

**BY ORDER OF THE COMMANDER
AIR FORCE MATERIEL COMMAND**



**AIR FORCE INSTRUCTION 21-103
AIR FORCE MATERIEL COMMAND
Supplement**

**ADDENDUM_S
13 SEPTEMBER 2016**

Maintenance

**EQUIPMENT INVENTORY, STATUS
AND UTILIZATION REPORTING
SYSTEM/C-12C/D/F/J MINIMUM
ESSENTIAL SUBSYSTEM LIST (MESL)**

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This instruction implements AFI 21-103_AFMCSUP, *Equipment Inventory, Status and Utilization Reporting*. It establishes guidance and assigns responsibility to provide AFMC Test Fleet aircraft status changes/updates in accordance with (IAW) current maintenance conditions and the developed Mission Design Series (MDS) specific mission essential subsystem list (MESL). This instruction applies to all AFMC organizations that manage or perform maintenance on AFMC assigned/possessed aircraft regardless of Air Force Specialty Code. This instruction does not apply to Air Force Reserve Command (AFRC) units or the Air National Guard. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). This publication may be supplemented at any level, but all direct Supplements must be routed to the Office of Primary Responsibility (OPR) of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-2, T-3") number following the compliance statement. See AFI 33-360, Publications and Forms Management, for a description of the

authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Send comments and suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, to HQ AFMC/A4MM, 462 Chidlaw Road, Wright-Patterson AFB OH 45433-5006.

These MESLs complement AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*. They apply to maintenance activities supporting AFMC test missions across AFMC.

SUMMARY OF CHANGES

This publication has been substantially revised to meet the intent of AFI 21-103 AFMCSUP; this Addendum must be reviewed in its entirety. The MESL is modified based on user inputs and has been updated to reflect current mission requirements. Additionally, removed Tier 1 (T-1) IAW AFI 33-360 dated 1 December 2015, MAJCOM level instruction will not Tier references above the MAJCOM waiver authority (e.g. Table 1.1. Tier Waiver Authorities, Tier T-1 may be used in publications at Departmental level only.).

1.1. **General.** The MESL is the basis of status reporting IAW AFI 21-103. MESLs lay the ground work for reporting the status of aircraft availability. They list the minimum essential systems and subsystems that must work on test fleet aircraft to perform specifically assigned unit test, training or other missions.

1.2. **Qualifying notes are used to:** Define system exceptions and help explain complex degraded mission systems.

1.3. **It is understood that any aircraft or support equipment system or subsystem may:** Be subjected to test or tested under a test scenario and/or are test dependent as directed by the test mission director. If identified by test mission director, those systems or subsystems if not already identified by qualifying notes must be operational to be considered FMC or PMC for that mission.

2.1. **Reading the MESL.** Due to the unique nature of the C-12, no -06 work unit code (WUC) manual was created for this program; there are no WUCs within the table to reference. This MESL instead is read by comparing the systems listed in the Full Systems List (FSL) and all applicable Basic Systems List (BSLs) across the page. Each unit's Design Operational Capability (DOC) statement determines applicability of BSL columns. The aircraft MESLs incorporate all AFMC assigned aircraft and therefore it is important to compare only those columns listed in the MESL which are applicable to the unit's assigned aircraft.

2.2. C-12 maintenance will use the MESL listed in the maintenance contract. HQ AFMC/A4M will approve all changes to the C-12 MESL. (T-2).

Table 2.1. C-12 C/D Minimum Essential Subsystem List (MESL).

