPDATE BASE	MISSION SYMBOL	MISSION NUMBER	UPDATE DATE	SQUAD	ASSIGNED STATUS	TOTAL LANDINGS	FULL STOPS
01 OCT 16	1036	OMAM	1702	ETAR	6.4	XDAT	P7AA	6MR52QH02275	16277	L&	CA	01	1
02 OCT 16	1308	ETAR	0040	KSUU	11.5	XDAT	P7AA	6MR520H02275	16277	L&	CA	01	1
11 OCT 16	1533	KSUU	2102	KSUU	5.5	XDAT	T2AT	6UN52TI63285	16285	L&	CA	18	1
12 OCT 16	0305	KSUU	0657	KSUU	3.9	XDAT	T3MA	6UN52TC23286	16286	L&	CA	07	1

TOTAL

27.3

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I

MISSION DATA

1. DATE (DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION
7 Oct 2016	KC-010A	83 - 0080	60 AMW (AMC) XDAT	TRAVIS AFB, CA

FLT SEQ 6	MISSION NUMBER 7	MISSION SYMBOL 8	FROM (ICAO) 9	TO (ICAO) 10	TAKE OFF TIME (Z) 11	LAND TIME (Z) 12	TOTAL TIME 13	14. LANDINGS TOUCH & GO	14. LANDINGS FULL STOP	14. LANDINGS TOTAL	SORTIES 15	SPECIAL USE 16
a.	6UN52TC23286	T3MA	KSUU	KSUU	0305	0657	3.9	6	1	7	1	
b.												
c.												
d.												
e.												
f.												
GRAND TOTALS							3.9	6	1	7	1	

CONVERSION

Minutes	Dur
1 ~ 2	= .0
3 ~ 8	= .1
9 ~ 14	= .2
15 ~ 20	= .3
21 ~ 26	= .4
27 ~ 33	= .5
34 ~ 39	= .6
40 ~ 45	= .7
46 ~ 51	= .8
52 ~ 57	= .9
58 ~ 60	= Next

17. FLIGHT AUTH # 17-0004 | 18. ISSUING UNIT 0009 ARS

II

AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	FLIGHT CONDITIONS NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	RESV STATUS 38
0009			IP			3.9			3.9	1	3.9	3.9							
0009			EP	0.5			3.4		3.9	1	3.9	3.9							
0009			FPQ	1.5	0.2			2.2	3.9	1	1.7	1.5							
0009			UP	1.5	0.2			2.2	3.9	1	1.7	1.5							
0009			MF	3.9					3.9	1	3.9								
0009		IBO2	IB			2.0		1.9	3.9	1	2.0								
0009			MB	3.9					3.9	1	3.9								

39. MAINT REVIEW | 40. PILOT REVIEW (If different, AC for each Flt Seq should initial) a. b. c. d. e. f. | 41. SARM REVIEW | 42. ARMS INPUT DATE: INITIALS | ARMS AUDIT DATE INITIALS:

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out.

Printed Name: Rank: Branch of Svc: DSN: Signature:

AFTO FORM 781, 20080911 PREVIOUS EDITION IS OBSOLETE ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT

KC 10A, T/N 83-000080, 1 November 2016
DD-79

DATE FROM: 20161009 TO _____ | MDS: KC010A | SERIAL NUMBER: 83 0080 | PAGE 8 OF ____ PAGE

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162861255	20161012				

WUC/REF DESIGNATOR: 23XCD | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: #3 TR will not stow

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) FE | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162861257	20161012				

WUC/REF DESIGNATOR: 51FBD | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: GPWS wind shear fail light on

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) FE | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162861258	20161012				

WUC/REF DESIGNATOR: 44AED | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: Master caution on during Take off roll @ 80 knots. No associated lights to go with.

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) FE | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A | MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161004 TO _____ | MDS: KC010A | SERIAL NUMBER: 83 0080 | PAGE 9 OF ____ PAGE

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162861259	20161012		☐	☐	

WUC/REF DESIGNATOR: 46GAN | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: The boom was about 4 to 5 degrees to the left and the roll gauge was showing 11 to 12 degrees to the right when lowered.

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) IBO2 | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	162861260	20161012		☐	☐	

WUC/REF DESIGNATOR: 52EA0 | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: Auto-Throttle 1 alpha speed 12 kts off from ATS #2

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161012		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: Info Note: Block Not Used

ZONE: CARD: SEQ# | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/11 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF ___ PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE ~~AND OIL ADDED (HALF PINTS, PINTS, QUARTS)~~

				NO 1 POSITION SER # 517740/ OIL CHANGE TIME 0 DUE CHG N/A			NO 2 POSITION SER # 528365/ OIL CHANGE TIME 0 DUE CHG N/A			NO 3 POSITION SER # 530336/ OIL CHANGE TIME 0 DUE CHG N/A			NO 4 POSITION SER # / OIL CHANGE TIME 0 DUE CHG				
DATE FLOWN	CUM TOTAL HOURS FLOWN	CUM. GEAR CYCL	OIL SMP	~~OAD~~ ~~ADD~~	ENGINE TIME	ENGINE CYCLES	~~OAD~~ ~~ADD~~	ENGINE TIME	ENGINE CYCLES	~~OAD~~ ~~ADD~~	ENGINE TIME	ENGINE CYCLES	~~OAD~~ ~~ADD~~	ENGINE TIME	ENGINE CYCLES	TOTAL LANDS	FULL STOP LANDS
PREV TOTAL	29439.6	9316			24940.7	14053.0		25975.6	13252.0		25668.0	12409.0		.4	0.0	15374	5790
2016/10/01	6.4	1			6.4	1.0		6.4	1.0		6.4	1.0		0.0	0.0	1	1
TOTAL	29446.0	9317			24947.1	14054.0		25982.0	13253.0		25674.4	12410.0		6.0	0.0	15375	5791
2016/10/02	11.5	1			11.5	1.0		11.5	1.0		11.5	1.0		0.0	0.0	1	1
TOTAL	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0		5.5	0.0	15376	5792
2016/10/11	5.5	18			5.5	18.0		5.5	18.0		5.5	18.0		0.0	0.0	18	1
TOTAL	29463.0	9336			24964.1	14073.0		25999.0	13272.0		25691.4	12429.0			0.0	15394	5793
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
CARRIED FORWARD																	

AFTO FORM 781J AEROSPACE VEHICLE - ENGINE FLIGHT

PREVIOUS AIRCREW DISCOVERED DISCREPANCIES

WUC/REFDES MMN/FC	A T	HOW MAL	W D	DISCOVERED	COMPLETED	JCN	DISCREPANCY
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
AIRCRAFT: 83000080							
24AA9	R	070	D	2016/09/29	2016/10/01	162731253	A2ASP-APU WOULDN'T SPOOL UP "APU OIL PRESS LO/TEMP HI" LIGHT DIDN'T COME ON AT ALL. DISCONTINUED START
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: R2 APU PROXIMITY SENSOR. APU OP** ACT BASE: XDAT
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
44AE0	L	127	D	2016/09/29	2016/10/04	162731251	A2ASE-MASTER CAUTION ON DURING T/O ROLL @ 90-100KTS. N O ASSOCIATED LIGHTS TO GO WITH.
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: RESET SYS LOGIC. OPS CHECK GOOD** ACT BASE: XDAT
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
46GB0			D	2016/10/11		162851256	HYDR -BOOM ROLL GAUGE SHOWS 8 DEGREES RIGHT WHEN BOOM IS CENTERED AT 0 DEGREES
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: **
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
52DE0			D	2016/10/11		162851257	A2ASG-AUTO SPOILER DO NOT USE LIGHT ILLUMINATED WHILE SPOILERS WERE DISARMED
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: **
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
55B00	R	254	D	2016/10/02	2016/10/07	162771256	A2ASC-DURING TAKEOFF TCAS SHOWED STBY ON BOTH VVI'S. C ONTROLLER TOLD US OUR MODE C WAS NOT ABLE TO BE SEEN. AT ABOUT 10K FEET IT BEGAN TO WORK PROPERLY.
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: ASSOCIATED EQUIP MALFUNCTION SE** ACT BASE: XDAT
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
71BCD			D	2016/10/11		162851258	A2ASC-EADI PITCH DEGREE SCALE GOES AWAY DURING POWER S WAPS
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: **
					AIRCREW DISCREPANCIES 1 TIMES IN LAST 4 SORTIES		
71EFF	X	799	D	2016/09/29	2016/09/29	162731252	A2DEP-TACAN 2 REPEATEDLY NO GO/GO ALERT TURNED OFF
		SYMBOL: /		MAN NUM:			**CORRECTIVE ACTION: RECYCLED SYSTEM POWER O/C/G ** ACT BASE: PTFL

Aircraft:	Date:	Debriefer:
3080		

Prior to debrief: Review past debriefing forms, logs or files to acquaint themselves with any previous repeat / recurring discrepancies

Scheduled Flight Hours:	5.0	Flying Squadron
Actual Flight Hours:	3.9	
Reason Late/Early By (+/- .5 Hrs)		6th - LC 79th - LB 76th - L$ (9th - L&) 2nd - L" 78th - L% 70th - L' 32nd - L#
Lost tanker activity due to broke Boom		
Training Complete:	Yes (No)	Percentage Complete: 60

Reason Training Was Not Completed	Type Of Training Not Completed
Boom inop	Tanker AR
Recievers Hit / Missed (How many Each Type?)	Type Of Training Completed (If < 50%)
∅	

If UARRSI Contacts were wet, ensure aircrew has documented AF Form 664

UARRSI:	6	Boom Cycles:	1	Boom Contacts:	∅
		Drogue Cycles:	6	Drogue Contacts	∅
Fuel Offload:	6	Left Warp Cycles:	—	Left Warp Contacts:	—
		Right Warp Cycles:	—	Right Warp Contacts:	—

Was Drogue Check Done?	Yes (No)
Reason check was not accomplished:	Timing
Was an engine coupon done?	Yes (No)
Reason engine coupon wasn't documented:	Timing

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies.

Repeat/Recur:	(Yes) No	Pro Super	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
Original JCN:			
Repeat/Recur JCN:			
Code 3:	(Yes)	Pro Super	Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are **properly completed for A-3 landing**
JCN:			
Air Abort:	Yes (No)	Pro Super	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
JCN:			
Bird Strike:	Yes (No)	Pro Super	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
JCN:			
Thrust Reverser Discrepancies:	(Yes) No	Pro Super	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
JCN:			
Engine Shutdown:	Yes (No)	Pro Super	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
JCN:			
Engine:	#1 #2 #3	Pro Super	
Engine Serial Number:			
Engine Hours:			
Shutdown Location ICAO:			
Uncommanded flight control input:	Yes (No)	Pro Super	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures
JCN:			
Dropped Objects:	Yes (No)	Pro Super	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to **appropriate personnel**
JCN:			
Volcanic Ash:	Yes (No)	Pro Super	If yes, make an entry in the 781 A's, and document information on G081 screen F9090 with WUC 04293 to create the volcanic ash discrepancy.
JCN:			
Low Level Salt Water:	Yes (No)	Pro Super	If yes, comply with T.O. 1-1-691, *Aircraft Weapon System Cleaning and Corrosion Control*.
JCN:			
Foot & Mouth Disease:	Yes (No)	Pro Super	If yes, Ensure ALL locations where the aircraft stopped and was chemically disinfected for Foot and Mouth Disease, that an entry is made in the 781A's. Debriefers will document this information in G081 using screen 9051, with work unit code (WUC) 92400 to create the Foot and Mouth Decontamination discrepancy. Report this information to HQ AMC/ A4MJS: DSN 779-2622 / Commercial 618-229-2622.
JCN:			

Prior to debrief:	Print out & prep Pre-launch package, Fill out Debrief worksheet heading with Date, Tail number, & Mission number
During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
Check AFTO Form 781 for:	Blocks 1-15 filled out. Correct date, Tail Number, Mission Number, Mission Symbol, ensure dates, and times are in Zulu, and the Pilots initials are in the Review Block.
Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
Complete 9050 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
Fax/email Appropriate Documents:	Fax / email any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file
Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

2 YEAR LOCAL KC-10 DEBRIEF CHECKLIST OA REVIEW IAW AFI 21-101_AMCSUP_2_CL-2 14 FEBRUARY 2011

RANK/NAME: _____ SIGN:

DATE: _____

MAMR8038 FLYING HOUR DETAIL FOR A/C 83000080

AS OF 10/31/16 15.06.55 ZULU - DATA SOURCE: IMS

DATE FLOWN	TAKEOFF TIME	TAKEOFF ICAO	LANDING TIME	LANDING ICAO	HOURS FLOWN	UPDATE BASE	MISSION SYMBOL	MISSION NUMBER	UPDATE DATE	SQUAD	ASSIGNED STATUS	TOTAL LANDINGS	FULL STOPS
01 OCT 16	1036	OMAM	1702	ETAR	6.4	XDAT	P7AA	6MR52QH02275	16277	L&	CA	01	1
02 OCT 16	1308	ETAR	0040	KSUU	11.5	XDAT	P7AA	6MR520H02275	16277	L&	CA	01	1
11 OCT 16	1533	KSUU	2102	KSUU	5.5	XDAT	T2AT	6UN52TI63285	16285	L&	CA	18	1
12 OCT 16	0305	KSUU	0657	KSUU	3.9	XDAT	T3MA	6UN5ZTC23286	16286	L&	CA	07	1
23 OCT 16	1628	KSUU	1731	KSUU	1.1	XDAT	T30C	6JH420W23297	16305	L&	CA	01	1
23 OCT 16	2006	KSUU	0021	PAEI	4.3	XDAT	T30C	6JH420W23297	16305	L&	CA	01	1
30 OCT 16	1809	PAEI	0001	KSUU	5.9	XDAT	T30C	6PH420W23300	16305	L&	CA	01	1

TOTAL

38.6

8038 Down AZ

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I

MISSION DATA

1. DATE (DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION
23 OCT 2016	KC10A	83-0080	60 AMW (AMC) / DKFX	TRAVIS AFB, CA

FLT SEQ 6	MISSION NUMBER 7	MISSION SYMBOL 8	FROM (ICAO) 9	TO (ICAO) 10	TAKE OFF TIME (Z) 11	LAND TIME (Z) 12	TOTAL TIME 13	14. LANDINGS TOUCH & GO	LANDINGS FULL STOP	LANDINGS TOTAL	SORTIES 15	SPECIAL USE 16
a.	6JH420W23297	T30C	KSJJ	KSUU	1628	1731	1.1	Ø	1	1	1	
b.	6JH420W23297	T30C	KSUU	11EI	2006	0021	4.3	Ø	1	1	1	
c.												
d.												
e.												
f.												
GRAND TOTALS							5.4	Ø	2	2	2	

CONVERSION

Minutes	Dur
1 ~ 2	.0
3 ~ 8	.1
9 ~ 14	.2
15 ~ 20	.3
21 ~ 26	.4
27 ~ 33	.5
34 ~ 39	.6
40 ~ 45	.7
46 ~ 51	.8
52 ~ 57	.9
58 ~ 60	Next

17. FLIGHT AUTH # 17-0026 | 18. ISSUING UNIT 0009 ARS

II

AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	FLIGHT CONDITIONS NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	RESV STATUS 38
0009			IP			5.4			5.4	2		3.0							
0009			FPN	4.5	0.9				5.4	2		3.0							
0009			IF			5.4			5.4	2									
0009			FF	5.4					5.4	2									
0009		IBO	MB	5.4					5.4	2									

39. MAINT REVIEW	40. PILOT REVIEW (If different, AC for each Flt Seq should initial)	41. SARM REVIEW	42. ARMS INPUT		ARMS AUDIT	
	a. MKH b. c. d. e. f.		DATE:	INITIALS	DATE	INITIALS:

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out

Printed Name: Rank: Branch of Svc: DSN: Signature

AFTO FORM 781, 20080911 PREVIOUS EDITION IS OBSOLETE ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT

KC 10A, T/N 83-000080, 1 November 2016
DD-86

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I

MISSION DATA

1. DATE (DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION
30 OCT 2016	KC10A	83-0080	60 AMW/AMC / DKFX	TRAVIS AFB, CA

FLT SEQ	MISSION NUMBER	MISSION SYMBOL	FROM (ICAO)	TO (ICAO)	TAKE OFF TIME (Z)	LAND TIME (Z)	TOTAL TIME	14. LANDINGS			SORTIES	SPECIAL USE
								TOUCH & GO	FULL STOP	TOTAL		
6	7	8	9	10	11	12	13				15	16
a.	6PH420 W23300	T30C	PAEI	KSUU	1809	0001	5.9	0	1	1	1	
b.												
c.												
d.												
e.												
f.												
GRAND TOTALS							5.9	0	1	1	1	

CONVERSION Minutes Dur

1 ~ 2	=	.0
3 ~ 8	=	.1
9 ~ 14	=	.2
15 ~ 20	=	.3
21 ~ 26	=	.4
27 ~ 33	=	.5
34 ~ 39	=	.6
40 ~ 45	=	.7
46 ~ 51	=	.8
52 ~ 57	=	.9
58 ~ 60	=	Next

17. FLIGHT AUTH # M-0026 | 18. ISSUING UNIT 0009 AFS

II

AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME PRIM 23	SEC 24	INSTR 25	EVAL 26	OTHER 27	TOTALS TIME 28	TOTALS SRTY 29	FLIGHT CONDITIONS NIGHT (P/S/I/E) 30	INS (P/I/E) 31	SIM INS (P/I/E) 32	NVG 33	COMBAT TIME 34	COMBAT SRTY 35	COMBAT SPT TIME 36	COMBAT SPT SRTY 37	RESV STATUS 38
0009		IBO	IP			5.9			5.9	1		4.5							
0009			FPN	5.0	0.9				5.9	1		4.5							
0009			TF			5.9			5.9	1									
0009			EE	5.9					5.9	1									
0009			NF3	5.9					5.9	1									

39. MAINT REVIEW	40. PILOT REVIEW (If different, AC for each Flt Seq should initial)	41. SARM REVIEW	42. ARMS INPUT		ARMS AUDIT	
	a b c d e f		DATE:	INITIALS	DATE	INITIALS:

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out

Printed Name: _____ Rank: _____ Branch of Svc: _____ DSN _____ Signature _____

AFTO FORM 781, 20080911 | PREVIOUS EDITION IS OBSOLETE | ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT

KC 10A, T/N 83-000080, 1 November 2016
DD-87

DATE FROM: 20161030 TO _____ | MDS: KC010A | SERIAL NUMBER: 83422 | PAGE 26 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XP 781K	DATE CORRECTED
		20161030		☐	☐	

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) MM15 | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XP 781K	DATE CORRECTED
	16303 1256	20161030		☐	☐	

WUC/REF DESIGNATOR: 23CCB | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: While Attempting to Start Engine #3 Starter button disengaged before reaching 45% N2 rpm.

