

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



AIR FORCE INSTRUCTION 21-103

**AIR COMBAT COMMAND
Supplement**

Addendum T

27 JUNE 2012

Maintenance

**EQUIPMENT INVENTORY, STATUS AND
UTILIZATION REPORTING SYSTEM/F-15E
MINIMUM ESSENTIAL SUBSYSTEM LIST
(MESL)**

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This MESL compliments AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*. It applies to all F-15E ACC units. This Addendum does apply to Air National Guard (ANG) Air Force Reserve Command (AFRC) units and members. 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/afirms/afirms/afirms/rims.cfm>. Contact supporting records managers as required. Send recommended changes or comments on AF Form 847, *Recommendation for Change of Publication*, to HQ ACC/A4V10-A10, 130 Douglas St., Suite 210, Langley AFB VA 23665- 2791, and send information copies to the applicable Office of Collateral Responsibility (OCR). OCR: HQ ACC/A4Q.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Major changes include: the addition of ASQ-236 RECCE Pod, Joint Helmet Mounted Cueing System and APG-82V1 Radar System.

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 be fully operational for it to perform specifically assigned unit wartime, training, test or other assigned missions. Mission Ready Available (MRA) is used in readiness Status of Resources and Training System reporting only and denotes MC 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 suspension equipment.

1.2. Aircraft status for generation and deployment: The goal is to generate or deploy 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 System List (FSL) and all applicable Basic System Lists (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 which 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 1.1. F-15E MESL.

NO.	WUC	SYSTEM/SUBSYSTEM	BSL					
			FSL	ADC	ASC	ASN	*TNG	*TST
1.	11	Airframe	X	X	X	X	X	X
2.	12	Cockpit & Fuselage	X	X	X	X	X	X
3.	13	Landing Gear	X	X	X	X	X	X
4.	14	Flight Controls	X	X	X	X	X	X
5.	23	Turbofan Power Plant	X	X	X	X	X	X
6.	24	Auxiliary Power Plant	X	X	X	X	X	X
7.	41	AC Pressurization	X	X	X	X	X	X
8.	42	Electrical Power Supply	X	X	X	X	X	X
9.	44A	Exterior Lighting	X1	X1	X1	X1	X1	X1
10.	44B/E	Interior Lighting / Warning and Caution Light Panel Assy	X	X	X	X	X	X
11.	45	Hydraulic System	X	X	X	X	X	X
12.	46	Fuel System	X	X	X	X	X	X
13.	47	Oxygen System	X	X	X	X	X	X
14.	49	Miscellaneous Utilities	X	X	X	X	X	X
15.	51	Instruments	X	X	X	X	X	X
16.	52	Autopilot	X					
17.	52B	Automatic Flight Control Set	X	X	X	X	X	X
18.	55C	Malfunction Analysis & Recording	X	X	X	X	X	X
19.	55E	Build-In-Test Display Group	X	X	X	X	X	X
20.	55D	Standard Flight Data Recorder	X2					
21.	57	Integrated Guidance and Flight Control System	X	X	X	X	X	X
22.	63AV 63AX	UHF/VHF Communications	X3	X3	X3	X3	X3	X3
23.	63AZ	SATCOM Communications	X4	X4	X4	X4	X16	X4
24.	63B	Upfront Controller (UFC)	X	X	X	X	X	X
25.	63C	Intercommunications System	X	X	X	X	X	X
26.	65G	IFF Transponder	X	X	X	X	X	X
27.	65F	IFF Interrogator (AAI)	X	X	X	X	X16	X
28.	71C	Instrument Landing Set	X	X	X	X	X	X
29.	71G	Global Positioning System	X	X	X	X	X	X
30.	71M	Inertial Navigation System	X	X	X	X	X	X
31.	71Q	Fighter Data Link	X	X	X	X	X	X
32.	71Z	Tactical Air Navigation Set	X	X	X	X	X	X
33.	72A	Radar Altimeter (CARA - AN/APN-232)	X		X	X	X	X
34.	74G/Q	Radar Set (APG-70 / APG-82)	X	X	X	X	X	X
35.	74K	Heads Up Display Set (HUD)	X	X	X	X	X	X