NO	SYSTEM/SUBSYSTEM	FS L	BSL				
			VFRD	VFRN	IFRD	IFRN	IC
	AIR CONDITIONING/ ENVIRONMENTAL						
1.	Pressurization Controller	X	X3	X3	X3	X3	X3
2.	Cabin Rate of Climb Indicator	X	X	X	X	X	X
3.	Cabin Altitude Annunciator	X	X	X	X	X	X
4.	Differential Press/Cabin Alt Indicator	X	X	X	X	X	X
5.	Outflow Valve	X	X	X	X	X	X
6.	Safety Valve	X	X	X	X	X	X
7.	Cabin Dump System	X	X	X	X	X	X
8.	Air Conditioner	X	X1	X1	X1	X1	X1
9.	Auto Temp Control System	X	X1	X1	X1	X1	X1
10.	Manual Temp Control System	X					
11.	Bleed Air Failure Annunciators (2)	X	X2	X2	X2	X2	X2
12.	Pressurization Air Source (2)	X	X3	X3	X3	X3	X3
13.	Bleed Air Shutoff Valve (2)	X	X	X	X	X	X
14.	Duct Overtemp Annunciator	X	X	X	X	X	X
	AUTO FLIGHT						
15.	Autopilot	X					
	COMMUNICATIONS						
16.	VHF (3)	X	X4	X4	X4	X4	X4
17.	SATCOM	X	X5	X5	X5	X5	X5
18.	Radio Control Unit (2)	X	X4	X4	X	X	X
19.	Audio Control Panel (3)	X	X6	X6	X6	X6	X6
20.	Static Discharge Wicks (15)	X	X7	X7	X7	X7	X7
21.	UHF	X	X8	X8	X8	X8	X8
22.	HF	X	X8	X8	X8	X8	X8
	ELECTRICAL						
23.	Aircraft Battery	X	X	X	X	X	X
24.	Battery Charge System and Annunciator	X	X	X	X	X	X
25.	Auxiliary Battery	X	X	X	X	X	X
26.	Auxiliary Battery Annunciator	X	X	X	X	X	X
27.	DC Generator (2)	X	X	X	X	X	X
28.	DC Loadmeter (2)	X	X	X	X	X	X
29.	DC Generator Annunciator (2)	X	X9	X9	X9	X9	X9
30.	Inverter (2)	X	X	X	X	X	X
31.	Inverter Warning Annunciator (2)	X	X10	X10	X10	X10	X10
32.	AC Frequency / Voltmeter (2)	X	X	X	X	X	X
33.	Emergency Battery Power Supply	X	X	X	X	X	X
	ENGINE INDICATING						

34.	Propeller Tachometer Indicator (2)	X	X	X	X	X	X
35.	Turbine Tachometer (N1) (2)	X	X	X	X	X	X
36.	TGT Indicator (2)	X	X	X	X	X	X
37.	Torque Indicator (2)	X	X	X	X	X	X
38.	Engine Oil Pressure / Temperature (2)	X	X	X	X	X	X
39.	Chip Detector System and Annunciator (2)	X	X	X	X	X	X
	FIRE PROTECTION						
40.	Engine Fire Detector System & Annunciator (2)	X	X	X	X	X	X
41.	Engine Fire Extinguisher (2)	X	X	X	X	X	X
42.	Portable Fire Extinguisher (2)	X	X	X	X	X	X
	FLIGHT CONTROLS						
43.	Flap Position Indicator	X11	X11	X11	X11	X11	X11
44.	Trim Tab Indicators (3)	X12	X12	X12	X12	X12	X12
45.	Yaw Damp	X13	X13	X13	X13	X13	X13
46.	Stall Warning Horn	X	X	X	X	X	X
47.	Rudder Boost System (If installed)	X					
48.	Flap System	X	X	X	X	X	X
	FUEL SYSTEM						
49.	Standby Fuel Boost Pump (2)	X	X14	X14	X14	X14	X14
50.	Engine Driven Boost Pump (2)	X	X	X	X	X	X
51.	Firewall Shutoff Valve (2) Including Annunciators	X	X	X	X	X	X
52.	Fuel Quantity Indicator (2) Including Annunciator	X	X15	X15	X15	X15	X15
53.	Cross-feed Valve	X	X	X	X	X	X
54.	Cross-feed Light	X	X16	X16	X16	X16	X16
55.	Fuel Flow Indicator (2)	X	X17	X17	X17	X17	X17
56.	Fuel Pressure Warning Annunciator (2)	X	X18	X18	X18	X18	X18
57.	Jet Transfer Pump (2)	X	X19	X19	X19	X19	X19
58.	Motive Flow Valve (2)	X	X19	X19	X19	X19	X19
59.	Fuel Quantity Gage Selector Switch	X	X20	X20	X20	X20	X20
	FLIGHT SAFETY EQUIPMENT						
60.	Seat Belts (10)	X	X21	X21	X21	X21	X21
61.	Shoulder Harness: Pilot, Copilot, AMT	X	X22	X22	X22	X22	X22
62.	Emergency Locator Transmitter	X	X	X	X	X	X
63.	Flight Data Recorder	X	X	X	X	X	X
64.	Cockpit Voice Recorder	X	X	X	X	X	X
65.	TAWS	X	X5	X	X	X	X
66.	TCAS	X	X	X	X	X	X