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XP 781K	DATE CORRECTED
	16303 1257	20161030		☐	☐	

WUC/REF DESIGNATOR: 52BBB | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: Autopilot #2 disengaged twice in-flight, did not respond to pilot inputs.

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161026 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 27 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1258	20161030				

WUC/REF DESIGNATOR: 71BBA | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY:
CO-pilot EHSI did not display True Heading During pilot pre-Flight*

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1259	20161030				

WUC/REF DESIGNATOR: 46GBØ | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY:
During boom lowering, the boom flew to 5 degrees w/ no input by the operator. Small corrections were made to align the boom. The boom flew flew uncommanded to 32 degrees or greater. Right structural limit broken w/ no command inputs made.

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) IBO | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A — MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 20161020 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 28 OF _____ PAGES

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1260	20161030				

WUC/REF DESIGNATOR: 71FBA | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: During Cruise, Pilot lost Navigation, CDI and line disappeared, DP/master Disagree annunciation on CDU FMS

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

(FE)

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
	16303 1261	20161030				

WUC/REF DESIGNATOR: 23EXØ | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY: With Throttle levers even @ FL280 N1 readings: Eng 1: 100.3 N1 / Eng 2: 105.9 N1 EN63. 102.0 N1 #1 and #3 throttles move from knob width with N1 Setting's Even.

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

(FE)

SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER	CF 781A	XF 781K	DATE CORRECTED
		20161030				

WUC/REF DESIGNATOR | FAULT CODE | STA CODE | CORRECTIVE ACTION

DISCREPANCY

Info Note: Block Not Used

ZONE: CARD: | CORRECTED BY | EMPLOYEE NO

DISCOVERED BY (PRINT) | EMPLOYEE NO | INSPECTED BY | EMPLOYEE NO

AFTO FORM 781A | MAINTENANCE DESCREPANCY AND WORK DOCUMENT

DATE FROM: 2016/10/20 TO _____ | MDS: KC010A | SERIAL NUMBER: 83000080 | PAGE 1 OF ____ PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED (~~HALF PINTS, PINTS,~~ QUARTS)

				NO 1 POSITION SER # 517740/ OIL CHANGE TIME 0 DUE CHG N/A			NO 2 POSITION SER # 528365/ OIL CHANGE TIME 0 DUE CHG N/A			NO 3 POSITION SER # 530336/ OIL CHANGE TIME 0 DUE CHG N/A			NO 4 POSITION SER # / OIL CHANGE TIME 0 DUE CHG				
DATE FLOWN	CUM TOTAL HOURS FLOWN	CUM. GEAR CYCL	OIL SMP	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	OA ID LD	ENGINE TIME	ENGINE CYCLES	TOTAL LANDS	FULL STOP LANDS
PREV TOTAL	29446.0	9317			24947.1	14054.0		25982.0	13253.0		25674.4	12410.0		9.9	0.0	15375	5791
2016/10/02	11.5	1			11.5	1.0		11.5	1.0		11.5	1.0		0.0	0.0	1	1
TOTAL	29457.5	9318			24958.6	14055.0		25993.5	13254.0		25685.9	12411.0		1.6	0.0	15376	5792
2016/10/11	5.5	18			5.5	18.0		5.5	18.0		5.5	18.0		0.0	0.0	18	1
TOTAL	29463.0	9336			24964.1	14073.0		25999.0	13272.0		25691.4	12429.0		3.9	0.0	15394	5793
2016/10/12	3.9	7			3.9	7.0		3.9	7.0		3.9	7.0		0.0	0.0	7	1
TOTAL	29466.9	9343			24968.0	14080.0		26002.9	13279.0		25695.3	12436.0			0.0	15401	5794
	1.1	1			1.1	1		1.1	1		1.1	1		0	0	1	1
TOTAL	29468.0	9344			24969.1	14081.0		26004.0	13280		25696.4	12437		0	0	15402	5795
	4.2	1			4.2	1		4.2	1		4.2	1		0	0	1	1
TOTAL	29472.2	9345			24973.3	14082.0		26008.2	13281		25700.6	12438		0	0	15403	5796
TOTAL																	
TOTAL																	
TOTAL																	
TOTAL																	
CARRIED FORWARD																	

AFTO FORM 781J

AEROSPACE VEHICLE - ENGINE FLIGHT

Aircraft: 84000185	Date:	Debriefer:

Prior to debriefing: Review past debriefing forms, logs, or files to aquaint themselves with any previous repeat/recurring discrepancies

Scheduled Flight Hours:	MSN
Actual Flight Hours:	5.0
Reason Late/Early By (+/- 5 Hrs)	
Flying Squadron	6th - LC 79th - LB 76th - L$ 9th - L& 2nd - L" 78th - L% 70th - L' 32nd - L#
Training Complete:	Yes / No
Percentage Complete:	100%
Reason Training Was Not Completed	
Type Of Training Not Completed	
Recievers Hit / Missed (How many Each Type?)	
Type Of Training Completed (If < 50%)	

If UARRSI Contacts were wet, ensure aircrew has documented AF Form 664

UARRSI:		Boom Cycles:		Boom Contacts:	
		Drogue Cycles:		Drogue Contacts	
Fuel Offload:		Left Warp Cycles:		Left Warp Contacts:	
		Right Warp Cycles:		Right Warp Contacts:	

Was Drogue Check Done?	Yes / No
Reason check was not accomplished:	
Was an engine coupon done?	Yes / No
Reason engine coupon wasn't documented:	

Prior to debrief: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Repeat/Recur:	Yes / No	Pro Super	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
Original JCN:			
Repeat/Recur JCN:			
Code 3:	Yes / No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
JCN:			
Air Abort:	Yes / No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
JCN:			
Bird Strike:	Yes / No	Pro Super	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
JCN:			
Thrust Reverser Discrepancies:	Yes / No	Pro Super	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
JCN:			
Engine Shutdown:	Yes / No	Pro Super	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
JCN:			
Engine:	#1 #2 #3	Pro Super	
Engine Serial Number:			
Engine Hours:			
Shutdown Location ICAO:			
Uncommanded flight control input:	Yes / No	Pro Super	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures
JCN:			
Dropped Objects:	Yes / No	Pro Super	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
JCN:			
Volcanic Ash:	Yes / No	Pro Super	If yes, make an entry in the 781 A's, and document information on G081 screen F9090 with WUC 04293 to create the volcanic ash discrepancy.
JCN:			
Low Level Salt Water:	Yes / No	Pro Super	If yes, comply with T.O. 1-1-691, *Aircraft Weapon System Cleaning and Corrosion Control*.
JCN:			
Foot & Mouth Disease:	Yes / No	Pro Super	If yes, Ensure ALL locations where the aircraft stopped and was chemically disinfected for Foot and Mouth Disease, that an entry is made in the 781A's. Debriefers will document this information in G081 using screen 9051, with work unit code (WUC) 02400 to create the Foot and Mouth Decontamination discrepancy. Report this information to HQ AMC/ A4MJS; DSN 779-2622 / Commercial 618-229-2622.
JCN:			

Prior to debrief:	Print out & prep Pre-launch package. Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol, ensure dates, and times are in Zulu, and the PDots initials are in the Review Block.
Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 8. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H
Complete 9050 Screen:	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
Complete 6070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
Complete 6001 Screen:	Check 6035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 6035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
Complete 6038 Screen:	Print out 1 copy for the last month of flights. Use option Y
Fax/email Appropriate Documents:	Fax / email any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
Create Debrief Package:	Staple 6038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
Update Aircraft Brief Sheet:	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

2 YEAR LOCAL KC-10 DEBRIEF CHECKLIST QA REVIEW I.A.W. AFI 21-101_AMCSUP_2_CL-2 14 FEBRUARY 2011

RANK/NAME:_____

DATE:_____

SIGN:

Date: 20161030		Aircraft: 83 00080		Debriefed By:	MM15
Aircrew Time In:	N/A	Aircrew Time Out:	N/A		

Prior to debriefing: Review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies

Mission Number:	6PM40W25300	Mission Symbol:	T30C	Flying Squadron			
Scheduled Flying Hours:	5.4	Actual Flying Hours:	5.4	6th	LC	2nd	L"
Take-Off ICAO:	PACT	Take-Off Time:	1810	9th	L&	32nd	L#
Landing ICAO:	KSUU	Landing Time:	2356	70th	L'	76th	L$
Training Complete:	Yes / No	Percentage Complete:	100%	79th	LB	78th	L%
Reason Training Was Not Completed:	N/A						
Type Of Training Not Completed:	N/A			Notes:			
Type Training Completed (If < 50 %):	N/A						
Reason Late/Early By +/- .5 Hours:	N/A			Was it coordinated through MOCC:		Yes	No

If UARSSI Contacts were wet, ensure Aircrew has documented AF Form 664

UARSSI	Boom Contacts	Drogue Contacts	Left Warp Contacts	Right Warp Contacts	Type Receivers / Remarks
0	0	0	0	0	
Fuel Offload	**Boom Cycles**	**Drogue Cycles**	**Left Warp Cycles**	**Right Warp Cycles**	
0	0	0	0	0	Boom Operators Name: IBO

Was a drogue check due prior to aircraft take-off:	Yes	No
Reason check was not accomplished:		
Do you have any engine coupons:	Yes	No
Reason coupon wasn't documented:		

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Dropped Objects:	Yes / No	JCN:	Pro Super:
If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel			
Code 3:	Yes / No	JCN:	Pro Super:
Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing			
Air Abort:	Yes / No	JCN:	Pro Super:
Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C			
Repeat / Recur Discrepancies:	Yes / No	Original JCN:	Pro Super:
Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package		Repeat / Recur JCN:	
Bird strike:	Yes / No	JCN:	Pro Super:
If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.			
Engine Shutdown:	Yes / No	JCN:	Pro Super:
Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS		Engine: #1 #2 #3	Engine Serial Number:
		Engine Hours:	Shutdown Location ICAO:
Thrust Reverser Discrepancies:	Yes / No	JCN:	Pro Super:
If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets			
Uncommanded Flight control input: Auto Pilot:	Yes / No	JCN:	Pro Super:
Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures			

1	Prior to debrief:	Print out & prep Pre-launch package. Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
2.	During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
3.	Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
4	Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol, Times are in Zulu and the Pilots initials are in the Review Block.
5.	Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
6.	Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
7.	Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
8.	Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
9.	Complete 9050 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
10.	Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
11.	Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
12.	Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
13.	Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
14.	Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
15.	Fax Appropriate Documents:	Fax any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
16.	Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
17	Update Aircraft Brief Sheet:	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

Date: 20161023		Aircraft: 83-000080		Debriefed By:	MM15
Aircrew Time In:	N/A	Aircrew Time Out:	N/A		

Prior to debriefing: Review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies

Mission Number:	QJH420W23297	Mission Symbol:	T30C	Flying Squadron			
Scheduled Flying Hours:	4.7	Actual Flying Hours:	4.7	6th	LC	2nd	L"
Take-Off ICAO:	KSUU	Take-Off Time:	2008	9th	L&	32nd	L#
Landing ICAO:	PACE	Landing Time:	2015	70th	L'	76th	L$
Training Complete:	Yes / No	Percentage Complete:	100%	79th	LB	78th	L%
Reason Training Was Not Completed:	N/A						
Type Of Training Not Completed:	N/A			Notes:			
Type Training Completed (If < 50 %):	N/A						
Reason Late/Early By +/- .5 Hours:	N/A			Was it coordinated through MOCC:		Yes	No

If UARSSI Contacts were wet, ensure Aircrew has documented AF Form 664

UARSSI	Boom Contacts	Drogue Contacts	Left Warp Contacts	Right Warp Contacts	Type Receivers / Remarks
0	0	0	0	0	
Fuel Offload	**Boom Cycles**	**Drogue Cycles**	**Left Warp Cycles**	**Right Warp Cycles**	
0	0	0	0	0	Boom Operators Name: IBO

Was a drogue check due prior to aircraft take-off:	Yes	No
Reason check was not accomplished:		
Do you have any engine coupons:	Yes	No
Reason coupon wasn't documented:		

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Dropped Objects:	Yes / No	JCN: / Pro Super:	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
Code 3:	Yes / No	JCN: / Pro Super:	Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
Air Abort:	Yes / No	JCN: / Pro Super:	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
Repeat / Recur Discrepancies:	Yes / No	Original JCN: / Pro Super: / Repeat / Recur JCN:	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
Bird strike:	Yes / No	JCN: / Pro Super:	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
Engine Shutdown:	Yes / No	JCN: / Pro Super: / Engine: #1 #2 #3 / Engine Serial Number: / Engine Hours: / Shutdown Location ICAO:	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
Thrust Reverser Discrepancies:	Yes / No	JCN: / Pro Super:	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
Uncommanded Flight control input: Auto Pilot:	Yes / No	JCN: / Pro Super:	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures

1	Prior to debrief:	Print out & prep Pre-launch package, Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
2.	During debrief	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
3.	Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
4	Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol, Times are in Zulu and the Pilots initials are in the Review Block.
5.	Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
6.	Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
7.	Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
8.	Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
9.	Complete 9050 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
10.	Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
11.	Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
12.	Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
13.	Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (AIA's, Code 3 Breaks)
14.	Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
15.	Fax Appropriate Documents:	Fax any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
16.	Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
17	Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

Date:		Aircraft:		Debriefed By:	MM15
Aircrew Time In:	N/A	Aircrew Time Out:	N/A		

Prior to debriefing: Review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies

				Flying Squadron			
Mission Number:	QJH420W23297	Mission Symbol:		6th	LC	2nd	L"
Scheduled Flying Hours:	.50	Actual Flying Hours:	.50	8th	L&	32nd	L#
Take-Off ICAO:	KSUU	Take-Off Time:	1629	70th	L'	76th	L$
Landing ICAO:	KSUU	Landing Time:	1725	79th	LB	78th	L%
Training Complete:	Yes / No	Percentage Complete:	100%				
Reason Training Was Not Completed:	N/A			Notes:			
Type Of Training Not Completed:	N/A						
Type Training Completed (If < 50 %):	N/A						
Reason Late/Early By +/- .5 Hours:	N/A			Was it coordinated through MOCC:		Yes	No

If UARSSI Contacts were wet, ensure Aircrew has documented AF Form 664

UARSSI	Boom Contacts	Drogue Contacts	Left Warp Contacts	Right Warp Contacts	Type Receivers / Remarks
0	0	0	0	0	
Fuel Offload	**Boom Cycles**	**Drogue Cycles**	**Left Warp Cycles**	**Right Warp Cycles**	
0	0	0	0	0	Boom Operators Name: IBO

Was a drogue check due prior to aircraft take-off:	Yes	No
Reason check was not accomplished:		
Do you have any engine coupons:	Yes	No
Reason coupon wasn't documented:		

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Dropped Objects:	Yes / No	JCN:	Pro Super:	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
Code 3:	Yes / No	JCN:	Pro Super:	Have aircrew complete AMC Form 97 If applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
Air Abort:	Yes / No	JCN:	Pro Super:	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
Repeat / Recur Discrepancies:	Yes / No	Original JCN:	Pro Super:	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9050 screen. Attach 9032c to debrief package
		Repeat / Recur JCN:		
Bird strike:	Yes / No	JCN:	Pro Super:	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
Engine Shutdown:	Yes / No	JCN:	Pro Super:	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
		Engine: #1 #2 #3	Engine Serial Number:	
		Engine Hours:	Shutdown Location ICAO:	
Thrust Reverser Discrepancies:	Yes / No	JCN:	Pro Super:	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
Uncommanded Flight control input: Auto Pilot:	Yes / No	JCN:	Pro Super:	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures

1.	Prior to debrief:	Print out & prep Pre-launch package, Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
2.	During debrief	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
3.	Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
4	Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol. Times are in Zulu and the Pilots initials are in the Review Block.
5.	Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
6.	Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
7.	Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
8.	Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
9.	Complete 9050 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
10.	Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
11.	Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
12.	Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
13.	Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
14.	Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
15.	Fax Appropriate Documents:	Fax any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
16.	Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
17	Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, load states code, training percentage completed and discrepancy information if applicable.

