

**BY ORDER OF THE COMMANDER  
AIR COMBAT COMMAND**



**AF INSTRUCTION 21-103\_ACC  
SUP\_ADDENDUM-CC  
AIR COMBAT COMMAND  
Supplement**

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Maintenance**

**EQUIPMENT INVENTORY, STATUS AND  
UTILIZATION REPORTING SYSTEM/TC-  
130H MINIMUM ESSENTIAL SUBSYSTEM  
LIST (MESL)**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This MESL compliments AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*. It applies to all TC-130H ACC units. This Addendum does not apply to Air National Guard or Air Force Reserve Command units and members. Ensure that all records created as a result of processes prescribed in this document are maintained in accordance with (IAW) AFMAN 33-363, *Management of Records*, and are disposed of IAW the Air Force Records Disposition Schedule located at <https://www.my.af.mil/gcss-af61a/afrimsafrims/>. Contact supporting records managers as required. Send recommended changes or comments on AF Form 847, *Recommendation for Change of Publication*, to HQ ACC/A4YA, 130 Douglas St., Suite 210, Langley AFB VA 23665- 2791, and send information copies to the applicable Office of Collateral Responsibility (OCR).

**SUMMARY OF CHANGES**

Updates since the last publication are correction to minor errors to common aircraft systems.

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 an aircraft for it to perform specifically assigned unit wartime, training, test or other missions. Mission Ready Available (MRA) is used in readiness

Status of Resources and Training System (SORTS) reporting only and denotes Mission Capable aircraft capable of being configured for a contingency mission IAW COMACC OMNIBUS Plan.

1.1. Qualifying notes are used to define aircraft exceptions and help explain complex degraded mission systems such as prime mission equipment.

1.2. Aircraft status for generation and deployment: The goal is to generate or deploy Fully Mission Capable (FMC) aircraft, recognizing status actually achieved may be less than FMC. A Not Mission Capable (NMC) aircraft may be deployed provided it is safe for flight and can be configured and generated to MRA status at an employment site.

1.3. All ACC units will generate, or deploy and regenerate, using ACC MESLs. Major Command differences in MESLs are acknowledged. Upon actual deployment to another MAJCOM theater, the gaining MAJCOM has the responsibility to resource and specify the unit's requirements and resource the differences in support/mission equipment.

1.4. Reading the MESL . A MESL is read by comparing the systems stated by work unit code (WUC) against the Full Systems List (FSL) and all applicable Basic Systems List (BSL) across the page. Each unit's Design Operational Capability (DOC) statement determines applicability of BSL columns. The aircraft MESLs incorporate all ACC assigned aircraft; therefore, it is important to compare only those columns listed in the MESL that are applicable to the unit's assigned aircraft. For example, units with CC (wartime) coded aircraft would determine and report status using only the FSL and BSL columns related to their DOC statement. Units with TF (training) coded aircraft would determine and report status using only the FSL and TNG columns, and units with CB (test) coded aircraft would determine and report status using only the FSL and TST columns. Units with multiple coded aircraft will ensure status is reported using the MESL columns appropriate to the individual aircraft assignment code.

**Table 1. TC-130H MESL.**

NO.	WUC	SYSTEM/SUBSYSTEM	BSL	
			FSL	TNG
		11 - AIRFRAME		
1.	11	Airframe	X 24	X 24
		12 - COCKPIT AND FUSELAGE COMPARTMENTS		
2.	122	Flight Deck Crew Seating	X	X
3.	125	Aft Cargo	X 2	X 2
		13 - LANDING GEAR		
4.	13	Landing Gear	X	X
		14 - FLIGHT CONTROL		
5.	140	Flight Controls	X 3	X 3
		22 - TURBO PROP POWER PLANT		
6.	220	Turboprop Power Plant	X 4	X 4
		24 - AUXILIARY POWER PLANT		