67.	Stall Warning	X	X	X	X	X	X
68.	Stall Strip (2)	X	X	X	X	X	X
69.	Survival Equipment	X	X5	X5	X5	X5	X5
70.	PBE (2)	X	X	X	X	X	X
71.	Flashlights	X					
	ICE AND RAIN PROTECTION						
72.	Surface De-ice System	X					X
73.	Engine Anti-Ice System and Annunciator	X	X23	X23	X23	X23	X23
74.	Windshield Heat (2)	X					X
75.	Engine Auto Ignition System and Lights	X	X	X	X	X	X
76.	Pitot Heat	X			X	X	X
77.	Alternate Static Air Source	X	X	X	X	X	X
78.	Propeller De-ice System	X					X
79.	Heated Fuel Vent	X					X
80.	Stall Warning Heat	X					X
81.	Pneumatic Pressure Indicator	X					X
82.	Wing Ice Light	X					X
83.	Brake De-ice System	X					X
	LANDING GEAR						
84.	Landing Gear Position Indicator Lights	X	X	X	X	X	X
85.	Landing Gear Handle Light	X	X	X	X	X	X
86.	Landing gear Aural Warning	X	X	X	X	X	X
87.	Emergency Landing Gear Extension System	X	X	X	X	X	X
	LIGHTS AND INDICATORS						
88.	Cockpit and Instrument Light	X		X		X	
89.	Landing and Taxi Lights	X		X		X	
90.	Beacon	X	X	X	X	X	X
91.	Position Lights	X		X		X	
92.	Master Fault Caution Lights	X	X	X	X	X	X
93.	TAWS Annunciation Lights	X	X	X	X	X	X
94.	Cabin Door Caution Annunciator	X	X24	X24	X24	X24	X24
	NAVIGATION INSTRUMENTS						
95.	Navigation Display	X		X	X	X	X
96..	Navigation Display Control Panel	X		X	X	X	X
97.	Navigation Equipment	X	X5	X5	X5	X5	X5
98.	Flight Management System (2)	X	X4	X4	X4	X4	X4
99.	GPS (2)	X	X4	X4	X4	X4	X4
100	TA-12	X	X5	X5	X5	X5	X5

.							
101	Standby Magnetic Compass	X	X	X	X	X	X
102	IFF Mode S Transponder	X	X	X	X	X	X
103	Clock	X			X	X	X
104	Radio Altimeter	X	X	X	X	X	X
105	Outside Air Temp Indicating System	X	X	X	X	X	X
106	Primary Flight Display (2)	X	X25	X25	X25	X25	X25
107	Pilots PFD Control Panel	X	X	X	X	X	X
108	Copilots PFD Control Panel	X					
109	Course Heading Control Panel	X			X	X	X
110	Reference Select Control Panel	X					
111	Air Data Computer (2)	X	X4	X4	X	X	X
112	Attitude Heading Reference System (2)	X	X4	X4	X	X	X
113	Electronic Standby Instrument System	X		X	X	X	X
114	Pedestal Cooling Fan	X	X	X	X	X	X
	OXYGEN						
115	Oxygen System	X	X	X	X	X	X
	PROPELLERS						
116	Propeller Governor	X	X	X	X	X	X
117	Overspeed Governor	X	X	X	X	X	X
118	Propeller Governor Test Switch	X	X	X	X	X	X
119	Prop Reversing System (If installed)	X	X	X	X	X	X
120	Auto-Feather System (If installed)	X	X	X	X	X	X
121	Propeller Primary Low Pitch Stop	X	X	X	X	X	X

QUALIFYING NOTES

1. Determined by pilot; if deemed flyable, A/C is MC.
2. One may be operative provided bleed air is not used from side of failed light.
3. Flight limited to cabin altitude to 10,000 ft. or less.
4. One system must be operable.
5. As determined by mission (i.e. passenger carrying, oceanic flights, local procedures, etc).
6. AMT panel may be inoperative.
7. Eight (8) must be installed IAW flight manual and in serviceable condition.
8. If required by FAA/ICAO airspace.
9. One may be inoperative provided corresponding load-meter is monitored.
10. One may be inoperative provided corresponding AC Freq/Volt meter is monitored.
11. May be inoperative provided the flap travel is visually inspected prior to takeoff.
12. May be inoperative provided the tabs are visually checked in the neutral position prior to takeoff for full range operation.
13. May be inoperative for flight at and below 17000 ft. Not required for BD-04.
14. One may be inoperative unless operating on aviation gasoline above 20000 ft.
15. One may be inoperative provided other side is operational and amount of fuel on board can be established for intended flight.
16. May be inoperative provided proper operation of cross-feed system is checked prior to takeoff. Both fuel pressure lights must be operative.
17. One may be inoperative provided fuel quantity gauges are operative.
18. One may be inoperative provided standby boost pump operation is ascertained using opposite light with cross-feed prior to engine start. Standby Boost pump on side of failed light must be operated in flight to assure fuel pressure, should the engine driven boost pump fail.
19. Not required if Aux Tank fuel not required.
20. May be inoperative provided MAIN quantity indicators are operational.
21. One per occupied seat.
22. AMT position required as mission dictates.
23. Annunciator may be inoperative provided manual ice vane controls are operational.
24. May be inoperative provided visual indicators are checked.
25. Copilot's PFD may be inoperative.