Aircraft:	Date:	Debriefer:

Prior to debriefing: Review past debriefing forms, logs, or files to aquaint themselves with any previous repeat/recurring discrepancies

Scheduled Flight Hours:		Flying Squadron
Actual Flight Hours:		6th - LC 79th - LB 76th - L$ 9th - L& 2nd - L* 78th - L% 70th - L' 32nd - L#
Reason Late/Early By (+/- .5 Hrs)		
Training Complete:	Yes No	Percentage Complete:
Reason Training Was Not Completed		Type Of Training Not Completed
Recievers Hit / Missed (How many Each Type?)		Type Of Training Completed (If < 50%)

If UARRSI Contacts were wet, ensure aircrew has documented AF Form 664

UARRSI:		Boom Cycles:		Boom Contacts:	
		Drogue Cycles:		Drogue Contacts	
Fuel Offload:		Left Warp Cycles:		Left Warp Contacts:	
		Right Warp Cycles:		Right Warp Contacts:	

Was Drogue Check Done?	Yes	No
Reason check was not accomplished:		
Was an engine coupon done?	Yes	No
Reason engine coupon wasn't documented:		

Prior to debriefing: The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies

Repeat/Recur:	Yes No	Pro Super	Ensure true Repeat / Recur. Properly annotate 781A. Properly load Repeat / Recur when job is loaded on GO81 9650 screen. Attach 9032c to debrief package
Original JCN:			
Repeat/Recur JCN:			
Code 3:	Yes No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Ensure screens 9134 & 9140 are properly completed for A-3 landing
JCN:			
Air Abort:	Yes No	Pro Super	Have aircrew complete AMC Form 97 if applicable. Verify with MOC that aircraft landing was a true Air Abort. WD = C
JCN:			
Bird Strike:	Yes No	Pro Super	If yes have the aircrew complete an AF IMT 853 Wildlife Strike Report as well as AMC Form 97. Ensure Form is faxed to appropriate personnel.
JCN:			
Thrust Reverser Discrepancies:	Yes No	Pro Super	If yes have the aircrew complete a T/R Discrepancy Worksheet. Give a copy to Pro Super and Jets
JCN:			
Engine Shutdown:	Yes No	Pro Super	Ensure Debrief Engine Event Response Sheet is properly filled out by aircrew. Ensure data is properly inputted into GO81 screen 9023. Forward data to P&S and COMBS
JCN:			
Engine:	#1 #2 #3	Pro Super	
Engine Serial Number:			
Engine Hours:			
Shutdown Location ICAO:			
Uncommanded flight control input:	Yes No	Pro Super	Have aircrew complete AMC Form 97. Refer to Debrief Continuity book IFE/Unusual Occurrence section for impoundment procedures
JCN:			
Dropped Objects:	Yes No	Pro Super	If yes have the aircrew complete a 60th AMW IMT 511 Form. Ensure Form is faxed to appropriate personnel
JCN:			
Volcanic Ash:	Yes No	Pro Super	If yes, make an entry in the 781 A's, and document information on G081 screen F9090 with WUC 04293 to create the volcanic ash discrepancy.
JCN:			
Low Level Salt Water:	Yes No	Pro Super	If yes, comply with T.O. 1-1-691, *Aircraft Weapon System Cleaning and Corrosion Control*.
JCN:			
Foot & Mouth Disease:	Yes No	Pro Super	If yes, Ensure ALL locations where the aircraft stopped and was chemically disinfected for Foot and Mouth Disease, that an entry is made in the 781A's. Debriefers will document this information in G081 using screen 9051, with work unit code (WUC) 02400 to create the Foot and Mouth Decontamination discrepancy. Report this information to HQ AMC/ A4MJS; DSN 779-2622 / Commercial 618-229-2622.
JCN:			

Prior to debrief:	Print out & prep Pre-launch package. Fill out Debrief worksheet heading with "Date, Tail number, & Mission number"
During debrief:	Have AFI21-101 AMCSUP CL2 open for use as guide during debrief
Check AFTO Form 781A for:	Clarity of write-ups. Contact specialists to debrief Alpha 2 & Alpha 3 landings.
Check AFTO Form 781 for:	Blocks 1-15 filled out, Correct date, Tail Number, Mission Number, Mission Symbol, ensure dates. and times are in Zulu, and the Pilots initials are in the Review Block.
Check AFTO Form 781H for:	Ensure number of signatures in section 7 matches number of flying hour entries in section 9. Update Aircraft Status Symbol to Red X. Ensure landings and cycles in sections 10 & 12 match 781. Ensure block 13:Servicing Data is correctly filled out.
Complete 9020 Screen:	Input all data from AFTO Form 781. Ensure accuracy of any 781's entered off-station. Original(s) kept by crew.
Complete 9032g Screen:	Print updated 781J. Replace old 781J in the forms binder, remove engine coupons if available
Check AFTO Form 644 for:	Fuel receipts and documentation versus 781H.
Complete 9060 Screen	Load any aircrew discovered discrepancies. Use When Discovered D, or C for Air Aborts
Complete 8070 Screen:	Print out 90 day histories of ALL Aircrew Discovered discrepancies the aircrew landed with
Complete 9032c Screen:	Print out previous aircrew discovered discrepancies for the last 4 flights
Complete 9001 Screen:	Check 8035 to ensure previous prelaunch jobs are not open. Load Prelaunch pkg. Check 8035 to ensure Prelaunch jobs are open. Insert previously prepared Prelaunch package into 781's binder
Complete 9134 Screen:	Close all 9020 entries. Annotate contacts and landing status accordingly (A/A's, Code 3 Breaks)
Complete 8038 Screen:	Print out 1 copy for the last month of flights. Use option Y
Fax/email Appropriate Documents:	Fax / email any completed documents (Bird Strike, Engine Shutdown, etc.) to appropriate personnel
Create Debrief Package:	Staple 8038, 781 copy, 781A copy, old 9032C, this form, and any misc. forms together and file.
Update Aircraft Brief Sheet	Input flight scheduled/actual flight hours, land status code, training percentage completed and discrepancy information if applicable.

RANK/NAME:_____

DATE:_____

SIGN:

Web Go81/MAF LOG C2
Air Mobility Command

Input Aircraft Discrepancies
F9050

Logged in as
::Sign Out

Action: S [Scan Discrepancy] Key: | 781 A/K: | Discrepancy: MASTER CAUTION ON DURING T/O
Serial ID: 83000080 | WD: D
JCN: 162861258 SES: | Arrival/Attempt Dep: 10/12/20 POD: 01
Shop: A2ASG Type Shop: | Work Zone:
WUC/REFDES: 44AE0 | Remarks: | Card #:
Job Ind.: NG [PMCM, Red / Maintenance] Job Suppression: N [Nc
WUC Narrative: WORK U CODE: MASTR WRNG CAUT SYS
Create Date: 10/12/201 | Emp #: | Created By: MAT0RCL
Base: XDAT | Emp Name: | Created At: XDAT

Misc Data

Record Action: | JCN Cont. Disc: | ☐ Critical Discrepancy | Cann For A/C:
REP/REC JCN: | 350 Tag: | Assoc. JCN:
None | Repeat | Recurring | 350 Shop:

WDC "R" Fields

Cat Disc: | Item No: | Shop: | DSR: | TSR: | Job Std:
Card No: | WDC: | EDJC: | ETJC: | HRS:
Fault Code:

Close/Offshore Data

Print 349's

☐ Status Change?

CORRECTIVE ACTION: ASSOCIATED EQUIPMENT MALFUNCTIO
JOB IS "CLOSED"
Ready...

© 2009-2017 Air Mobility Command Version:
1.0.0.0(FI)

Previous Login: 02/05/2017 19:43Z from IP: | Last Data Change: 02/05/2017 20:41Z
Accessibility/Section 508

KC 10A, T/N 83-000080, 1 November 2016
DD-97

Web Go81/MAF LOG C2
Air Mobility Command

Input Aircraft Discrepancies
F9050

Logged in as
::Sign Out

Action: S [Scan Discrepancy] Key: | 781 A/K: | Discrepancy: DURING BOOM LOWERING, BOOM F

Serial ID: 83000080 | WD: D

JCN: 163031259 | MES: | Arrival/Attempt Dep: 10/30/20 | POD: 01

Shop: HYDR | Type Shop: | Work Zone:

WUC/REFDES: 46GB0 | Remarks: | Card #:

Job Ind.: NG [PMCM, Red / Maintenance] | Job Suppression: N [Nc

WUC Narrative: WORK U CODE: BOOM FLT CONT ACTON

Create Date: 10/30/201 | Emp #: | Created By: MAT0DJ2

Base: XDAT | Emp Name: | Created At: XDAT

Misc Data

Close/Offshore Data

Close Date: 10/31/20:

Repair

Emp #: 62642 | AT: X | ☐ Offshore Discrep

Base: XDAT | HM: 799

Print 349's

☐ Status Change?

CORRECTIVE ACTION: LOWERED BOOM. VISUAL CHECK FLT
JOB IS "CLOSED"
Ready...

© 2009-2017 Air Mobility Command Version:
1.0.0.0(US)

Previous Login: 02/06/2017 20:38Z from IP: | Last Data Change: 02/06/2017 21:33Z

Accessibility/Section 508

KC 10A, T/N 83-000080, 1 November 2016
DD-98

AIR MOBILITY COMMAND (AMC) PROGRAMMING MESSAGE (PMsg) 15-04
AMC HYDRAULIC BACKSHOP AND FLIGHTLINE CONSOLIDATION
XX MAY 2015

FROM: AMC/A4M Maintenance Division

SUBJECT: AMC PMsg 15-04 AMC Hydraulic Backshop and Flightline Consolidation

REF A: HAF Directed Program Guidance Letter (PGL) 14-02, 4 Dec 14

REF B: AFI 10-503, Strategic Basing, 27 Sep 10

REF C: HQ AF/A4LM Repair Network Integration (RNI) Hydraulic Backshop Consolidation Update E-mail, 5 May 15

REF D: AFI 10-501, Program Action Directives (PADs) and Programming Plans (PPLANs), 5 Jan 1994, Certified Current, 3 Mar 2010

REF E: AFI 25-201, Intra-Service, Intra-Agency, and Inter-Agency Support Agreement Procedures, 18 Oct 2013

REF F: 23-24 Apr 2015 Logistics Board (LB) In-Person Meeting Minutes

1. Purpose:

1.1. This PMsg implements REF F, AF LB direction relieving AMC of REF A direction to stand up hydraulic CRFs for C-5, C-17, and KC-135. This PMsg also identifies actions and assigns responsibilities required to consolidate AMC C-130, C-17, C-5, KC-135, and KC-10 flightline and backshop hydraulic maintenance into a single workcenter at all AMC Main Operating Bases (MOBs). This will create greater network efficiencies and decrease hydraulic manpower requirements.

1.2. Per REF F, AMC is to establish single combined hydraulic sections under the Accessories Flight in MXS at 19 AW Little Rock AFB, 305 AMW Joint Base McGuire/Dix/Lakehurst, 437 AW Joint Base Charleston, 436 AMW Dover AFB, 6 ARW MacDill AFB, 22 ARW McConnell AFB, 92 ARW Fairchild AFB, 62 AW Joint Base Lewis-McChord, and 60 AMW Travis AFB. The 317 AG Dyess AFB will be combined into the AMXS.

1.2.1. The 19 AW will be a hydraulic CRF and perform component repair supporting Moody and Davis Monthan AFBs (ACC). (AMC PMsg 15-02)

1.2.2. The 317 AG is structured differently from other AMC units and will retain the hydraulic section in the AMXS.

1.3. Inform future Weapon System Logistic Composite Models (LCOMs) which will validate requirements needed to support a combined mission generation and backshop construct.

1.4. Base-level or MAJCOM agreements may be used to assign responsibility for the backshop equipment and facility management responsibility.

2. Administrative Responsibilities:

2.1. AMC/A4MR (Hydro) will:

2.1.1. Serve as the AMC/A4 focal point for this PMsg.

2.1.2. A copy of this PMsg will be available by contacting the AMC Hydraulics Functional at DSN 779-2639.

2.1.3. Coordinate with other MAJCOMs as necessary to transfer equipment onto AMC accounts.

2.1.4. Provide current information and make recommendations to leadership and other coordinating activities affected.

2.1.5. Advise the Centralized Equipment Management Office (CEMO) of any changes in equipment requirements in accordance with AFI 23-101, if needed.

2.1.6. Advise A4MR branch chief on merging of tasks from flightline, backshop and manpower requirements.

2.2. AMC/A1 will:

2.2.1. Per REF F, reduce hydraulics AFSC manpower across the enterprise by 25 authorizations in FY16/1. AMC/A4 and AMC/A1 agreed to wait until the results of each weapon system LCOM study to validate the reductions of 24 additional authorizations (49 total originally estimated).

2.2.2. Ensure manpower authorizations are coded with appropriate PEC and execute programmed changes in MPES.

2.2.3. Coordinate with ACC to realign hydro manpower authorizations previously transferred and assign the authorizations to the 317 AMXS UMD.

2.2.4. Update Unit Manpower Documents (UMDs) for the affected units to reflect transfer of hydraulic authorizations from the AMXS to the MXS.
2.2.5. Coordinate with A4M and 3 MRS to develop new LCOMs.

2.3. AMC/FM will:

2.3.1. Initiate actions to ensure funding is aligned/allocated per any agreements.

2.4. AMC/A4RE will:

2.4.1. Monitor required logistic support equipment at the Component Repair Facilities.

2.4.2. Oversee equipment and GFE transfers as required.

2.5. AMC/A4O will:

2.5.1. Adjust UTC FAC codes as needed to continue supporting deployment and AOR requirements.

2.6. AFIMSC Det 9 will:

2.6.1. Facilitate the orderly integration of civil engineering (CE) issues and activities between appropriate AMC organizations.

3. The overall HQ AMC proponent for the consolidation is AMC/A4MR at DSN 779-2639.

4. Functional Guidance:

4.1. Logistics: The OPR within the Directorate of Logistics for this annex is AMC/A4M. Communications relative to this PMsg will be coordinated through this office.

4.1.1. All logistics-related issues or concerns requiring higher headquarters involvement will be directed to the appropriate OPR/OCR listed within the milestones below.

4.2. Civil Engineer: Due to the limited scope of the consolidation, no facility space savings is anticipated. If gains are realized subsequently, the space will be made available to the facilities custodian for other use.

5. Milestones:

5.1. The following table contains the major milestones required based on installation, to support the objective of this PMsg. The listed Offices of Primary Responsibility (OPRs) will report on the status of these milestones as outlined under paragraph 6 below.

