

12 February 1993

ELECTRICAL/ENVIRONMENTAL SYSTEMS

(C-141)

1. Objective. As prescribed in AFR 8-10, this Air National Guard Manpower Standard (ANGMS) quantifies the full-time manpower requirement to accomplish the tasks described in the work center description for varying levels of workload volume.

2. Authority. Air National Guard (ANG) Regulation 66-14 contains ANG policy and procedural guidance for the Electrical/Environmental Systems work center. This ANGMS has been developed in accordance with procedures contained in AFR 25-5, 16 May 88. This ANGMS is a result of a functional review.

3. Applicability. This standard applies to ANG C-141 Air Mobility Command gained flying units. This standard applies only to peacetime operations.

4. Standard Data:

- a. **Classification.** Type III.
- b. **Approval Date.** 4 Jan 93.
- c. **Man-Hour Data Source.** Operational Audit (historical record and technical estimate techniques).
- d. **Standard Man-Hour Equation.** $Y = 18.74 + 2.192X_1 + 29.24X_2$.
- e. **Workload Factor:**
 - (1) **Title:**
 - (a) X_1 . A Programmed Flying Hour.
 - (b) X_2 . A C-141 Aircraft Authorized.
 - (2) **Definition:**
 - (a) X_1 . The average monthly programmed flying hours.
 - (b) X_2 . The average monthly C-141 aircraft authorized.
 - (3) **Source of Count:**
 - (a) X_1 . USAF Program Document (PD), Volume II, maintained by NGB/FM.
 - (b) X_2 . USAF Program Document (PD), Volume II, maintained by NGB/FM.

5. Application Instructions:

- a. The valid man-hour range for this ANGMS is 751.13 through 1251.89. Should the extrapolation limits be exceeded, see AFR 26-1, Volume III, paragraph 1-20 for guidance.
- b. The AF Form 1113, Standard Manpower Table, is an aggregate of total manpower by specialty title and Air Force Specialty Code (AFSC). The applicable instructions are as follows:
 - (1) Determine the values for the two workload factors (WLFs) identified in paragraph 4e.
 - (2) Substitute the appropriate WLF value into the man-hour equation for X_1 and X_2 .
 - (3) Divide the total man-hours (Y) by the current civilian man-hour availability factor to determine total requirements. NOTE: To determine whole manpower requirements apply ANG standard application procedures using the Fractional Manpower Range Table.
 - (4) Find the column in which the total number of required authorizations fall; read up to determine manpower by AFSC.
- c. Fractional manpower requirements resulting from application of this standard will not be aggregated.

6. Statement of Conditions. This work center's normal hours of operation are 8 hours a day, 5 days a week. There are no other standard of living constraints which affect the daily operation of this work center.

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2 Attachments
1. Work Center Description
2. Standard Manpower Table

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WORK CENTER DESCRIPTION
Electrical/Environmental Systems
(C-141)

DIRECT:

1. ON-EQUIPMENT MAINTENANCE:

- 1.1. MAINTAINS AIR FRAME ELECTRICAL SYSTEM.** Inspects, troubleshoots, and repairs on-equipment.
- 1.2. MAINTAINS FUSELAGE AND NOSE EQUIPMENT AREA ELECTRICAL SYSTEM.** Inspects, troubleshoots, and repairs on-equipment.
- 1.3. MAINTAINS LANDING GEAR.** Inspects, troubleshoots, and repairs on-equipment.
 - 1.3.1. MAINTAINS MAIN LANDING GEAR.**
 - 1.3.2. MAINTAINS NOSE LANDING GEAR.**
 - 1.3.3. MAINTAINS LANDING GEAR CONTROL.**
 - 1.3.4. MAINTAINS BRAKE AND ANTI-SKID SYSTEM.**
 - 1.3.5. MAINTAINS STEERING SYSTEM.**
 - 1.3.6. MAINTAINS EMERGENCY SYSTEM.**
- 1.4. MAINTAINS FLIGHT CONTROL SYSTEM.** Inspects, troubleshoots, and repairs on-equipment.
- 1.5. MAINTAINS AIR CONDITIONING, PRESSURIZATION, AND SURFACE ICE CONTROL SYSTEM.** Inspects, troubleshoots, and repairs equipment.
 - 1.5.1. MAINTAINS AIR CONDITIONING SYSTEM.**
 - 1.5.2. MAINTAINS FLOOR HEAT SYSTEM.**
 - 1.5.3. MAINTAINS PRESSURIZATION SYSTEM.**
 - 1.5.4. MAINTAINS BLEED AIR SYSTEM.**
 - 1.5.5. MAINTAINS ANTI-ICING AND DEICING SYSTEM.**
 - 1.5.6. MAINTAINS RAIN REMOVAL SYSTEM.**
 - 1.5.7. MAINTAINS ELECTRICAL AND ELECTRONIC COOLING SYSTEM.**
 - 1.5.8. MAINTAINS INSTRUMENT SYSTEM.**
- 1.6. MAINTAINS ELECTRICAL POWER SUPPLY/ENVIRONMENTAL SYSTEM.** Inspects, troubleshoots, and repairs on-equipment.
 - 1.6.1. MAINTAINS ENGINE SYSTEM:**
 - 1.6.1.1. MAINTAINS TURBOFAN POWER PLANT COMPONENT.**
 - 1.6.1.2. MAINTAINS AUXILIARY POWER PLANT ELECTRICAL SYSTEM.**
 - 1.6.2. MAINTAINS POWER SUPPLY, DIRECT CURRENT (DC).**
 - 1.6.3. MAINTAINS POWER SUPPLY, ALTERNATING CURRENT (AC).**
 - 1.6.4. MAINTAINS EMERGENCY AC POWER SYSTEM.**