Table 2.2. C-12F Minimum Essential Subsystem List (MESL).

NO	SYSTEM/SUBSYSTEM	FS L	BSL				
			VFRD	VFRN	IFRD	IFR N	IC
	AIR CONDITIONING/ ENVIRONMENTAL						
1.	Pressurization Controller	X	X10	X10	X10	X10	X10
2.	Cabin Rate of Climb Indicator	X	X	X	X	X	X
3.	ALT WARN Annunciator	X	X	X	X	X	X
4.	Differential Press/Cabin Alt Indicator	X	X	X	X	X	X
5.	Outflow	X	X	X	X	X	X
6.	Safety Valve	X	X	X	X	X	X
7.	Cabin Dump System	X	X	X	X	X	X
8.	Air Conditioner	X	X3	X3	X3	X3	X3
9.	Auto Temp Control System	X	X3	X3	X3	X3	X3
10.	Manual Temp Control System	X					
11.	BL AIR FAIL Annunciators (2)	X	X	X	X	X	X
12.	Pressurization Air Source (2)	X	X1	X1	X1	X1	X1
13.	Bleed Air Shutoff Valve (2)	X	X	X	X	X	X
14.	Duct Overtemp Annunciator	X	X	X	X	X	X
	AUTO FLIGHT						
15.	Autopilot	X					
	COMMUNICATIONS						
16.	VHF (3)	X	X2	X2	X2	X2	X2
17.	SATCOM	X	X3	X3	X3	X3	X3
18.	Radio Control Unit (2)	X	X2	X2	X	X	X
19.	Audio Control Panel (2)	X	X2	X2	X2	X2	X2
20.	Static Discharge Wicks (22)	X	X4	X4	X4	X4	X4
21.	UHF	X	X3	X3	X3	X3	X3
22.	HF	X	X3	X3	X3	X3	X3
	ELECTRICAL						
23.	Battery	X	X	X	X	X	X
24.	Battery Charge Monitoring Sys and Annunciator	X	X	X	X	X	X
25.	Auxiliary Battery	X	X	X	X	X	X
26.	Auxiliary Battery Annunciator	X	X	X	X	X	X
27.	DC Generator (2)	X	X	X	X	X	X
28.	DC Loadmeter (2)	X	X	X	X	X	X
29.	DC GEN Annunciator	X	X	X	X	X	X
30.	Inverter (2)	X	X	X	X	X	X
31.	Inverter Annunciator (2)	X	X	X	X	X	X
32.	AC Frequency / Voltmeter (2)	X	X	X	X	X	X

33.	Emergency Battery Power Supply	X	X	X	X	X	X
	ENGINE INDICATING						
34.	Propeller Tachometer Indicator (2)	X	X	X	X	X	X
35.	Turbine Tachometer (N1) (2)	X	X	X	X	X	X
36.	TGT Indicator (2)	X	X	X	X	X	X
37.	Torque Indicator (2)	X	X	X	X	X	X
38.	Engine Oil Pressure / Temperature (2)	X	X	X	X	X	X
39.	Chip Detector System and Annunciator (2)	X	X	X	X	X	X
40.	Oil Press Annunciator (2)	X	X	X	X	X	X
	FIRE PROTECTION						
41.	Engine Fire Detector System & Annunciator (2)	X	X	X	X	X	X
42.	Engine Fire Extinguisher (2)	X	X	X	X	X	X
43.	Portable Fire Extinguisher (2)	X	X	X	X	X	X
	FLIGHT CONTROLS						
44.	Flap Position Indicator	X	X	X	X	X	X
45.	Trim Tab Indicator	X	X	X	X	X	X
46.	Yaw Damp	X	X	X	X	X	X
47.	Stall Warning Horn	X	X	X	X	X	X
48.	Flap System	X	X	X	X	X	X
	FUEL SYSTEM						
49.	Standby Fuel Boost Pump	X	X	X	X	X	X
50.	Engine Driven Boost Pump	X	X	X	X	X	X
51.	Firewall Shutoff Valve (2) Including Annunciators	X	X	X	X	X	X
52.	Fuel Quantity Indicator (2) Including Annunciator	X	X	X	X	X	X
53.	Cross-feed Valve	X	X	X	X	X	X
54.	Cross-feed Light	X	X	X	X	X	X
55.	Fuel Flow Indicator (2)	X	X	X	X	X	X
56.	Fuel pressure Annunciator (2)	X	X	X	X	X	X
57.	Jet Transfer Pump (2)	X	X	X	X	X	X
58.	Motive Flow Valve (2)	X	X	X	X	X	X
59.	Fuel Quantity Gage Selector Switch	X	X9	X9	X9	X9	X9
	FLIGHT SAFETY EQUIPMENT						
60.	Seat Belts	X	X5	X5	X5	X5	X5
61.	Shoulder Harness: Pilot, Copilot	X	X	X	X	X	X
62.	Emergency Locator Transmitter	X	X	X	X	X	X
63.	Flight Data Recorder	X	X	X	X	X	X
64.	Cockpit Voice Recorder	X	X	X	X	X	X
65.	TAWS	X	X6	X	X	X	X