	Milestones – Consolidate Hydro shops 19 AW Little Rock AFB, AR	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15

03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 305 AMW Joint Base McGuire/Dix/Lakehurst, NJ	**OPR**	**OCR**	**NLT Date**
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 437 AW Joint Base Charleston, SC	**OPR**	**OCR**	**NLT Date**
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 436 AMW Dover AFB, DE	**OPR**	**OCR**	**NLT Date**
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTCFAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 62 AW Joint Base Lewis-McChord, WA	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 60 AMW Travis AFB, CA	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 6 ARW MacDill AFB, FL	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MM	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 22 ARW McConnell AFB, KS	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1K AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K	1 Oct 15

			AMC/A4MP	
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 92 AMW Fairchild AFB, WA	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMM	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Transfer Personnel to MXS	FSS/FSMC	AMC/A1K AMC/A4MP	1 Oct 15
04	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
05	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

	Milestones – Consolidate Hydro shops 317 AG Dyess AFB, TX	OPR	OCR	NLT Date
01	Adjust UMDs	FSS/FSMC	AMC/A1M AMC/A4MR	1 Oct 15
02	Adjust UTC FAC Codes (After UMD updates)	AMC/A4O	AMC/A4M	1 Nov 15
03	Update Equipment Accounts/Allowance Standards	AMC/A4RE	AMC/A4MR	1 Oct 15
04	Adjust Supply Records	AMC/A4RE	AMC/A4MR	1 Oct 15

6. AMC Program Management:

6.1. Functional responsibility in meeting the objectives of this PMsg is assigned to the AMC OPRs through the Points of Contact (POCs) appointed below. These OPRs will provide guidance and assistance to subordinate units affected by this PMsg as required and will file progress reports as specified under paragraph 6, below. Unit requests for assistance will be coordinated with the appropriate AMC functional staff agency through proper chain of command.

FUNCTION	POC	OPR
PMsg Implementation Manager		AMC/A8PB
Proponent		AMC/A4MR
Manpower		AMC/A1MRF
Personnel		AMC/A1KAS
Logistics		AMC/A4MR
Facilities and Infrastructure		AFIMSC Det 9

7. Unit Responsibilities:

7.1. The 7 BW and 317 AG will establish a Memorandum of Agreement/Understanding (MOA/U) to detail use of hydraulic facilities and equipment at Dyess AFB. This has been coordinated with AFGSC A47/A4VA.

7.2. MXG/CD will:

7.2.1. Coordinate and implement organization and manpower changes to optimize mission generation support from hydraulic backshop, aircraft inspection and flightline maintenance.

7.2.2. Serve as the unit-level point of contact for PMsg implementation.

7.2.3. If needed, oversee development of a unit plan that identifies actions/requirements not addressed by this PMsg. A copy of the unit plan will be forwarded to HQ AMC/A8P.

7.2.4. Work with local Civilian Personnel Office (FSMC) to evaluate new organizational structure impact to Civilian Position Descriptions (if applicable) and effect on conditions of employment that may impact personnel actions.

7.2.5. Work solutions at the lowest level where possible. Identify specific problems requiring HQ AMC attention to the appropriate functional OPR listed under paragraph 6 above.

7.2.5.1. Mediate/direct any operational support issues that arise between MXS and AMXS when units cannot work out a support plan.

7.2.5.2. Hydraulic section will support flight line, aircraft inspection and component repair activities.

7.2.5.3. Hydraulic technicians will still be cross-utilize trained to perform tasks outside of their primary AFSC. (i.e. refuel/defuel/aircraft marshalling/etc.)

7.3. Hydraulic Section NCOIC will:

7.3.1. As Node Managers, maintain capacity and capability updates to support Repair Network Manager decision making.

7.4. Hydraulic section NCOIC will develop hydraulic personnel rotation plans.

7.4.1. Rotation plans will:

1. Rotate personnel minimum of every 2 years
2. Ensure a mix of 3/5/7 levels are assigned to perform maintenance for each AMXS or Weapon System

3. Account for Hydraulic Flying Crew Chief positions

8. Reporting Procedures and Responsibilities:

8.1. Units:

8.1.1. Reporting of capability and capacity is currently accomplished using RNI EXPRESS and/or LIMS-EV; however, this is not a substitution for communication to your MAJCOM Functionals.

8.2. HQ:

8.2.1. Functional Area Manager (FAM) Responsibilities:

8.2.1.1. HQ AMC FMs will track milestones within their respective area.

8.2.2. PMsg Implementation Manager Responsibilities:

8.2.2.1. HQ AMC/A8PB PMsg Implementation Manager will advise AMC/A4MR on any lessons learned.

Count of Job Control Number (On)	Column Labels							
Row Labels	2011	2012	2013	2014	2015	2016	2017	Grand Total
ADJUSTMENT OR ALIGNMENT IMPROPER	6	2	4	2	3	2		19
AIR ELIMINATOR R2	1							1
BCU R2			1		1	1		3
BCU RESET		1	2		2		1	6
BOOM R2	1				1			2
BOOM TRANSDUCER R2		1						1
DELAMINATED PANEL	1							1
DOOR R2	2					1		3
DROUGE HOSE R2	1							1
DRVT ADJUSTED			4	3		2		9
DRVT R2				2				2
ELEVATION GAUGE R2	2				1			3
ELEVATOR R2					1			1
FPCU RESEATED		3	1					4
GIMBAL CAM BRACKET R2					2			2
GIMBAL R2			1		4	3		8
GOUGE	1		1			1		3
HARDWARE WORN, BROKEN, MISSING (INCLUDES F4 TAPE)	12	17	9	13	13	15		79
HOLES DRILLED	2							2
HORIZ STAB R2		1						1
HYDRAULIC LINE R2			2					2
LAMP OUT		2						2
LEAK		1						1
LEAK - ?? REPAIRED	1							1
LEAK - ADJUSTMENT MADE	5	1	3		1	6		16
LEAK - CYLINDER R2	1							1
LEAK - DRAIN BOTTLE SERVICED	1		5	1	4	1		12
LEAK - HORIZ STAB PARTS R2			1					1
LEAK - HYD LINE R2			1					1
LEAK - PUMP COMPENSATOR R2	1							1
LEAK - SEAL R2	4	1	2		4	2	1	14
LEAK - SERVICE BOOT R2	1							1
LEAK - VALVE R2	2			1	1	1		5
LUBRICATED				1				1
NO DEFECT	50	31	61	21	31	45	1	240
NUTPLATE R2		3	2	1	1	1		8
PANEL R2/REPAIRED/INSTALL	4							4
PNEU PRESSURE TRANSMITTER R2	2							2
PUMP COMPENSATOR R2					1			1
R2 GIMBAL, DRVT			1					1
RECEPTACLE R2						1		1
ROLL INDICATOR/GAUGE R2	20	15	18	16	23	14		106
RUDDER FAIRING MISSING		1						1
SAFETY WIRE INCORRECT INSTALL			1					1
SAFETY WIRE R2	1		1	2	3	2		9
SEALANT MISSING	2		2			1		5
SERVICE REQUIRED		1			1			2
TRANSDUCER R2					1			1
TRANSMITTER R2						1		1
TRIM CONTROL VALVE R2					1	1		2
TRIM MOTOR R2			2					2
UMBILICAL R2		1						1
WIRE HARNESS R2			1					1
Grand Total	**124**	**82**	**126**	**63**	**100**	**101**	**3**	**599**

Here is what I have right now, waiting on information on BCU that they show sent to Honeywell

Gimbal Assembly, Part # NQC6400-503, w/serial # UAE2015-491
a. Repair Organization: Aero-K, Inc.
b. Overhaul Organization: Aero-K, Inc.
c. Dates and Locations of Overhaul and or Repair: Overhauled and repaired Nov 16, 2015
d. Level of Effort (bench check/testing and or repairs): Overhauled and repaired into full operational capability
e. Other pertain information: None

2. Dual Rotary Voltage Transducer/Transformer, Part # AS-784-001, w/serial # 5150
a. Repair Organization: Moog
b. Overhaul Organization: Moog
c. Dates and Locations of Overhaul and or Repair: None
d. Level of Effort (bench check/testing and or repairs): None
e. Other pertain information: Part purchased new, April 28, 2016

3. Boom Control Assembly, Part # AGH7033-503, w/serial # 48221
a. Repair Organization: Aero-K, item received for the first time December 12, 2016
b. Overhaul Organization: Aero-K, item received for the first time December 12, 2016
c. Dates and Locations of Overhaul and or Repair: preliminary inspection report created December 14, 2016, check test performed at Frazier Aviation, January 11, 2017
d. Level of Effort (bench check/testing and or repairs): complete inspection report and voltage check-test only
e. Other pertain information: Aero-K has returned this item to Travis, AFB, February 1, 2017

4. Boom Control Unit (BCU), Part # 4035981-906, serial # 93030227.
a. Repair Organization:
b. Overhaul Organization:
c. Dates and Locations of Overhaul and or Repair:
d. Level of Effort (bench check/testing and or repairs):
e. Other pertain information: There is no record of this PN/SN combination in the program

Summary of Flights and Maintenance Actions for KC-10A, T/N 83-0080

Date	Sortie # Since	JCN	WUC	Discrepancy	Corrective Action
11 Oct 16	1	162851256	46GBO	*Boom roll gauge shows 8 degrees right when boom is centered at 0 degrees*	*Adjusted DRVT*
12 Oct 16	2 (Repeat)	162861259	46GAN	*Boom was about 4-5 degrees to the left and the roll gauge was showing 11-12 degrees to the right when lowered*	*Removed and replaced Gimbal Assembly*
23 Oct 16	3, 4 Repeat cleared			*No Boom Cycles*	
30 Oct 16	5 (Recur) 3 sorties since corrective action	163031259	46GB0	*During boom lowering, the boom flew to 5 degrees w/no input by the operator. Small corrections were made to align the boom. The boom then flew uncommanded to 32 degrees or greater. Right structural limit broken with no command inputs made*	*Lowered boom check visually all flight control surfaces. Did sensor readouts on STP (Status/ Test Panel), all within limits. Hook up ARB tester ran test and sensor read out. Ran preflight and MX Test on boom. Found DRVT and Roll LVDT cannon plugs on visual inspection. [Re-torqued] cannon Plugs DRVT/LVDT*
1 Nov 16	6			*Boom departed aircraft with uncontrollable roll*	

Note: The data in this table was compiled by the AIB Maintenance Member from information contained in Tabs D-9, D-32, D-35, D-90, DD-65, DD-75, DD-84, and DD-93 to DD-95. In the Sortie # column, the text in parenthsis indicates what the maintenance action would be labeled IAW the definitions of Repeat/ Recur from AFI 21-101 AMC supplement.

INTENTIONALLY

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TAB EE

TECHNICAL REPORTS NOT IN TAB J

EE1. AIB ENGINEERING ANALYSIS 2

EE2. HONEYWELL BCU REPORT 23

EE3. AIB WINDOW HEATER ANALYSIS 25

INTENTIONALLY

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MEMORANDUM FOR RECORD ACCIDENT

INVESTIGATION BOARD (AIB)

MISHAP KC-10A TAIL NUMBER 83-0080

AERIAL REFUELING BOOM (ARB) SYSTEM COMPONENT ASSESSMENT

1.0 PURPOSE.

The purpose of this technical assessment is to investigate the deficiencies from components in the aerial refueling boom (ARB) system from the dropped boom mishap off aircraft KC-10A 83-0080. This assessment adds to the findings already documented by the Safety Investigation Board technical assessments. The following part numbers (PNs) were further analyzed:

Part Numbers:

- Yoke Assembly, P/N AQC7001-5

- Dual Voltage Rotary Transducer (DRVT) Assembly, P/N AS-784-001, S/N 5150

- Boom Control Assembly (BCA), P/N AGH7033-503, S/N 48221

2.1 COMPONENT ASSESSMENT.

2.2 Yoke Findings

The Gimbal and yoke assembly are located under the aft fuselage and attaches the boom assembly to the aircraft fuselage. The gimbal and yoke assembly consists of a gimbal housing, a yoke, a yoke retainer and roller bearings. The gimbal unit allows the boom to freely respond to aerodynamic control throughout the boom operational envelope. The yoke component is inserted in the gimbal housing assembly. The aerial refueling boom assembly attaches to the yoke at two lug locations. The Gimbal housing attaches to the aircraft structure at the two lug locations on top of the gimbal housing and the yoke retainer lug locations are attached to bungees that are attached to the aircraft structure.

The yoke component has been subject to design changes (Aircraft Engineering Orders or AEOs) in 1980 and 1982 against drawing AQC7001 to change the orientation and size of the yoke tangs (ref. Figure 1).

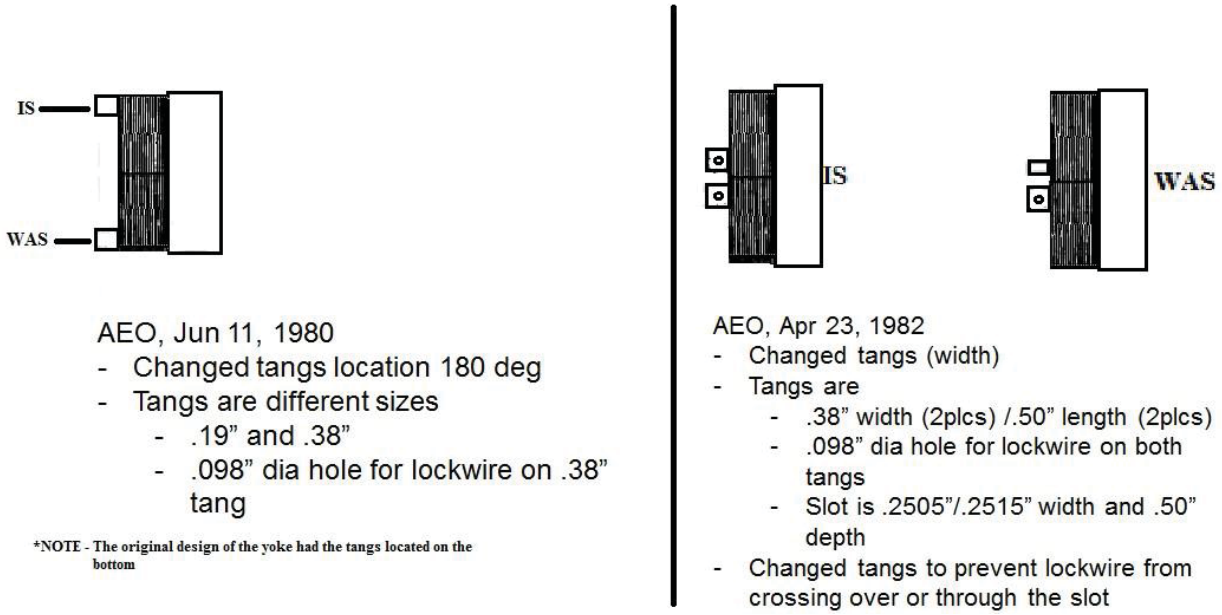


Figure 1. Yoke Design Changes

The yoke component off the mishap aircraft had the 1980-type yoke tang style. However, inspection of the yoke indicates that the yoke was not manufactured new with the tangs in their new location. The mishap yoke was a pre-1980 yoke that was refurbished to have a bearing insert installed at the end of the yoke that included the new tangs at their new 180° location (ref. Figure 2).

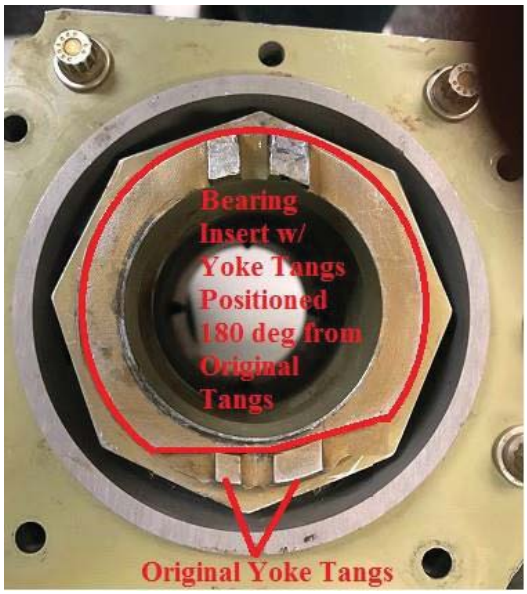


Figure 2. Yoke Bearing Insert and Tang Location

The issue discovered with this particular area of the yoke refurbishment is that the bearing insert has introduced potential installation issues when the Dual Rotary Voltage Transducer (DRVT) is installed with the transducer housing support (ref. Figure 3).