36.	74L/Z	Video Recorder System	X5	X5	X5	X5	X5	X5
37.	74M	Display System	X6	X6	X6	X6	X6	X6
38.	74N	Targeting Pod Capable	X7	X7	X7	X7	X7	X7
39.	74P	Navigation Pod Capable	X8		X8	X8	X8	X8
40.	74T	Joint Helmet Cueing	X9	X9	X9	X9	X9	X ⁹
41.	74Y	ASQ-236 Recce Pod	X10		X10		X10,16	X10
42.	75	Weapons Delivery	X11	X12	X12	X12	X12,13	X12
43.	75H	Gun System	X	X	X	X	X16	X
44.	76B	ALR-56C Radar Warning Receiver (RWR)	X	X	X	X	X	X
45.	76C	Interference Blanker	X	X	X	X	X	X
46.	76G	ALQ-128 Electronic Warfare Warning Set (EWWS)	X	X	X	X		X
47.	76M	ALQ-135 Band 3 ICS	X	X	X	X	X16	X
48.	76N	ALQ-135 Band 1.5 ICS	X14	X14	X14	X14	X14	X14
49.	76K	Countermeasures Dispenser	X	X	X	X	X	X
50.	82B	Digital Map System	X15		X15	X15	X15	X15
51.	91	Emergency Equipment	X	X	X	X	X	X
52.	97	Explosive Devices	X	X	X	X	X	X

* TNG: ONLY APPLIES TO ACFT IN ASSIGNMENT CODE TF

* TST: ONLY APPLIES TO ACFT IN ASSIGNMENT CODE CB

Notes:

1. As required by AFI 11-202 Vol 3, *General Flight Rules*.
2. If SFDR installed.
3. Two (2) radios required. One radio must be HAVEQUICK and secure voice capable to be FMC.
4. After TCTO 1F-15E-825.
5. 8mm VTRS capability may be substituted if TCTO-820 has not been completed.
6. Seven (7) Displays (3 MPCD & 4 MPD) are required.
7. Aircraft must be capable of LANTIRN targeting pod equivalent operation (IR sensor tracking and laser capability) to be FMC regardless of pod type installed.
8. Aircraft must be capable of NAV FLIR and full terrain following functions for FMC
9. After TCTO 1F-15E-818
10. Aircraft must be capable of ASQ-236 operations. If installed two (2) Recce Pod videos required to be FMC. One (1) video required for PMC
11. Eight (8) Air-To-Air missile and fifteen (15) Air-To-Ground station capability required for FMC.
12. Any six (6) missile stations, of which two (2) are LAU-128 capable; and eight (8) conformal fuel tank (CFT) Air-To-Ground stations required for PMC.
13. LC-2 (Primary) and RC-2 (Alternate) stations (BRU-47) are required for FMC. Either LC-2 or RC-2 are required for PMC.

- 14. If ICS Band 1.5 Installed.
- 15. Requires Mission Cartridge, Theater Cartridge and DMP for FMC
- 16. Required to satisfy USAFWS syllabus

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

AFI 11-202 Vol 3, *General Flight Rules*, 22 Oct 2010

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 26 Jan 2012

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ADC—Air Defense Conventional

AFRC—Air Force Reserve Command

ASC—Air to Surface Conventional

ASN—Air to Surface Nuclear

BSL—Basic System Lists

DOC—Design Operational Capability

FMC— Fully Mission Capable

FSL—Full System List

HQ—Headquarters

IAW—In Accordance With

MAJCOM—Major Command

MRA—Mission Ready Available

NGB—National Guard Bureau

NMC—Not Mission Capable

OCR—Office of Collateral Responsibility

SATCOM—Satellite Communications

TST—Development Test and Evaluation (only for CB-coded aircraft)

USAFWS—United States Air Force Weapons School

WUC—Work Unit Code