66.	TCAS	X	X	X	X	X	X
67.	Stall Warning	X	X	X	X	X	X
68.	Stall Strip (2)	X	X	X	X	X	X
69.	Survival Equipment	X	X3	X3	X3	X3	X3
	ICE AND RAIN PROTECTION						
70.	Surface De-ice System	X					X
71.	Engine Anti-Ice System and Annunciator	X	X	X	X	X	X
72.	Windshield Heat (2)	X					X
73.	Engine Auto Ignition System and Lights	X	X	X	X	X	X
74.	Pitot Heat	X			X	X	X
75.	Alternate Static Air Source	X			X	X	X
76.	Propeller De-ice System	X					X
77.	Heated Fuel Vent	X			X	X	X
78.	Stall Warning Heat	X					X
79.	Pneumatic Pressure Indicator	X			X	X	X
80.	Wing Ice Light	X					X
81.	Brake De-ice System	X					X
	LANDING GEAR						
82.	Landing Gear Position Indicator Lights	X	X	X	X	X	X
83.	Landing Gear Handle Light	X	X	X	X	X	X
84.	Landing gear Aural Warning	X	X	X	X	X	X
85.	Alternate Landing Gear Extension System	X	X	X	X	X	X
86.	Landing Gear Hydraulic Power Pack and Motor	X	X	X	X	X	X
87.	Hydraulic Fluid Low Annunciator	X	X	X	X	X	X
	LIGHTS AND INDICATORS						
88.	Cockpit and Instrument Light	X		X		X	
89.	Landing Lights	X		X		X	
90.	Beacon	X		X		X	
91.	Position Lights	X		X		X	
92.	Master Fault Caution Lights	X	X	X	X	X	X
93.	TAWS Annunciation Lights	X	X	X	X	X	X
94.	Cabin Door Caution Annunciator	X	X	X	X	X	X
	NAVIGATION INSTRUMENTS						
95.	Navigation Display	X		X	X	X	X
96..	Navigation Display Control Panel	X		X	X	X	X
97.	Navigation Equipment	X	X3	X3	X3	X3	X3
98.	Flight Management System (2)	X	X2	X2	X2	X2	X2

99.	GPS (2)	X	X2	X2	X2	X2	X2
100.	TA-12	X	X3	X3	X3	X3	X3
101.	Standby Magnetic Compass	X	X	X	X	X	X
102.	IFF Mode S Transponder	X	X	X	X	X	X
103.	Clock	X			X	X	X
104.	Radio Altimeter	X	X	X	X	X	X
105.	Outside Air Temp Indicating System	X	X	X	X	X	X
106.	Primary Flight Display (2)	X	X7	X7	X7	X7	X7
107.	Pilots PFD Control Panel	X	X	X	X	X	X
108.	Copilots PFD Control Panel	X					
109.	Course Heading Control Panel	X			X	X	X
110.	Reference Select Control Panel	X					
111.	Air Data Computer	X	X2	X2	X	X	X
112.	Attitude Heading Reference System	X	X2	X2	X	X	X
113.	Electronic Standby Instrument System	X		X	X	X	X
114.	Pedestal Cooling Fan	X	X	X	X	X	X
	OXYGEN						
115.	Oxygen System	X	X	X	X	X	X
	PROPELLERS						
116.	Propeller Governor	X	X	X	X	X	X
117.	Overspeed Governor	X	X	X	X	X	X
118.	Propeller Governor Test Switch	X	X	X	X	X	X
119.	Prop Reversing System and Annunciators	X	X	X	X	X	X
120.	Auto-Feather System and Annunciators	X	X8	X8	X8	X8	X8

.							
121	Propeller Primary Low Pitch Stop	X	X	X	X	X	X
.							