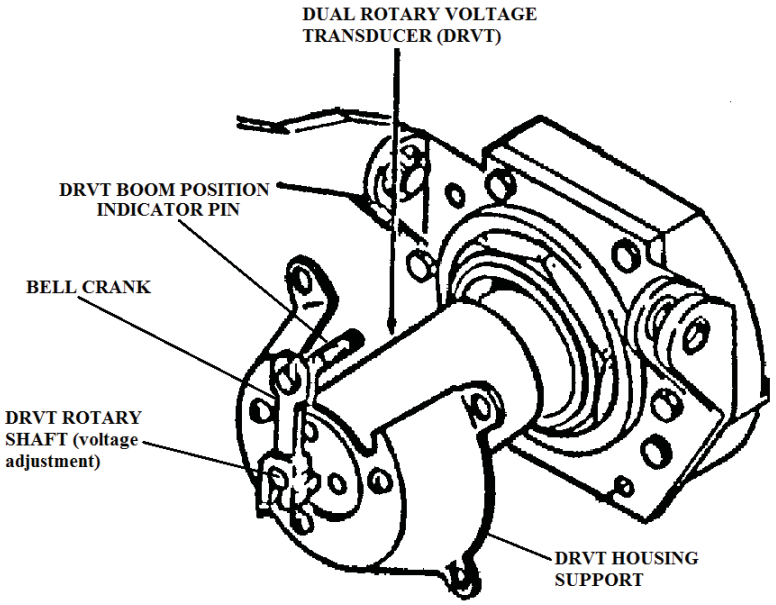


Figure 3. DRVT Installation w/ Housing Support

The Boom Control Unit (BCU) is a modified MD80 autopilot box that assists and controls the aerial refueling boom (ARB) while in flight. The DRVT is responsible for sensing and reporting the position of the boom in its roll axis to the BCU. Electrical connectivity to the DRVT is provided through a DRVT housing conduit penetration. The DRVT contains and requires two operable roll sensors the BCU uses to provide ARB control and DRVT status. Both sensors within the single DRVT are continually compared and monitored by the BCU. Miss-compares drive fault declaration and subsequent boom flight control termination by the BCU. The yoke tang bearing insert introduced an additional .132" of length to the end of original end of the yoke. The internal diameter (ID) of the yoke decreased by .293" due to the yoke tang bearing insert. The bearing face is now much closer to the conduit electrical connection running from the DRVT and the ID creates a tighter space around the DRVT case. These interferences could prevent proper installation of the DRVT and housing support onto the gimbal housing (ref. Figure 4). It is believed that the DRVT electrical conduit and wiring harness were in contact with the yoke tang bearing face some time during boom operations, which could damage the DRVT and affect its functionality.

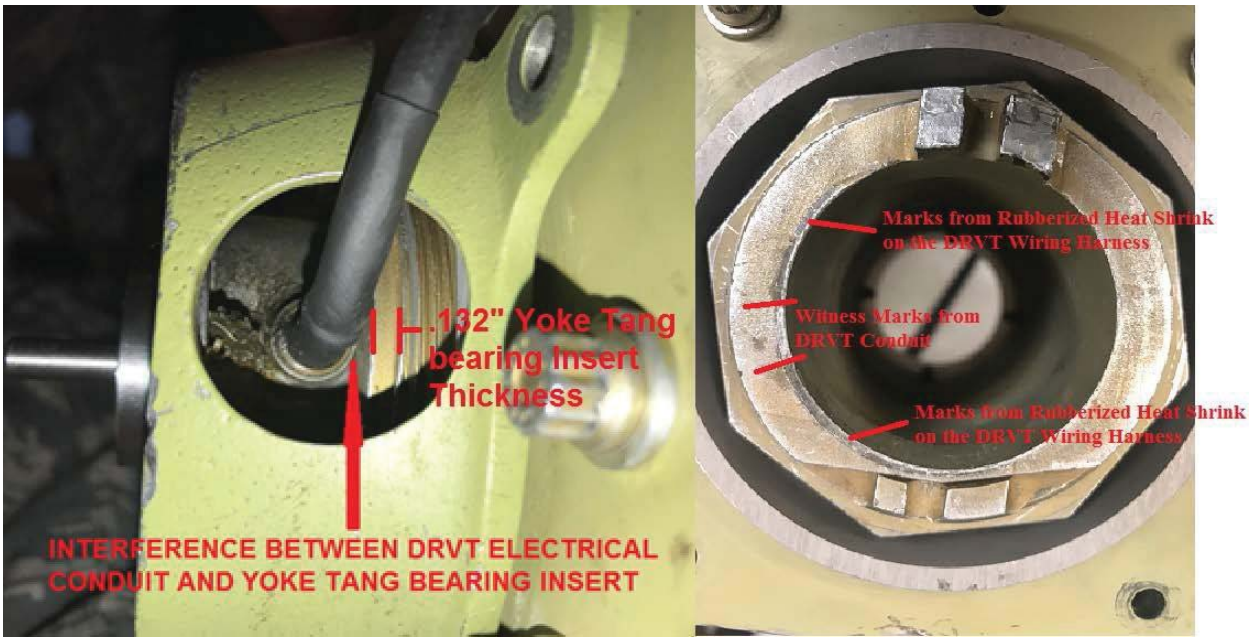


Figure 4. DRVT Conduit and Yoke Bearing Insert Interference

To install the DRVT, maintainers reference technical order (T.O.) 1C-10(K)A-2-28. First, the DRVT electrical connector is routed through an access hole on the support housing (ref. Figure 4) followed by the DRVT seated into the housing support and secured at 3 screw locations. With the housing support on one end of the DRVT, the other end of the DRVT slides into the yoke opening. The next step in the installation process is to install 4 bolts, washers and nuts at 4 locations to secure the housing support to the gimbal housing. After the housing support is secured to the gimbal housing, next the bell crank with the DRVT indicator stud is installed and positioned between the yoke tangs (ref. Figures 6 & 7). Having good stud insertion into the yoke tang slot is critical, ensures that the stud does not back out during boom operations and maintains a good point of reference for the DRVT to report accurate boom roll positions to the BCU.

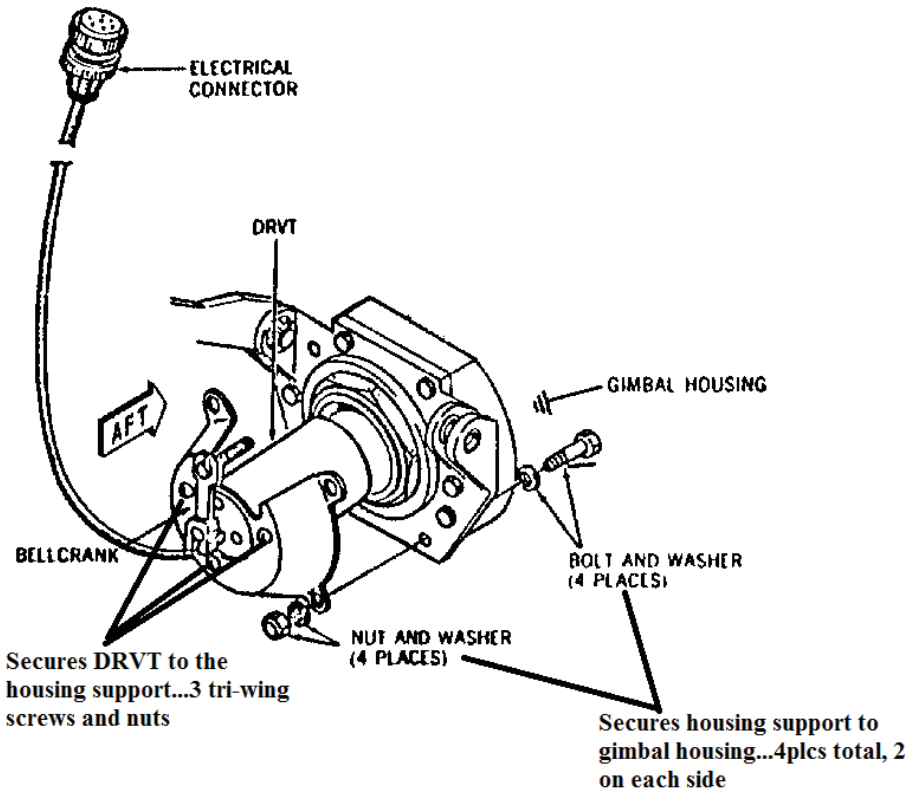


Figure 5. DRVT and Housing Support Installation

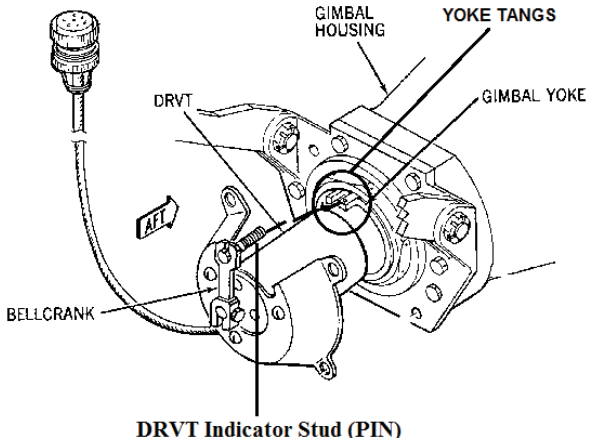
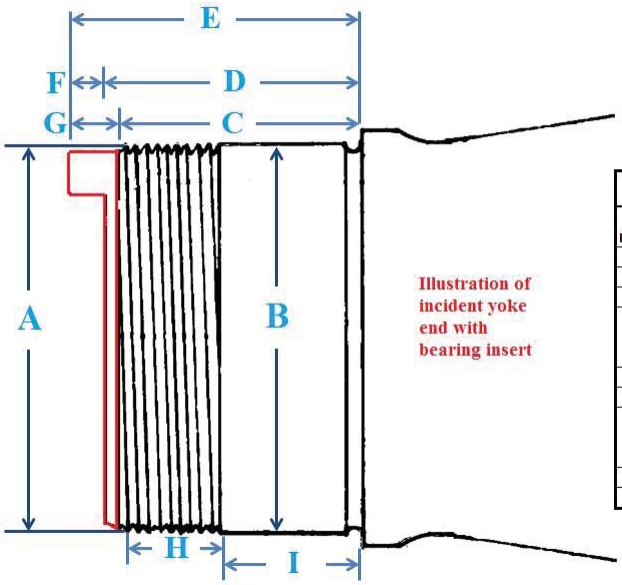


Figure 6. DRVT Indicator Stud Installation into Yoke Tangs

Figure 7. Picture to Depict DRVT Indicator Stud in Yoke Tang Slot

In addition to the yoke tang bearing insert installed on the incident yoke, other yoke design dimensions were found to be outside of drawing specifications referenced in Figure 8a below.



YOKE ASSEMBLY - ARB GIMBAL (DWG AQC7001)			
Point of Reference	Measured Dimension (in)	Out of Limits Y/N?	Reason
A	2.997	N	Per Drawing Specifications
B	3.000	Y	Bearing Shaft Diameter Above Drawing Limits
C	1.995	N	Per Drawing Specifications
D	2.127	?	Drawing does not provide bearing insert dimensions
E	2.404	Y	Below Drawing Limits
F	0.277	Y	Tang Length Below Drawing Limits
G	0.409	?	Drawing does not provide bearing insert dimensions
H	0.800	Y	Threaded Length Below Drawing Limits
I	1.214	Y	Bearing Shaft Length Above Drawing Limits

Figure 8a. Yoke End Design Limits

These measurements were taken by Travis AFB machinists with AIB members present. Measurements may vary depending on where the measurements were taken along the circumference of the yoke. Total length of measurement E ranges from 2.404” - 2.423”, depending on how the machinist takes the measurement along any point of the yoke end circumference.

Measurement E is below drawing specifications values. The critical physical attributes as measured involves the yoke tang length and the effective yoke tang slot that is available for the DRVT indicator pin insertion. The as measured insert lip and tang length (0.277" (F)) combine to produce a minimized yoke tang slot. It should be noted that the yoke tangs during the incident were damaged. Measurement F, tang length, is critical because it is required to provide the appropriate engagement with the DRVT roll indicator pin. In this case, the tang length was nearly half the size it should have been per drawing specifications. With a tang length of approximately .277", the indicator pin would not able to be sufficiently inserted into the tang slot for appropriate engagement; preserving the integrity of the DRVT indicator pin and boom yoke tang interface. The damage evaluated on the yoke tangs does not appreciably contribute to the minimized available yoke tang slot. A minimized yoke tang length can affect DRVT indicator pin and yoke tang integrity in the roll axis. In Figure 8b, the thread count for the yoke is below drawing limits, meaning the shaft length is too long.

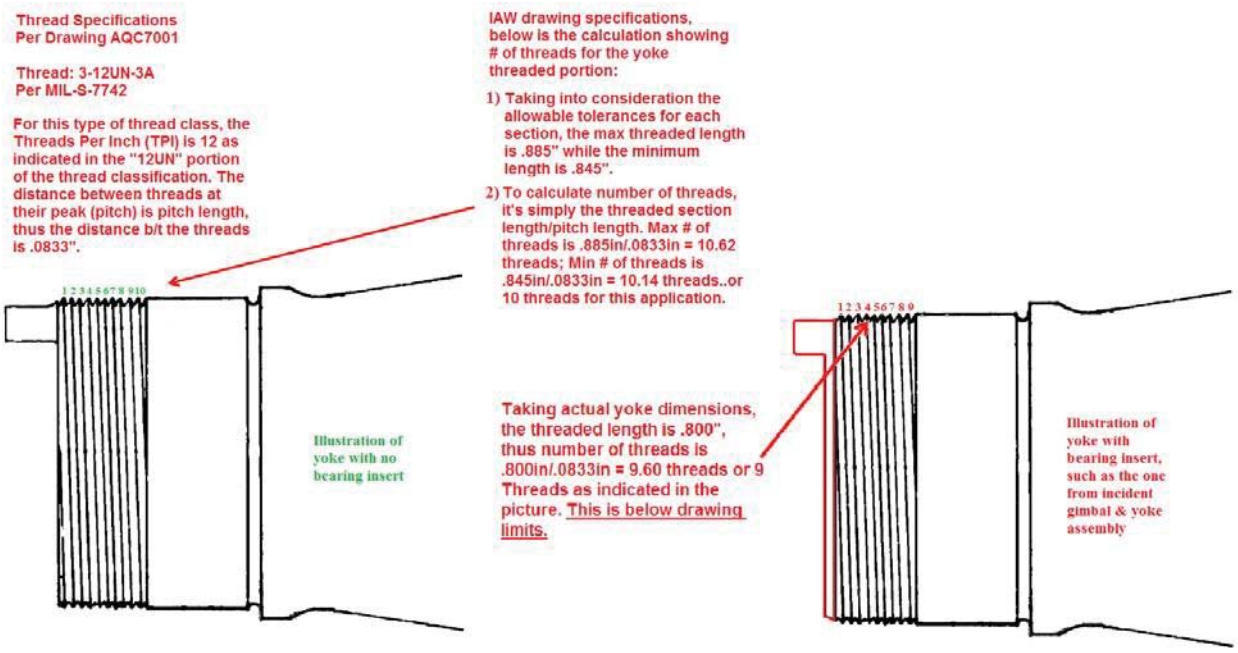


Figure 8b. Yoke Thread Details

The bearing shaft length, measurement "I" in Figure 10a, was measured at 1.214," which is above design limits. If the threaded section, dimension "H" is too short and the shaft length as measured at dimension "I" is too long, the retaining nut cannot be appropriately torqued and will allow additional longitudinal play along the fore and aft axis of the boom. The longitudinal play that this introduces also increases the lateral play at both ends of the yoke, which now allows the yoke to move laterally, as well as, longitudinally (ref. Figure 8c). The yoke now has excess play, which can affect the integrity of the DRVT indicator pin to yoke tang relationship. Subsequently, the DRVT is not able to sense accurate physical boom roll position. Excess play between yoke and gimbal could cause the boom to drift to either left or right when lowered in flight.