1.6.5. MAINTAINS ASSOCIATED ITEM.

1.7. MAINTAINS LIGHTING SYSTEM. Inspects, troubleshoots, and repairs on-equipment.

1.7.1. MAINTAINS EXTERIOR LIGHTING SYSTEM.

1.7.2. MAINTAINS INTERIOR LIGHTING SYSTEM.

1.7.3. MAINTAINS LIGHTING CONTROL.

1.8. MAINTAINS HYDRAULIC POWER SUPPLY ELECTRICAL SYSTEM. Inspects, troubleshoots, and repairs on-equipment.

1.9. MAINTAINS FUEL ELECTRICAL SYSTEM. Inspects, troubleshoots, and repairs on-equipment.

1.10. MAINTAINS OXYGEN SYSTEM. Inspects, troubleshoots, and repairs oxygen system.

1.10.1. MAINTAINS FIXED OXYGEN SYSTEM.

1.10.2. MAINTAINS PORTABLE OXYGEN SYSTEM.

1.10.3. MAINTAINS MISSION KIT.

1.11. MAINTAINS MISCELLANEOUS UTILITY. Maintains fire warning and overheat system.

1.12. MAINTAINS INERTIAL NAVIGATION BATTERY.

1.13. MAINTAINS EMERGENCY LIGHTING. Inspects, troubleshoots, and repairs equipment.

1.14. PERFORMS INSPECTION. Performs special, phase, and hourly aircraft inspection.

1.14.1. PERFORMS SPECIAL INSPECTION.

1.14.2. PERFORMS ISOCHRONAL INSPECTION.

1.14.3. PERFORMS HOME STATION CHECK.

2. OFF-EQUIPMENT. Inspects, troubleshoots, and repairs off-equipment.

2.1. MAINTAINS FUSELAGE AND NOSE EQUIPMENT AREA ELECTRICAL SYSTEM.

2.2. MAINTAINS LANDING GEAR ELECTRICAL SYSTEM.

2.3. MAINTAINS FLIGHT CONTROL ELECTRICAL SYSTEM.

2.4. MAINTAINS AIR CONDITIONING, PRESSURIZATION, AND SURFACE ICE CONTROL SYSTEM.

2.5. MAINTAINS ELECTRICAL POWER SUPPLY SYSTEM:

2.5.1. MAINTAINS ENGINE ELECTRICAL SYSTEM.

2.5.2. MAINTAINS POWER SUPPLY, DC.

2.5.3. MAINTAINS POWER SUPPLY, AC.

2.6. MAINTAINS LIGHTING SYSTEM.

2.7. MAINTAINS FUEL ELECTRICAL SYSTEM.

2.8. MAINTAINS OXYGEN SYSTEM.

2.9. MAINTAINS MISCELLANEOUS UTILITY.

2.10. MAINTAINS INERTIAL NAVIGATION SYSTEM BATTERY.

2.11. MAINTAINS EMERGENCY LIGHTING.

3. LIFE RAFT CO₂ BOTTLE. Services life raft CO₂ bottle.

4. PERIODIC MAINTENANCE OF ELECTRICAL EQUIPMENT IN BASE SUPPLY. Performs periodic functional check or calibration of equipment stored in Base Supply to maintain shelf life and ensure serviceability before use.

5. NONPOWERED AEROSPACE GROUND EQUIPMENT. Maintains nonpowered aerospace ground equipment.

6. DIRECT LABOR MAINTENANCE. Assists in the performance of direct labor maintenance requirement to ensure effective utilization of maintenance personnel.

7. TIME COMPLIANCE TECHNICAL ORDER (TCTO). Performs maintenance required on/off the aircraft in accordance with applicable TCTO and completes documentation.

8. SHOP SUPPORT GENERAL CODE. Performs shop support general code.

9. UNIT TRAINING ASSEMBLY (UTA) AND MOBILITY REQUIREMENT. Performs planning/scheduling task associated with preparation for UTA weekend and mobility requirement.

INDIRECT: Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are Supervision, Administration, Meeting, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the standard indirect description.

STANDARD MANPOWER TABLE										
WORK CENTER/FAC Electrical/Environmental Systems/23330A			APPLICABILITY MAN-HOUR RANGE 751.13 - 1251.89							
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT							
Systems Maintenance	454XX	CIV	1	1	1	1				
Airlift Elect and Envir Sys	454X6	CIV	4	5	6	7				
TOTAL			5	6	7	8				
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT							
TOTAL										