QUALIFYING NOTES

1. Flight limited to cabin altitude of 10,000 ft. or less with one pressurization air source.
2. One system must be operable.
3. As required for mission.
4. At least two static wicks per primary control surface and no more than three other static wicks missing though out the rest of the aircraft.
5. One per occupied seat.
6. If carrying passengers.
7. Copilot's PFD may be inoperative.
8. Required for aircraft weighing 12,500 lbs or more at takeoff.
9. May be inoperative provided MAIN quantity indicators are operational.
10. Flight limited to cabin altitude to 10,000 ft. or less

Table 2.3. C-12J Minimum Essential Subsystem List (MESL).

NO	SYSTEM/SUBSYSTEM	FSL	BSL				
			VFR D	VFR N	IFRD	IFRN	IC
	AIR CONDITIONING/ ENVIRONMENTAL						
1.	Bleed Air FAIL Annunciator	X	X1	X1	X1	X1	X1
2.	Bleed Air Shutoff Valves	X	X	X	X	X	X
3.	Precooler and Bypass Valve system	X	X5	X5	X5	X5	X5
4.	CABIN ALTITUDE Annunciator	X	X10	X10	X10	X10	X10
5.	Outflow Valve/Safety Valve	X	X	X	X	X	X
6.	Cabin Rate of Climb Indicator	X					
7.	Pressurization Controller	X	X	X	X	X	X
8.	Differential Pressure/Cabin Altitude Indicator	X	X	X	X	X	X
9.	Environmental Fail Annunciator	X	X	X	X	X	X
	AUTO FLIGHT						
10.	Autopilot	X					
	COMMUNICATIONS						
11.	VHF (3)	X	X2	X2	X2	X2	X2
12.	Radio Control Unit (2)	X	X2	X2	X2	X2	X2
13.	Audio Control Panel (2)	X	X2	X2	X2	X2	X2
14.	SATCOM	X	X3	X3	X3	X3	X3
15.	UHF	X	X4	X4	X4	X4	X4
16.	HF	X	X4	X4	X4	X4	X4
17.	Flight Deck Speakers	X	X13	X13	X13	X13	X13
18.	Static Wicks (30)	X	X12	X12	X12	X12	X12
	ELECTRICAL						
19.	AC Volt/Freq Meter	X	X	X	X	X	X
20.	Battery	X	X	X	X	X	X
21.	Battery Monitoring System	X	X	X	X	X	X
22.	BATT TIE OPEN Annunciator	X	X	X	X	X	X
23.	DC Generator	X	X	X	X	X	X
24.	DC GEN Annunciator	X	X	X	X	X	X
25.	DC Loadmeter	X	X	X	X	X	X
26.	DC Voltmeter System	X	X	X	X	X	X
27.	GEN TIE OPEN Annunciator	X	X	X	X	X	X
28.	Inverter	X	X	X	X	X	X
29.	INVERTER Annunciator	X	X	X	X	X	X
30.	Auxiliary Battery	X	X	X	X	X	X
31.	AUX BATT Annunciator	X					
32.	Emergency Battery Power Supply	X	X	X	X	X	X
	ENGINE INDICATING						

33.	ITT Indicator	X	X	X	X	X	X
34.	Tachometer (Gas Generator)	X	X	X	X	X	X
35.	Tachometer (Propeller)	X	X	X	X	X	X
36.	Torque Indicator	X	X	X	X	X	X
37.	Chip Detector Annunciator System	X	X15	X15	X15	X15	X15
38.	Oil Pressure Indicator	X	X	X	X	X	X
39.	Oil Temperature Indicator	X	X	X	X	X	X
40.	OIL PRESS Annunciator	X	X	X	X	X	X
	FIRE PROTECTION						
41.	Engine Fire Detector System	X	X	X	X	X	X
42.	Engine Fire Extinguisher	X	X	X	X	X	X
43.	Portable Fire Extinguisher	X	X	X	X	X	X
	FLIGHT CONTROLS						
44.	Flap Position Indicator	X	X	X	X	X	X
45.	Flap System	X	X	X	X	X	X
46.	Trim Tab Indicator – Rudder, Aileron, Elevator	X	X	X	X	X	X
47.	Stall Warning System	X	X	X	X	X	X
	FUEL SYSTEM						
48.	Fuel Transfer System including annunciator	X	X	X	X	X	X
49.	Standby Pump	X	X	X	X	X	X
50.	Fuel Flow Indicator	X	X18	X18	X18	X18	X18
51.	FUEL PRESS Annunciator	X	X	X	X	X	X
52.	Fuel Quantity Indicator	X	X16	X16	X16	X16	X16
53.	FUEL QTY Annunciator	X	X17	X17	X17	X17	X17
54.	Firewall Fuel Shutoff System w/ annunciator	X	X	X	X	X	X
55.	Primary Jet Pump	X	X	X	X	X	X
56.	Engine Driven Boost Pump	X	X	X	X	X	X
57.	FUEL FEED Annunciator	X	X	X	X	X	X
58.	Auxiliary Fuel Transfer System w/annunciator	X	X19	X19	X19	X19	X19
	FLIGHT SAFETY EQUIPMENT						
59.	Exit Signs Self Illuminating	X	X6	X6	X6	X6	X6
60.	Emergency Locator Transmitter	X	X	X	X	X	X
61.	Cockpit Voice Recorder	X	X	X	X	X	X
62.	Flight Data Recorder	X	X	X	X	X	X
63.	Terrain Awareness and Warning System(TAWS)	X		X	X	X	X
64.	Traffic Collision Avoidance System (TCAS)	X	X	X	X	X	X
65.	Stall Warning System	X	X	X	X	X	X
	ICE AND RAIN PROTECTION						