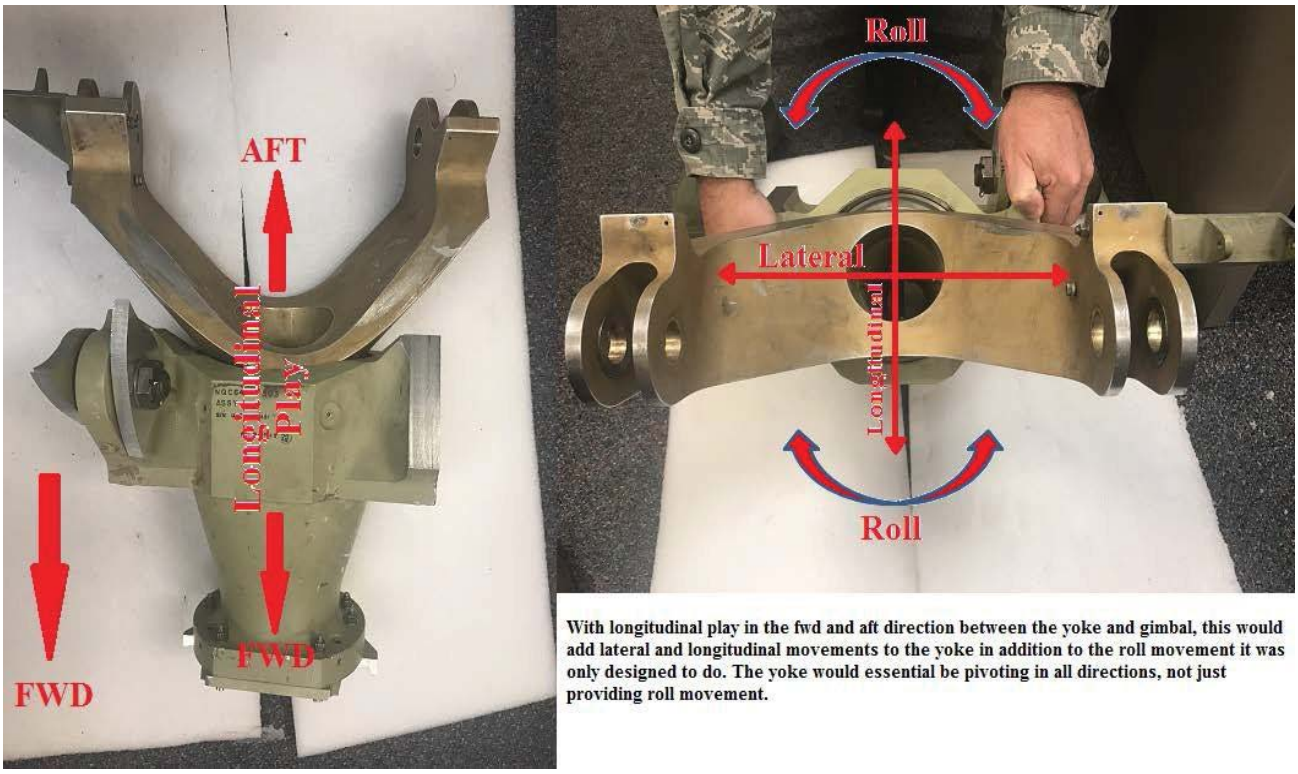


Figure 8c. Gimbal and Yoke Play Due to Excess Play When Assembled

During the incident in flight, images are available that show the DRVT pin was not positioned in the yoke tangs prior to separating from the aircraft (ref. Figures 9 & 10). With the DRVT roll indicator pin out of the yoke tang slot, the DRVT will sense and report boom roll positions to the BCU based on the position of the roll indicator pin. Since the DRVT is fixed to the gimbal housing, this means that the yoke displacement within the housing was sufficient enough to allow the DRVT indicator pin to disconnect from the minimized yoke tangs. With the roll indicator pin out of the yoke tang slot, the DRVT's sensed and reported roll position no longer correlates to the actual position (roll axis) of the boom. With a free-moving DRVT roll indicator pin, continuously commanded BCU flight control responses to the boom, in this scenario, are based on a very inaccurately (false) reported boom location. The BCU commanded responses to the continuously changing gross roll axis misalignment (DRVT input vs boom actual) will result in highly erratic rolling left and right boom movement.

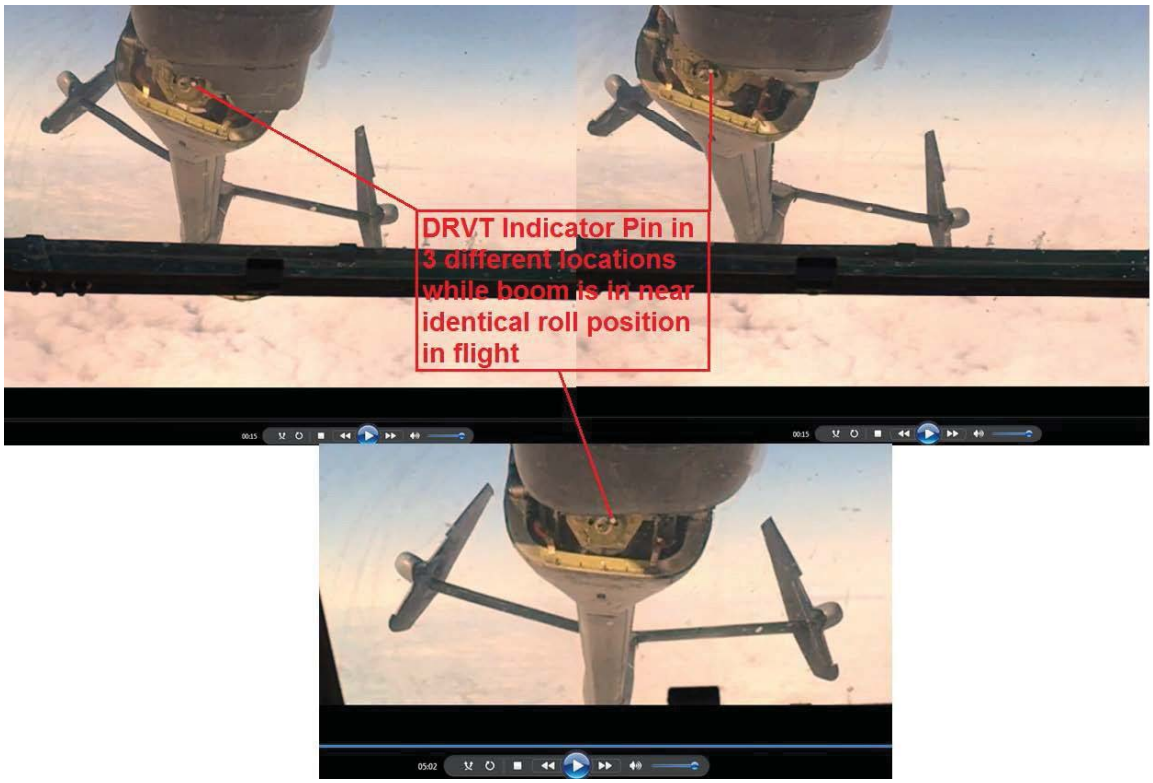


Figure 9. DRVT Indicator Pin Unseated From Yoke Tang Slot (Prior to Aircraft Separation)

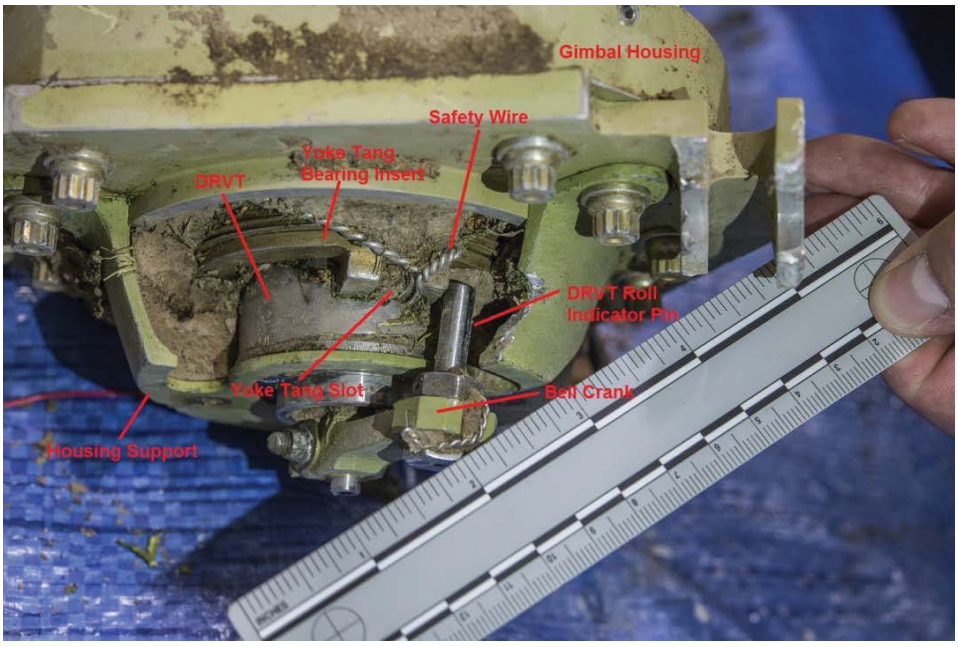


Figure 10. Post-Accident Condition and Placement of DRVT Indicator Pin

2.3 DRVT Assembly Findings

Further analysis of pre and post mishap photographs of the DRVT location revealed that the DRVT rotary bearing onto the DRVT structural plate (end cap) was installed incorrectly during assembly. Reference Figure 11 for example of good DRVT.

Figure 11. DRVT Assembly from Non-Mishap Aircraft

The focus of the DRVT analysis centered on the rotary bearing installation onto the structural mounting plate. The rotary bearing is attached by 6 screws and must be oriented properly prior to tightening the 6 screws (ref. Figure 12). The maintainer receives the DRVT assembly as pictured in Figure 11 and is not required to alter the assembly in any manner. The back side of the DRVT rotary bearing contains a rotary crank and a mechanical stop where the stop must be oriented at the 12 o'clock position when securing the rotary bearing onto the structural plate (ref. Figure 12). The rotary crank on the back side, or internal to the DRVT, is situated to drive rotational positions to the 2 transducers inside the DRVT case to transmit roll position via electrical signal back and forth to the BCU (ref. Figure 12). The DRVT in Figures 11 and 12 were disassembled carefully to ensure that when the rotary bearing assembly was removed proper orientation of the mechanical stop position was verified to be in the correct location.

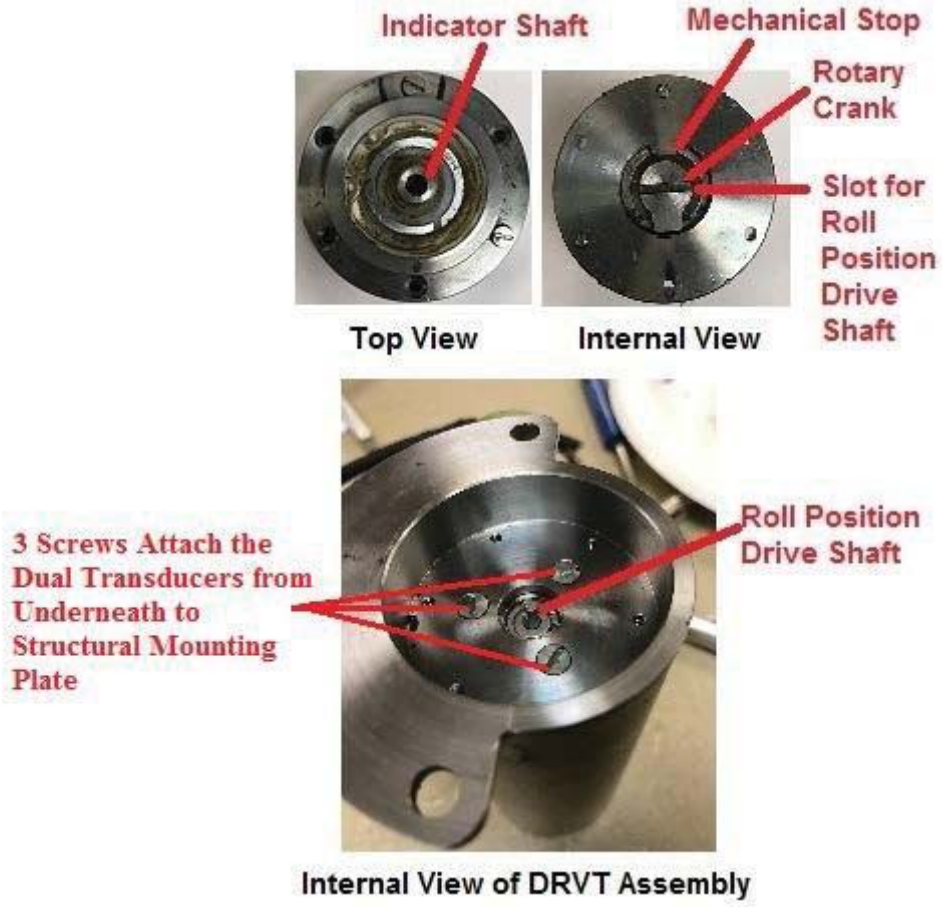


Figure 12. DRVT Details from Non-Mishap Aircraft (Mechanical Stop at 12 o'clock)

Analyzing the DRVT from the mishap it was found that the DRVT rotary bearing assembly was oriented 120° clockwise placing the internal mechanical stop in the 4 o'clock position looking from the face view or 8 o'clock position (240°) if viewing from internal view when removed. Pictures prior to the mishap and post mishap aided the AIB in determining the orientation the DRVT bearing assembly as installed onto the boom gimbal assembly by the maintainer. A few key reference points on the mishap DRVT helped validate the placement of the rotary bearing assembly (ref. Figures 13 & 14).