				<b>BSL</b>	
<b>NO.</b>	<b>WUC</b>	<b>SYSTEM/SUBSYSTEM</b>	<b>FSL</b>	<b>TNG</b>	
7.	241	Gas Turbine Compressor (GTC)	X		
8.	242	Air Turbine Motor (ATM)	X 5	X 5	
9.	243	Cooling Fan Assembly	X		
32 - HYDRAULIC PROPELLER					
10.	320	Hydraulic Propeller	X 18	X 18	
41 - AIR CONDITIONING AND SURFACE ICE CONTROL					
11.	411	AC-Flight Deck	X 29	X 29	
12.	412	AC-Cargo Compartment	X 6	X 6	
13.	413	Pressurization	X	X 6	
14.	414	Bleed Air System	X	X	
15.	415	Anti-Ice/De-Ice Systems	X	X 7	
16.	418	Air Conditioning, Pressurization and Surface Ice Control Instruments	X	X	
17.	419	Under Floor Heat	X		
42 - ELECTRICAL POWER SUPPLY					
18.	420	Electrical Power Supply	X 19	X 19	
44 - LIGHTING SYSTEMS					
19.	4411	Navigation Lights	X 20	X 20	
20.	4412	Landing Lights	X 21	X 21	
21.	4414	Taxi Lights	X 22	X 22	
22.	4415	Leading Edge Lights	X		
23.	4418	Strobe Light System	X 25	X 25	
24.	4419	Light Strobe Anti-Collision	X 25	X 25	
25.	4428	Warning Lights	X	X	
26.	443	Emergency Exit Lights (Impact)	X	X	
45 - HYDRAULIC AND PNEUMATIC PWR SUPPLY					
27.	450	Hydraulic and Pneumatic Power Supply	X 30	X 30	
46 - FUEL SYSTEM					
28.	46W	UARRSI	X		
29.	461	Fuel System - Fuel Tanks	X	X 8	
30.	462	Fuel System - Distribution	X	X 9	
31.	463	Fuel System - Single Point Refueling	X 10		
32.	464	Fuel System - Vent System	X	X	

				<b>BSL</b>	
<b>NO.</b>	<b>WUC</b>	<b>SYSTEM/SUBSYSTEM</b>	<b>FSL</b>	<b>TNG</b>	
33.	466	Fuel System - Instruments	X	X 11	
	47 - OXYGEN SYSTEM				
34.	470	Oxygen System	X 1	X 1	
	49 - MISCELLANEOUS UTILITIES				
35.	491	Fire Extinguisher System	X	X	
36.	495	Windshield Wipers	X 12	X 12	
37.	496	Personnel Warning Bell	X	X	
	51 - INSTRUMENTS				
38.	51J	Ground Collision Avoid Sys	X		
39.	51Z	Rosemont Pilot Static System	X	X	
40.	51Y	Air Data Computer	X	X	
41.	5112	Turn And Slip Indicating System	X 12	X 12	
42.	5113	Attitude Indicating System	X	X	
43.	5114	Navigation Instruments	X	X 13	
44.	518	AF Standard Flt Director System	X	X	
45.	519	Stand By Compass	X	X	
	52 - AUTOPILOT				
46.	522	C-12 Compass System	X	X 14	
47.	527	Digital Autopilot (AN/AYW-1(V)-1)	X		
	56 - ACCIDENT INVESTIGATION RECORDING				
48.	56A	Cockpit Voice Recorder	X 31	X	
49.	56B	Flight Data Recorder	X 31	X	
	61 - HF COMMUNICATIONS				
50.	614	Antenna System - HF Long Wire	X 14	X 14	
51.	615	HF Communications (AN/ARC-190)	X 14	X 14	
52.	616	ANDVT	X 26	X 26	
	62 - VHF COMMUNICATIONS				
53.	62B	VHF Communications (AN/ARC-186)	X	X	
	63 - UHF COMMUNICATIONS				
54.	630	UHF Communications (AN/ARC-164)	X	X 12	
	64 - INTERPHONE				
55.	64	Interphone System	X 1, 16	X 1, 16	

				BSL	
NO.	WUC	SYSTEM/SUBSYSTEM	FSL	TNG	
	65 - IFF				
56.	652	IFF/SIF (APX-119)	X	X	
57.	65L	E-TCAS	X		
	66 - EMERGENCY COMMUNICATIONS				
58.	6617	Emergency Locator Transmitter (ELT)	X 32	X 32	
59.	663	Underwater Acoustic Locator System	X 17	X 17	
	69 - MISCELLANEOUS COMM EQUIPMENT				
60.	69YC	KY-58 Secure Voice	X	X 26	
	71 - RADIO NAVIGATION				
61.	71C	VOR/ILS/MB (AN/ARN-147)	X	X 14	
62.	71E	Global Positioning System (AN/ARN-151)	X	X 27	
63.	71Z	TACAN System (AN/ARN-118)	X	X 14	
64.	711	Radio Compass (AN/ARN-6)	X		
	72 - RADAR NAVIGATION				
65.	72Z	Inertial Navigation Set	X	X 27	
66.	72Z	Computer-Aided Nav System (CANS)	X 28	X	
67.	721C	Ground Speed and Drift Angle Ind (APN-218)	X 17		
68.	722	CARA Altimeter (AN/APN-232)	X		
69.	7232	Wave Guide Pressurization System (ASQ-14)	X 23		
70.	727A	Search Radar (AN/APN-59F)	X 23		
	91 - EVACUATION AND EMERGENCY				
71.	91113	Escape Rope	X	X	
72.	91213	Life Raft (Type F-2)	X 15, 17	X 15, 17	
	97 - EXPLOSIVE DEVICES AND COMPONENTS				
73.	97A	Squib, Fire Extinguisher	X	X	
<b>QUALIFYING NOTES:</b>					
1.	One required at each operational position				
2.	Urinal and Toilet Facilities required; Urinal may be inop for local Pro and AR training sorties				
3.	WUC 14511 Flap Indicator may be Inoperative				
4.	WUC 22DBF - Datum Amplifier, 22EBD-Temp Datum Amplifier, 22EBH-Low Speed Idle Solenoid, 22GF0-Oil Cooler Door Position Indication, And ONE 22GG0-Oil Quantity Indication may be Inoperative if low oil light is operational and oil level is verified prior to				