66.	Alternate Static Air System	X	X	X	X	X	X
67.	Alternate Static Air Heat	X	X	X	X	X	X
68.	Engine Auto-Ignition System w/annunciator	X	X	X	X	X	X
69.	Engine Inertial Ice Vane	X	X	X	X	X	X
70.	ENG ICE FAIL Annunciator	X	X	X	X	X	X
71.	ENG ANTI-ICE Annunciator	X	X	X	X	X	X
72.	Fuel Vent Heat	X			X	X	X
73.	Windshield Heat	X					X
74.	Pitot Heat	X			X	X	X
75.	Stall Warning Lift Transducer Heat	X					X
76.	Surface De-ice System	X					X
77.	Propeller De-ice System	X					X
78.	Wing Ice Light	X					X
79.	Pneumatic Pressure Gage	X	X	X	X	X	X
80.	Pneumatic System	X	X	X	X	X	X
81.	Windshield wiper system	X	X20	X20	X20	X20	X20
	LANDING GEAR						
82.	Landing Gear Position Indicator Annunciator	X	X	X	X	X	X
83.	Landing Gear Handle Light	X	X	X	X	X	X
84.	Landing gear Aural Warning	X	X	X	X	X	X
85.	Landing Gear Hydraulic Power Pack / Motor	X	X	X	X	X	X
86.	Hydraulic Fluid Low Annunciator	X	X	X	X	X	X
87.	Alternate Extension System	X	X	X	X	X	X
	LIGHTS AND INDICATORS						
88.	Cockpit and Instrument Light	X		X		X	
89.	Landing Lights	X		X		X	
90.	Position Lights	X		X		X	
91.	Rotating Beacon/Anti-Collision Light System	X		X		X	
92.	Cabin Door Annunciators	X	X7	X7	X7	X7	X7
93.	Warning Annunciator Panel	X	X	X	X	X	X
94.	Caution and Advisory Panel	X	X	X	X	X	X
95.	Passenger Notice System	X	X8	X8	X8	X8	X8
	NAVIGATION INSTRUMENTS						
96.	Navigation Display	X		X	X	X	X
97.	Navigation Display Control Panel	X		X	X	X	X
98.	Navigation Equipment	X	X3	X3	X3	X3	X3
99.	Flight Management System	X	X14	X14	X14	X14	X14
100.	Global Positioning System (GPS)	X	X14	X14	X14	X14	X14

101	TA-12S	X	X3	X3	X3	X3	X3
102	Standby Magnetic Compass	X	X	X	X	X	X
103	IFF Mode S Transponder	X	X	X	X	X	X
104	Weather Radar	X	X3,20	X3,20	X	X	X
105	ADF	X	X3,4	X3,4	X3,4	X3,4	X3,4
106	Radio Altimeter	X	X3,4	X3,4	X3,4	X3,4	X3,4
107	Primary Flight Display (PFD)	X	X9	X9	X9	X9	X9
108	Pilots PFD Control Panel	X	X	X	X	X	X
109	Copilots PFD Control Panel	X					
110	Course Heading Control Panel	X			X	X	X
111	Reference Select Control Panel	X					
112	Air Data Computer	X	X14	X14	X	X	X
113	Attitude Heading Reference System	X	X14	X14	X	X	X
114	Electronic Standby Instrument System	X	X	X	X	X	X
115	Outside Air Temp Indicating System	X	X11	X11	X11	X11	X11
116	Clock	X			X	X	X
	OXYGEN						
117	Oxygen System	X	X	X	X	X	X
118	Oxygen Cylinder Pressure Gage	X	X	X	X	X	X
119	Oxygen Outlet Pressure Gage	X	X	X	X	X	X
	PROPELLERS						
120	Auto-Feather System Including Annunciator	X	X	X	X	X	X
121	Propeller Reversing / Ground Fine	X	X	X	X	X	X
122	Propeller Governor / Low Pitch Test	X	X	X	X	X	X