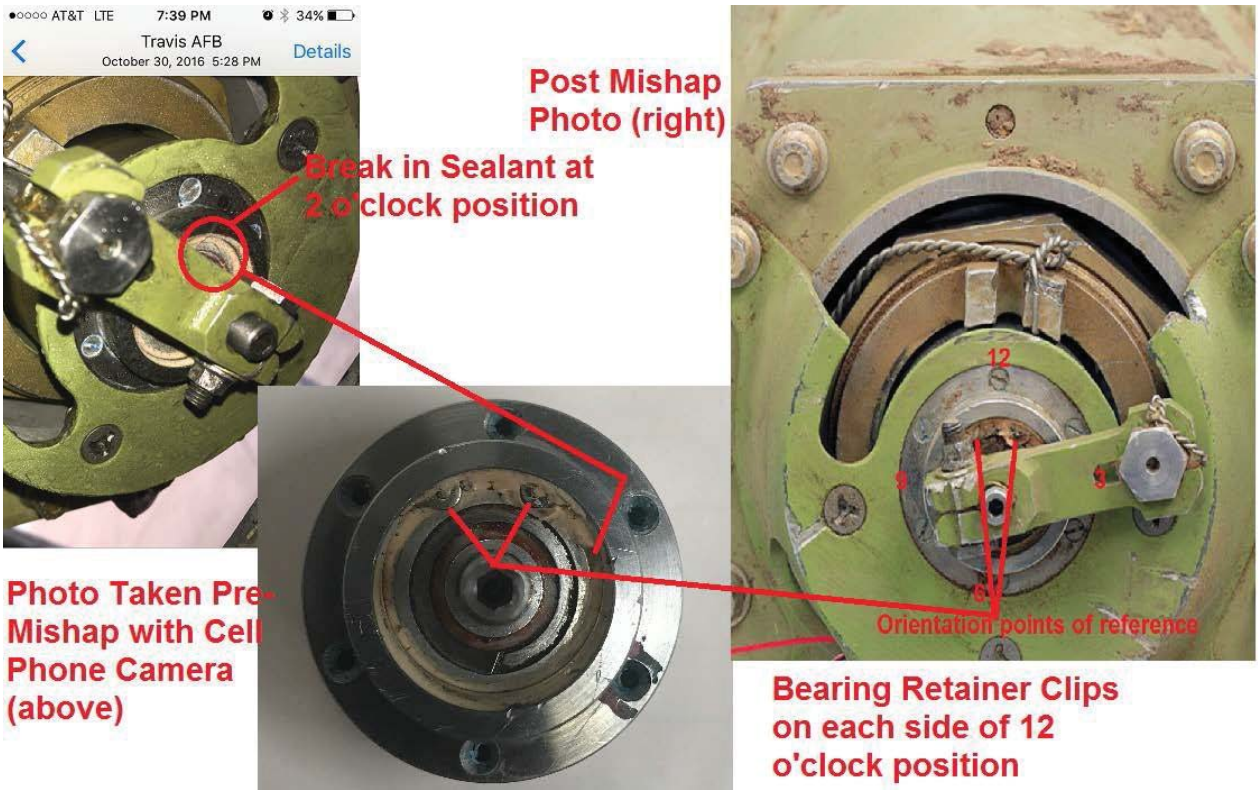


Figure 13. Mishap DRVT Rotary Bearing Assembly Pre & Post Mishap

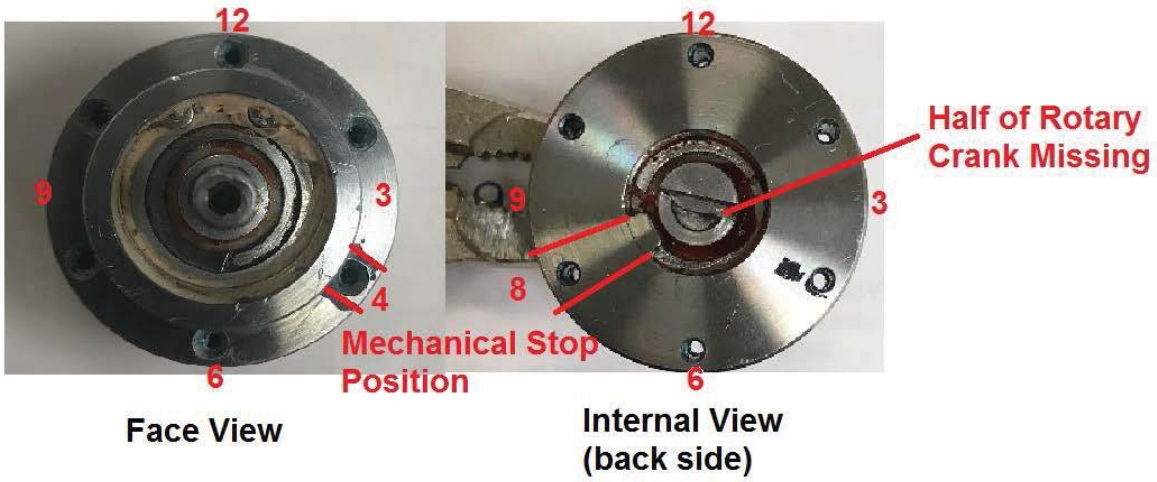


Figure 14. DRVT Rotary Bearing Face and Back Side View Points

Proper orientation of the rotary bearing assembly onto the DRVT structural support is an important step during the assembly process at the manufacturing facility. Figure 12 shows the correct orientation of where the mechanical stop should be, which is the 12 o'clock position. The rotary bearing assembly from the DRVT off mishap aircraft was not oriented properly placing the mechanical stop in a position where it should not be for DRVT rotary crank operation. When a maintainer receives a DRVT from supply, technical order 1C-10(K)A-2-28 is referenced for the

installation and adjustment of the DRVT. The adjustment portion of the DRVT is the last set of steps accomplished after installation. This requires the maintainer to place the boom in the up and stowed position on the aircraft. The DRVT transmits voltage to the BCU where in turn the BCU equates a voltage value to a specific degree of roll. Values are from -3.05V (left) to +4.16V (right). The difference in value is due to being offset at zero. Zero on the DRVT is not zero voltage coming from the DRVT. The offset value at zero for the DRVT equates to +.555V (±.05V). With the boom in the up and stowed position, the maintainer references the Status Test Panel (STP) located in the boom operator's overhead panel in the Aerial Refueling Operator (ARO) compartment. This will display the degree value for the DRVT. The STP should display a degree of 0º (±.45º). If the STP display value is outside of that range, then the DRVT requires adjustment. The DRVT is adjusted via the DRVT rotary shaft (ref. Figure 3) by loosening the bottom bolt on the bell crank and then using an Allen wrench to rotate the shaft either clockwise or counterclockwise to achieve the proper reading for the up and stowed position of the boom, which is 0º (±.45º). Once the desired reading is achieved, the maintainer re-tightens the bottom bell crank bolt to hold the rotary shaft at that position to set the 0º position for the boom. To finish the task, the maintainer is then required to lower the boom onto a dolly and move the boom to aircraft left to ensure the polarity is correct when displayed on the STP. Once this is accomplished, the boom is returned to the stowed and locked position to close out the task.

The two unknowns are: 1) Orientation of how roll position drive shaft from figure 12 when rotary bearing was installed; 2) How the maintainer adjusted the DRVT to set the 0º position. What is factual is that the rotary crank struck the mechanical stop due to its placement in the path of what is supposed to be the rotational path of operation for DRVT rotary crank. Photographs taken of the internal view shows the fracture surface after half of the rotary crank went missing (ref. Figure 15). A shear fracture, which indicates an approximate 45º break, is present on the surface. Contact witness marks are also evident on the mechanical stop. The internal dual transducers are attached to the structural mounting plate from the underside by 3 screws from the top and these 3 screws only require less than a ½ - ¾ turn to secure the transducers to the structural plate. The incident DRVT had 2 of the 3 screws disengaged from the top transducer inside the case, which will allow the roll drive shaft to be dislodged. This condition too will lead to intermittent engagement with an already-damaged rotary crank. The case is only attached to the structural plate by bonding adhesive. The opposite end of the DRVT case is capped by a phenolic plate attached by 3 screws. The end cap on incident DRVT was also missing, along with the transducer connected to the end cap.

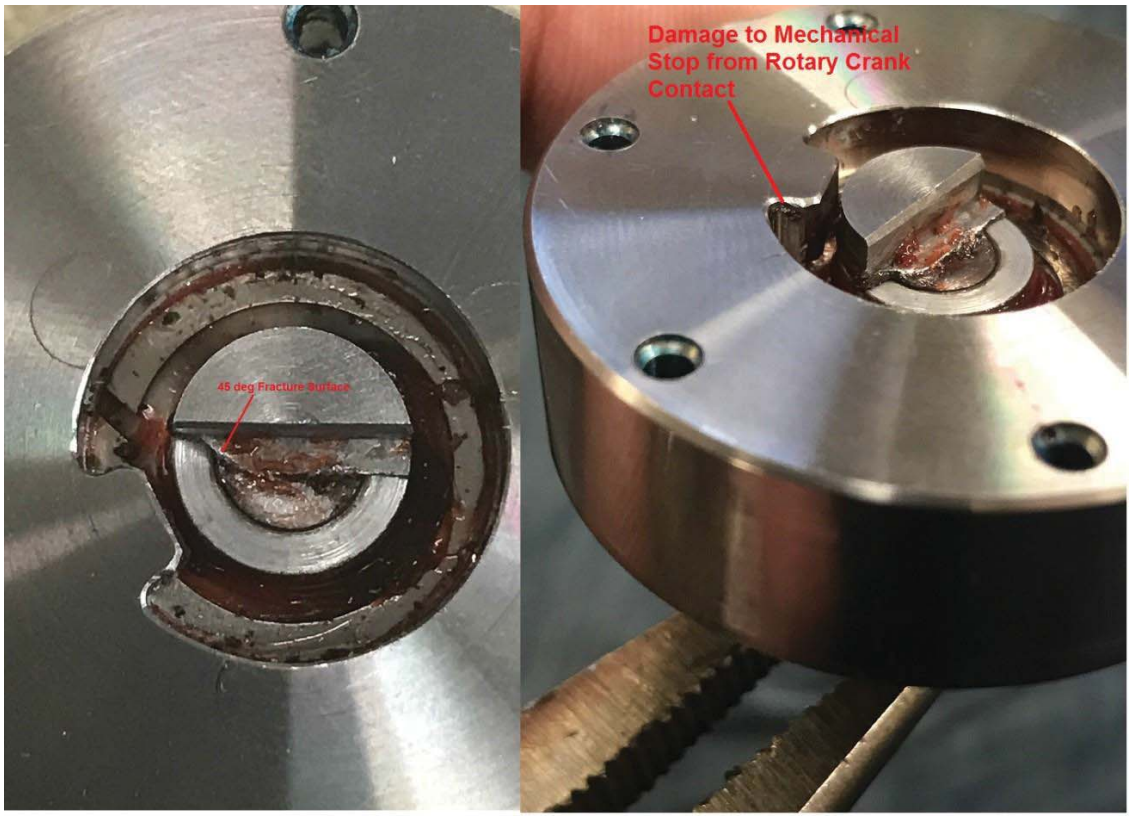


Figure 15. Rotary Crank and Mechanical Stop Damage

Reference figure 16 below for illustration of DRVT indicator pin movement and orientation relative to rotary crank orientation. The figure below is not to scale in regards to degrees, but shows the max path of possible travel for the DRVT indicator pin and for the DRVT rotary crank. Note that the mechanical stop is not in the path of the rotary crank when it rotates due to its position at the 12 o'clock position.

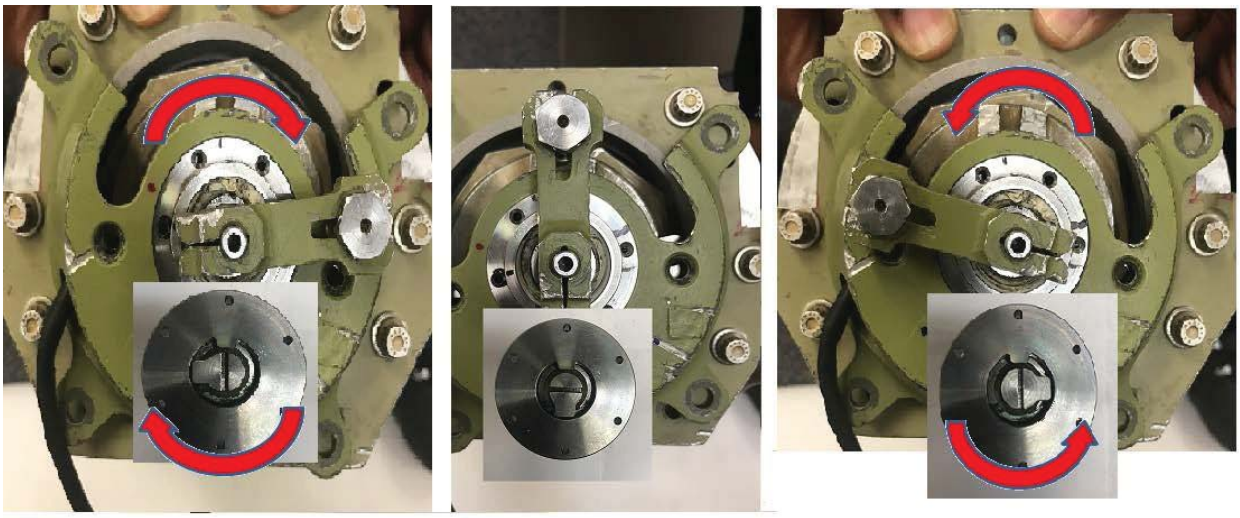
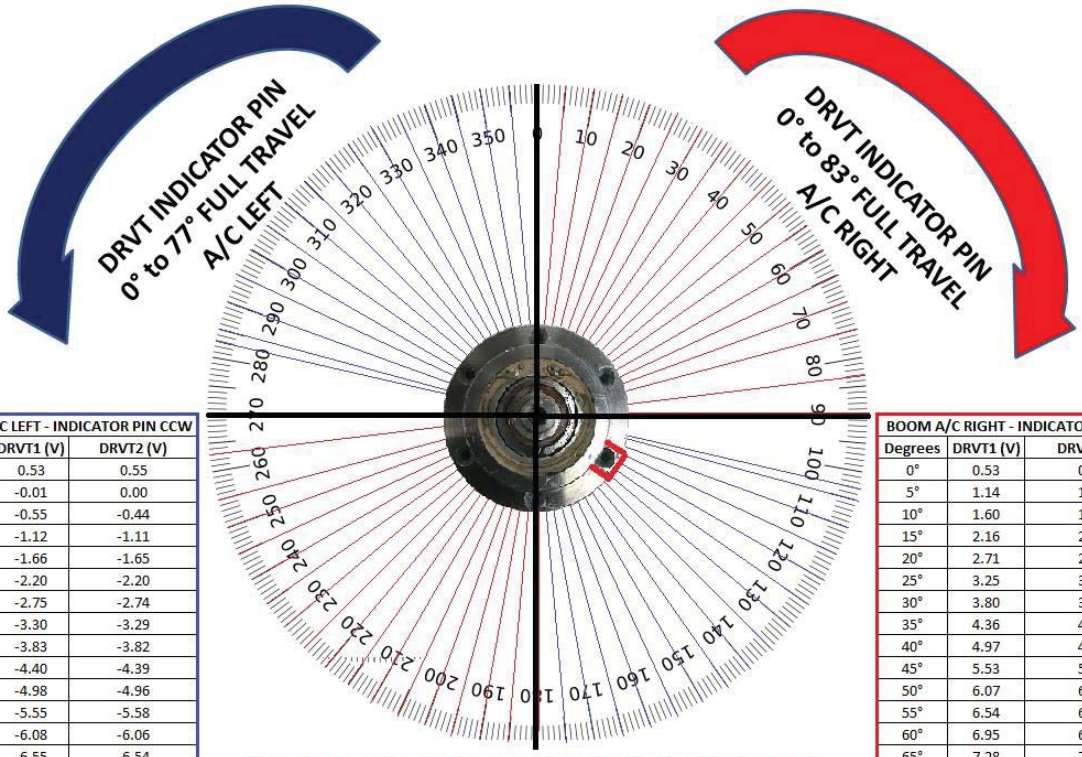


Figure 16. DRVT Rotary Crank Position Relative to Indicator Pin

The AIB performed an analysis to equate degree roll to voltage output from a functional DRVT installed onto a gimbal and yoke assembly. The DRVT was then connected to the ARB tester to record voltage readings. An inclinometer was placed flat on the yoke to rotate the yoke at 5° increments both CW and CCW. With the yoke centered at 0°, the voltage output was +0.53V for DRVT1 and +0.55 for DRVT2. From Figure 17 below, the red lines indicate boom roll to aircraft right and blue lines represent boom roll to aircraft left. With the yoke reading 0° on the inclinometer, the voltage reading required very slight adjustment CCW on the adjustment pin to get the voltage output within tolerance. The DRVT specification is +0.555V (±.05V) for 0°…the functional DRVT used was adjusted to +0.53V/+0.55V which fell within specifications. Once adjusted properly, the yoke was rotated CW and CCW in 5° increments from 0° to full boom roll left and right with voltages recorded at each increment from ARB tester. Assuming that the rotary crank inside the functional DRVT used during our test was positioned at 180° (6 o'clock position) from the manufacturer and slight adjustment was required to set 0°, figure 18 shows that it would have taken approximately 15° of left roll or -1.12V/-1.11V (from table in fig. 17) for the rotary crank to contact the mechanical stop.



BOOM A/C LEFT - INDICATOR PIN CCW		
Degrees	DRVT1 (V)	DRVT2 (V)
0°	0.53	0.55
5°	-0.01	0.00
10°	-0.55	-0.44
15°	-1.12	-1.11
20°	-1.66	-1.65
25°	-2.20	-2.20
30°	-2.75	-2.74
35°	-3.30	-3.29
40°	-3.83	-3.82
45°	-4.40	-4.39
50°	-4.98	-4.96
55°	-5.55	-5.58
60°	-6.08	-6.06
65°	-6.55	-6.54
70°	-6.96	-6.95
75°	-7.14	-7.13
77°	-7.40	-7.39

BOOM A/C RIGHT - INDICATOR PIN CW		
Degrees	DRVT1 (V)	DRVT2 (V)
0°	0.53	0.55
5°	1.14	1.15
10°	1.60	1.62
15°	2.16	2.17
20°	2.71	2.73
25°	3.25	3.27
30°	3.80	3.82
35°	4.36	4.38
40°	4.97	4.98
45°	5.53	5.54
50°	6.07	6.08
55°	6.54	6.55
60°	6.95	6.96
65°	7.28	7.29
70°	7.52	7.52
75°	7.67	7.67
83°	7.79	7.78

Figure 17. DRVT Degrees and Voltage Readouts

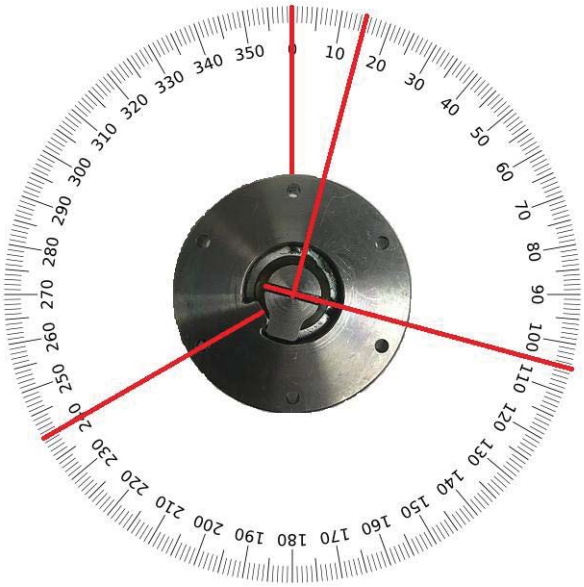


Figure 18. DRVT Rotary Crank Contacting Mechanical Stop

As mentioned earlier, how the roll position drive shaft from figure 12 was positioned prior to installation of the rotary bearing insert, as well as, how the maintainer adjusted the DRVT to set the 0º position are two unknowns; but also those two factors can make the situation worse to where the rotary crank can come in contact with the mechanical stop in less than 15° of right boom roll. To gain a visual perspective of how much the DRVT indicator pin moves relative to boom roll, reference figures 19 and 20 (corresponding voltages can be found in the tables from figure 17).