				BSL	
NO.	WUC	SYSTEM/SUBSYSTEM	FSL	TNG	
		flight. Low oil quantity light may be inop if all four engine oil gauges are operational.			
5.		If ATM fails while en route, mission may continue to next planned stop with repair capabilities provided; visual meteorological conditions (VMC), and no other electrical malfunction exists.			
6.		Must work in Manual Mode			
7.		If inoperative, report aircraft as PMC. Blade De-icing will be operational for flights into known or forecast icing conditions.			
8.		WUC 46120 - When leaking, tanks may be kept empty.			
9.		WUC 46212 - Auxiliary Tank Boost Pumps, and WUC 46213 - Pylon Tank Boost Pumps may be Inoperative provided tank is empty.			
10.		WUC 46321 - SPR Drain Pump required for Air Refueling.			
11.		Fuel Tank Fuel Quantity Indication allowed to be Inop provided Fuel Quantity is verified: Both Auxiliary Tanks, Two Non-symmetrical Main Tanks.			
12.		Pilot's Side Only			
13.		BDHIs and RMIs may be Inoperative.			
14.		One required.			
15.		Two required.			
16.		AIC-13 PA System not required			
17.		Not required for PDM input. If removed for PDM input, report as FMC. Report aircraft as PMC if inoperative/removed. Required for over water missions.			
18.		Propeller may be operated with a feather override failure where the override button fails to pop out at the full feather, provided malfunction has been isolated to a faulty pressure switch and no other system is affected. If synchrophaser fails, mission may continue to a repair facility.			
19.		Report aircraft as NMC if an engine-driven generator or an Essential TR fails. <b>NOTE:</b> Aircraft is airworthy. Flight(s) to a destination with repair capabilities may be made. Local training missions may continue after a failed generator is disconnected or removed and the mount padded; provided no other electrical malfunction exists.			
20.		Report aircraft as PMC if either/both wing tip taxi lights and neither of the tail cone white lights are inoperative. <b>NOTE:</b> For night operations, left and right wing tip Nav lights and at least one tail cone white light must be operational.			
21.		One may be inoperative provided the taxi light on the same side is operational.			
22.		One may be inoperative provided the landing light on the same side is operational.			
23.		Report aircraft as PMC if APN-59 Radar and/or ASQ-14 Waveguide Pressurization is/are inoperative. <b>NOTE:</b> Systems required if thunderstorms or hazardous conditions that can be detected by airborne radar are forecast or exist along route of flight.			

				BSL	
NO.	WUC	SYSTEM/SUBSYSTEM	FSL	TNG	
24.		One air deflector door may be inoperative.			
25.		If either strobe or anti-collision light fails while en route, mission may continue to next planned stop with repair capabilities.			
26.		One Secure Voice Sys required for each Operable HF, UHF/UHF SATCOM, and VHF sys.			
27.		If both INUs Operational, GPS may be Inop. If only one INU Operational, GPS required. Minimum is two of the three Nav Systems (INS and GPS)			
28.		Navigator's CDU must be operational			
29.		Must work in Auto or Manual mode			
30.		Aux direct reading gauge in cargo compartment may be inop.			
31.		Either CVR or DFDR must be operational for training missions, and to continue en-route to next repair facility. Both required prior to deployment.			
32.		If en-route, must be repaired at next capable repair facility.			

10.10. Form Adopted.

AF Form 847, Recommendation for Change of Publication

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

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 14 December 2005

***Abbreviations and Acronyms***

**ACC**—Air Combat Command

**ATM**—Air Turbine Motor

**BSL**—Basic System Lists

**DOC**—Design Operational Capability

**FSL**—Full System List

**GTC**—Gas Turbine Compressor

**HQ**—Headquarters

**IAW**—In Accordance With

**MAJCOM**—Major Command

**MRA**—Mission Ready Aircraft

**SORTS**—Status of Resources and Training System

**WUC**—Work Unit Code