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123	Propeller Overspeed Governor	X	X	X	X	X	X
124	Propeller Primary Low Pitch Stop	X	X	X	X	X	X

QUALIFYING NOTES

1. One may be inoperative provided bleed air is not used from side of failed light.
2. Co-Pilot's audio panel may be inoperative.
3. As determined by mission.
4. If required by FAA/ICAO airspace.
5. One may be inoperative provided affected side Environmental air valve is closed and Environmental annunciators are operational
6. Required for passenger carrying missions only.
7. May be inoperative provided aircrew manually inspects all locking mechanisms prior to takeoff.
8. May be inoperative provided aircrew verbally notifies passengers of instructions.
9. Copilot's PFD may be inoperative.
10. Not required for flights below 10,000 feet MSL.
11. Not required if OAT is displayed on PFD or ND
12. At least two static wicks per primary control surface and no more than three other static wicks missing though out the rest of the aircraft. Maximum of 5 wicks may be missing.
13. One May be inoperative provided both pilots headsets/interphone system is operational
14. One system must be operable.
15. If Installed
16. One may be inop provided both fuel flow indicators, both fuel quantity annunciators are operational and amount of fuel on board can be established to be adequate for intended flight.
17. One May be inop provided all fuel quantity indicators, and fuel flow indicators are operational
18. One may be inop provided All fuel Qty indicators are operational.
19. Either or both Auxiliary Fuel Transfer systems may be inoperative if auxiliary fuel is not required. Fuel must remain within imbalance limitations. Approval for continued flight must be obtained from qualified maintenance personnel (Regional Site Lead).
20. May be inop provided there is no precipitation at take-off and landing location

DONALD E. KIRKLAND, Brigadier General, USAF
 Director of Logistics, Civil Engineering and Force
 Protection

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

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AFI 11-218, *Aircraft Operations and Movement on the Ground*, 28 Oct 2011

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Prescribed Forms

There are no prescribed forms for this publication

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*, 22 Sep 2009

Abbreviations and Acronyms:

A/C—Aircraft

AC—Air Conditioning

AC—Alternating Current

ADF—Automatic Direction Finding

AFMC—Air Force Materiel Command

AMT—Air Mission Technician

BSL—Basic Systems List

CVR—Cockpit Voice Recorder

DC—Direct Current

DOC—Design Operational Capability

DTE—Developmental Test and Evaluation

DTS—Developmental Test Support

EGI—Global Positioning System

FAA—Federal Aviation Administration

FDR—Flight Data Recorder

EW—Electronic Warfare
FMC—Full Mission Capable
FSL—Full Systems List
GPS—Global Positioning System
HF—High Frequency
IAW—In Accordance With
IC—Intelligence Community
ICAO—International Civil Aviation Organization
IFF—Identification Friend or Foe
IFRD—Instrument Flight Rules Day
IFRN—Instrument Flight Rules Night
ILS—Instrument Landing System
IMT—Information Management Tool
INS—Inertial Navigation System
IRU—Inertial Reference Unit
ITT—Interstage Turbine Temperature
MC—Mission Capable
MCE—Mission Control Element
MDS—Mission Design Series
MDU—Multipurpose Display Unit
MESL—Mission Essential Subsystem List
MFD—Multi Function Display
MPCD—Multi-Purpose Color Display
NAV—Navigation
ND—Navigation Display
NMC—Non-Mission Capable
OAT—Outside Air Temperature
OPR—Office of Primary Responsibility
PBE—Portable Breathing Equipment
PFD—Primary Flight Display
PMC—Partial Mission Capable
RCS—Radar Cross-Section

RLG—Inertial Navigation System
SAS—Signature Assessment System
SATCOM—Satellite Communication
SKE—Station Keeping Equipment
TACAN—Tactical Air Control and Navigation
TAWS—Terrain Avoidance Warning System
TCAS—Traffic Collision Avoidance System
TCTO—Time Compliance Technical order
TGT—Turbine Gas Temperature
TNG—Training
TOD—Technical Order Data
UARRSI—Universal Aerial Refueling Receptacle Slipway Installation
UHF—Ultra High Frequency
VFRD—Visual Flight Rules Day
VFRN—Visual Flight Rules Night
VHF—Very High Frequency
VOR—VHF Omnidirectional Range
VSD—Vertical Situation Display
WUC—Work Unit Code