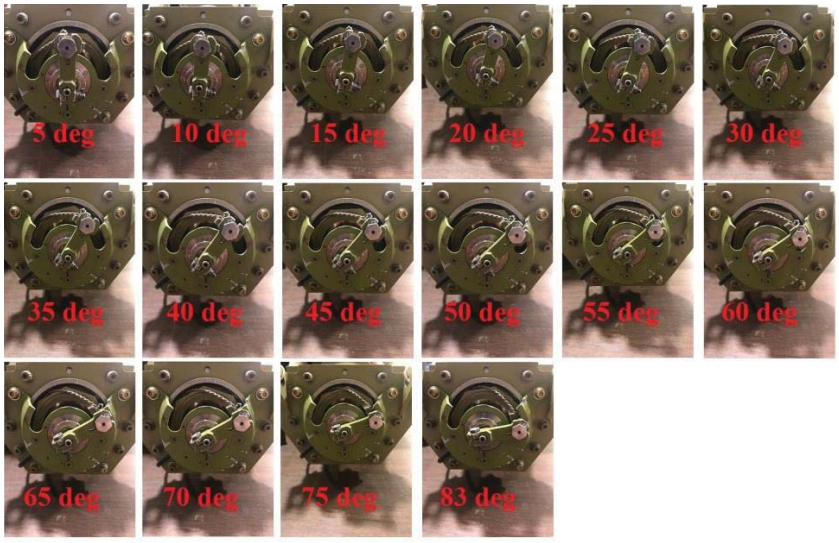


Figure 19. Boom Roll to Aircraft Right Side

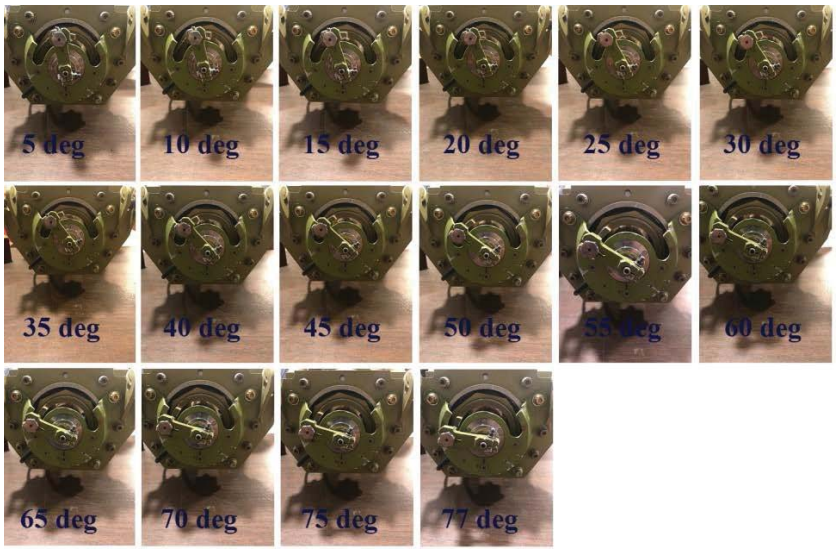


Figure 20. Boom Roll to Aircraft Left Side

2.4 Boom Control Assembly (BCA) Findings

To further add to potential causes for boom roll bias in either direction, the roll tilt Linear Differential Variable Transducers (LVDTs) located in the Boom Control Assembly (BCA) (ref. Figure 21), which are controlled by the boom operator's flight control stick, were found to be out of operational limits.

Figure 21. Roll Tilt LVDTs in BCA

The BCA was shipped to Aero-K, Inc. (primary contractor) who the sent the BCA to Frazier Aviation, Inc. (sub-contractor) for inspection and checkout of the BCA. The inspector noted the physical condition of the BCA and found that the #2 C3850A22RD wire was disconnected from the roll motor, even though there was no evidence to determine whether the wire was disconnected prior to the incident or through the BCA removal process. An inoperative roll motor means that the boom operator no longer has artificial feel through his flight control stick and could cause excessive play in the roll direction. In addition to the physical findings, the inspector found that with full downward pitch, the crank assembly contacted the support frame when the control stick was rolled full left and right. These physical findings were noted and reported by Aero-K, Inc. on their "Overhaul and Repair Report". After inspection at Aero-K, Inc., the BCA was shipped to Frazier Aviation, Inc. for electrical inspection and checkout of the roll (2ea) and elevation (2ea) LVDTs. During the bench test, the BCA was connected to a boom control test jig to measure voltages from both elevation and roll LVDT's. The flight control stick was positioned at its limits (i.e. full forward/aft and left/right) and measurements were taken for all LVDT's. All LVDT's were out of limits. Roll LVDT's operational limits measured are below (ref. Table 1). Values in red indicate out of tolerance in regards to their full thrown measurement, which the allowable is 6.61 ±.10 VAC.

Table 1. Roll Tilt LVDTs Tested at Frazier Aviation, Inc.

TEST MEASUREMENTS AT FRAZIER AVIATION, INC. USING BOOM CONTROL TEST JIG & TEST ASSY P/N: 7258-200 & 7258-300				
ROLL TILT LVDTs				
DIRECTION	LVDT1 (V)	LVDT2 (V)	VOLTAGE DIFFERENCE B/T LVDT1 & LVDT2	OUT OF LIMITS B/T LVDT1 & LVDT 2 Y/N?
Roll A/C Left	7.65	6.88	0.77	Y
Roll A/C Right	5.5	6.21	0.71	Y
Limits 6.61 ±- .10 VAC PER LVDT | .26VAC DIFFERENC B/T LVDT1 & LVDT2				

The BCA was then tested at Travis AFB using an ARB tester. This ARB tester is what field maintainers use to check voltage readings on LVDTs and DRVT. The ARB tester is an electronic software box that is similar to the BCU (ref. Table 2).

Table 2. Roll Tilt LVDTs Tested at Travis AFB

TEST MEASUREMENTS AT TRAVIS AFB USING BOEING ARB TESTER P/N: DZZ7610-1				
ROLL TILT LVDTs				
DIRECTION	LVDT1 (V)	LVDT2 (V)	VOLTAGE DIFFERENCE B/T LVDT1 & LVDT2	OUT OF LIMITS B/T LVDT1 & LVDT 2 Y/N?
Roll A/C Left	7.88	7.65	0.23	N
Roll A/C Right	6.66	6.91	0.25	N
Limits 6.61 ±.10 VAC PER LVDT | .26VAC DIFFERENC B/T LVDT1 & LVDT2				

The allowable operational tolerance is .26V difference between BCA roll tilt LVDT1 and LVDT2 when voltage signals are sent to the BCU. The BCU then processes the command roll from the roll tilt LVDTs and ensures they're both within the allowable operational tolerance to execute the command roll. If out of tolerance, the BCU does not recognize the command, the corresponding flight control surface is shut down followed by a fault light indication on the boom operator's instrument panel. Also, the BCU will record the fault in the STP as "Roll Stick LVDT No. 1 Fail" or "Roll Stick LVDT No. 2 Fail" for maintenance to reference after the flight and take appropriate actions to correct the fault. Using the voltage readings from Table 1 would infer that the BCU would have sent a fault indication and shut down the flight control surface. However, if the BCU obtained the voltage readings that the ARB tester recorded, the roll command from the flight control stick would have been processed and sent to the boom rudder actuators to execute the corresponding roll position since both LVDT 1 and LVDT 2 are within tolerance.

In regards to Table 2 voltage differences, when centered, the flight control stick would have a slight bias (or lean) to the boom operator's right (boom operator faces aft), which would drive the boom to the aircraft's left side. The bias can be calculated by taking the average difference between voltage outputs where (left LVDT1 + LVDT2)/2 – (right LVDT1 + LVDT2)/2 = Voltage Bias in either left direction (-) or right direction (+). Thus, (7.88V + 7.65V)/2 – (6.66V + 6.91V)/2 = .98V in the aircraft left direction, which is depicted as -.98V. The boom drifting to aircraft left side, due to flight control stick left side bias, means the DRVT indicator pin is rotating CCW (Face view) while the rotary crank rotates CW if viewed from the internal side. This boom drift to aircraft

left, while taking into account the other potential contributing factors already mentioned in this paper, could cause the rotary crank to contact and/or shear the mechanical stop (as depicted in figure 19b).

3.0 SUMMARY.

The components analyzed by the AIB contained deficiencies that would allow the components to operate outside their normal range of operation. The yoke measurements taken detail that several areas of the yoke end were outside of drawing specifications. The areas highlighted as out of limits can cause fit issues when installed into the gimbal housing. The Dual Rotary Voltage Transducer (DRVT) contained an error in orientation of the rotary bearing onto the structural plate. In addition, excess play between yoke and gimbal could cause the boom to drift to either left or right when lowered in flight. With the rotary bearing oriented 120° CW, this placed the internal mechanical stop in the operating range of the rotary crank where it normally would not be. The rotary crank came in contact with the stop causing half the crank to shear off. With half the crank sheared off, partial engagement with the roll drive shaft would cause intermittent roll position signals to be sent from the DRVT to the Boom Control Unit (BCU). The internal dual transducers are attached to the structural mounting plate from the underside by 3 screws from the top and these 3 screws only require less than a ½ - ¾ turn to secure the transducers to the structural plate. The incident DRVT had 2 of the 3 screws disengaged from the top transducer inside the case, which will allow the roll drive shaft to be dislodged. This condition too will lead to intermittent engagement with an already-damaged rotary crank. The boom control assembly (BCA) was found to have both roll tilt Linear Voltage Differential Transducers (LVDTs) out of limits at their max throws roll left and right. With the max throw differential calculated between left and right, a bias to the aircraft left was evident which means that the bias could drive the boom to drift to aircraft left.

4.0. SIGNATURE

Prepared by: AIB Engineering Advisor

Signature: _____// SIGNED//_____

BCU 93030227

1. This unit was last in for repair in 1998. The write up was “BCU fail elevation limit test at 23 degrees”. It shipped out as a no fault found.

2. All Honeywell seals were still intact. ETI at incoming was 4150.

3. J101, J102, J103, & J104 were inspected. No bent, loose, recessed, or damaged pins were noted.

4. The following faults were saved in the maintenance memory.

A. ROLL TILT LVDT

B. BCU ELVN RATE TAKER

C. ROLL DRVT

D. BCU ROLL RAKE TAKER

E. BCU FAIL 98

F. NOZ LOAD SENR ROLL

G. BOOM LAT ACCL

H. BOOM NRM ACCL

I. RT RUD LVDT

J. BOOM EV LVDT

K. TLCP POS LVDT NO. 2

L. ELEVATOR LVDT

M. LF RUD LVDT

N. BCU FAIL 39

O. TLSCP VALVE NO. 2

P. TLCP POS LVDT NO. 3

Q. TLCP POS LVDT NO. 1

R. TLSCP VALVE NO. 1

S. BCU FAIL 63

T. BCU FAIL 59

U. BCU FAIL 61

V. BCU FAIL 103

W. IMPACT PRESS

X. FUEL XDCR

Y. BCU FAIL 102

Z. TLSCP VALVE NO. 2

AA. TLSCP VALVE NO. 1

Incoming functional test passed.

Opened top of unit. All circuit cards were tightly seated.

Pulled all circuit cards and both power supplies out for inspection. No bent pins found. No visibly burnt or damaged components found.

Opened bottom of unit and visually inspected motherboard/backplane. No damage or defects noted.

Cleaned inside of unit to remove dust and reassembled.

Follow on functional test pass

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESEARCH LABORATORY
WRIGHT-PATTERSON AIR FORCE BASE OHIO

MEMORANDUM FOR Air Force Legal Operations Agency (AFLOA) (Capt. LA)

FROM: AFRL/RXSA

SUBJECT: KC-10 Accident Investigation Board Window Heater Analysis

The Materials Integrity Branch, System Support Division, Materials and Manufacturing Directorate, Air Force Research Laboratory (AFRL/RXSA) evaluated select hardware from a KC-10 refueling boom mishap. Captain LA a member of the resulting Accident Investigation Board (AIB), contacted RXSA with questions about the completed analysis relevant to the AIB investigation. The submitted questions, along with an RXSA response, can be seen below:

"Whether the window heater was functioning properly."

RXSA Response: No evidence was found, on the received and analyzed hardware, that would cause improper function of the window heater.

"Whether there was any electrical short circuiting in or around the case that could be passed outside to the associated bus."

RXSA Response: No evidence was found of electrical shorting and/or arcing present on the hardware analyzed.

"Whether the window heating unit recorded or produced any voltage faults."

RXSA Response: If non-volatile memory devices were present on any received hardware, we have no way to read or analyze the content. No physical evidence was found suggesting a voltage fault occurred.

Electrical and Electronic
Materials Integrity Branch
Systems Support Division
Materials and Manufacturing Directorate

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TAB FF

MEDICAL ADVISOR MEMORANDUM

FF1. Medical MFR Supplement..... FF-2

5 February 2017

MEMORANDUM FOR RECORD

FROM: Accident Investigation Board, KC-10A Mishap, T/N 83-0080, 1 November 2016

SUBJECT: MEDICAL RECORD REVIEW

1. On 9 November 2016, Major General Thomas J. Sharpy, Vice Commander, Air Mobility Command (AMC), appointed Colonel [Board President] to conduct an aircraft accident investigation of a mishap that occurred on 1 November 2016 involving a KC-10A Extender aircraft near Mountain Home Air Force Base (AFB), Idaho. The aircraft accident investigation was conducted in accordance with (IAW) Air Force Instruction (AFI) 51-503, *Aerospace and Accident Investigations*, at Travis AFB, California, from 9 January 2017 through 15 Feb 2017.

2. Medical Qualifications

a. After review of both the electronic medical records (AHLTA and CHCS) and the paper hard charts, all parties involved in this mishap were fully qualified for flying duties at the time of the mishap in accordance with AFI 48-123, *Medical Examinations and Standards*.

b. All mishap crew (MC) had current Preventative Health Assessments (PHA), with no variance in their baseline health.

c. Review of the Aeromedical Information Management Waiver Tracking System (AIMWTS) was significant for two Flying Class II/III waivers to include an indefinite waiver for bilateral myopia status-post photorefractive keratectomy (PRK) and temporary waiver expiring 31 August 2019 for bilateral optic nerve cupping in the setting of well-controlled ocular hypertension. There were no additional active profiles or waivers found involving MC.

d. Furthermore, all electronic medical records and the paper hard charts were reviewed for all involved maintenance squadron (MXS) members. All maintainers were found to have current PHA with no variance in their baseline health. There were, however, members found to be due for various vaccines to include influenza and anthrax upon review of individual medial readiness (IMR) database on ASIMS. Additionally, amongst the numerous maintainers investigated, there was discovered to be a record of active profiles that were not relevant to the findings of the accident investigation.

3. Medical Toxicology

a. All medical records of the involved MC and MXS members are detailed as above. Toxicology reports of the MC and MXS were reviewed and all were negative for ethanol, amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiates, phencyclidine, and sympathomimetic amines with one exception.

b. Laboratory analysis of a single maintainer's urine was positive for 11-nor-9-carboxy tetrahydrocannabinol, which is a metabolite of the psychoactive constituent of cannabis. Besides this single finding, there is no evidence to suggest either MC or MXS health was a factor in this mishap. Of note, the aforementioned maintenance member is currently undergoing administrative separation from the Air Force.

4. Questions regarding mishap members' past medical history shall be referred to the AIB medical advisor.

//SIGNED//
, Captain, USAF
Medical Advisor

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