

JET ENGINE/TEST CELL  
(F-16C/D)

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**1. Objective.** This standard is published as prescribed in AFI 38-201, *Determining Manpower Requirements*. This Air National Guard Manpower Standard (ANGMS) quantifies the full-time manpower required to accomplish the tasks described in the work center description for varying levels of workload.

**2. Authority.** Air National Guard Instruction 21-101, *Maintenance Management of Aircraft*, contains policy and procedural guidance for the Jet Engine/Test Cell work center. This ANGMS has been developed in accordance with procedures contained in AFPAM 38-208V1, *Air Force Management Engineering Program (MEP) Processes*, formerly AFR 25-5.

**\*3. Applicability.** Applies to all ANG Fighter Wings and Groups possessing F-16 C/D models. This standard quantifies the manpower requirement to accomplish engine removals and associated maintenance to support 250 cycles between engine changes at all units except the 169FG (equation 2). This standard quantifies the manpower requirement to accomplish engine removals and associated maintenance to support 500 cycles between engine changes at the 169FG (equation 1). This standard applies to peacetime operations.

**4. Standard Data:**

- a. Classification. Type II.
- b. Approval Date. 15 June 1994.
- c. Man-Hour Data Source. Operational Audit method (historical record and technical estimate techniques).
- \*d. Standard Man-hour Equation. (1)  $Y = 728.5 + 4.271X$ . (169 FG only)  
(2)  $Y = 614.9 + 6.178X$ .
- e. Workload Factor:
  - (1) Title. A Programmed Flying Hour.
  - (2) Definition. The average monthly flying hours.
  - (3) Source. USAF Program Document, Volume II, maintained by NGB/FM.

**5. Application Instructions:**

- \*a. The valid man-hour range for equation (1) is 1613.95 through 3242.43 and for equation (2) 2005.53 through 4141.81.
- b. This ANGMS is appropriate for use with all peacetime civilian man-hour availability factors.
- c. Determine the whole manpower requirements for this work center by substituting the appropriate workload value in paragraph 4e for the X value in the man-hour equations in paragraph 4d. The resultant number will be divided by the current civilian man-hour availability factor which will produce fractional manpower requirements. Use the fractional manpower table provided by ANGRC/MPME to determine requirements.
- \*d. Refer to attachments 2 and 3, AF Form 1113, Standard Manpower Table, to determine specific Air Force specialties.

**6. Statement of Conditions.** The conditions listed below had no effect on the development of this standard, nor will they affect future applications. Analyses of these levels of service indicate no manpower impact:

- a. Minimum response rates.
- b. Minimum manpower levels.
- c. Standardized crew complements.
- d. Safety considerations.

- e. Aircraft turn-around time.
- f. Length of waiting periods.
- g. Levels of backlog.
- h. Hours of operation.

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- 3 Attachments**
- 1. Work Center Description**
  - \* 2. Standard Manpower Table (169 FG)**
  - \* 3. Standard Manpower Table**

**SUMMARY OF CHANGES:** **Para 3:** Incorporates differences in engine change cycles at the 169FG and other ANG Fighter Wings and Groups. **Para 4d:** Provides man-hour equations for the 169FG and other units. **Para 5a:** Depicts extrapolation range for both equations. **Para 5d:** Incorporates additional manpower table attachment.

## WORK CENTER DESCRIPTION

### Jet Engine/Test Cell (F-16 C/D)

#### DIRECT:

#### 1. JET ENGINE INTERMEDIATE MAINTENANCE:

1.1. MAINTAINS TURBOFAN POWER PLANT SYSTEM ON EQUIPMENT. Inspects, troubleshoots, modifies, and repairs equipment.

1.1.1. MAINTAINS ACCESSORY GEARBOX ASSEMBLY/MODULE.

1.1.2. MAINTAINS INLET AND FAN ASSEMBLY/MODULE.

1.1.3. MAINTAINS CORE ENGINE ASSEMBLY/MODULE.

1.1.4. MAINTAINS LOW-PRESSURE TURBINE ASSEMBLY/MODULE.

1.1.5. MAINTAINS AUGMENTOR DUCT AND NOZZLE ASSEMBLY/MODULE.

1.1.6. MAINTAINS MAIN BEARING AREAS.

1.1.7. MAINTAINS MAIN FUEL AND CONTROL SYSTEM.

1.1.8. MAINTAINS OIL SYSTEM.

1.1.9. MAINTAINS ELECTRICAL SYSTEM.

1.1.10. MAINTAINS ENGINE INSTALLATION HARDWARE.

1.1.11. MAINTAINS ENGINE INSTRUMENTS, CONTROL, AND MOUNTING SYSTEM.

1.1.12. REMOVES AND INSTALLS POWER PLANT ASSEMBLY.

1.1.13. MAINTAINS AUXILIARY POWER PLANT AND JET FUEL STARTER. Inspects, troubleshoots, modifies, and repairs equipment.

1.1.13.1. MAINTAINS POWER SECTION.

1.1.13.2. MAINTAINS HYDRAZINE TANK.

1.1.13.3. MAINTAINS PANEL ASSEMBLY.

1.1.13.4. MAINTAINS JET FUEL STARTER SYSTEM.

1.1.13.5. MAINTAINS ACCESSORY DRIVE SYSTEM.

**1.1.14. PERFORMS WASHING, CLEANING, CORROSION PREVENTION TREATMENT, AND DECONTAMINATION.**

**1.1.15. PERFORMS INSPECTION.** Performs special or phase inspection.

**1.1.15.1. PERFORMS SPECIAL INSPECTION.**

**1.1.15.2. PERFORMS PHASE INSPECTION.**

**1.1.16. PERFORMS INSTALLED ENGINE RUNS.**

**1.2. MAINTAINS TURBOFAN POWER PLANT SYSTEM OFF EQUIPMENT:**

**1.2.1. PERFORMS BUILDUP OF ENGINE.**

**1.2.2. PERFORMS TEARDOWN OF ENGINES.**

**1.2.3. PERFORMS UNINSTALLED ENGINE RUNS.**

**1.2.4. PREPARES ENGINE FOR STORAGE OR SHIPMENT.**

**1.2.5. GENERAL SHOP SUPPORT.** Performs shop support task to include local manufacture of item.

**2. NONPOWERED AEROSPACE GROUND EQUIPMENT (AGE), SHOP INDUSTRIAL EQUIPMENT, AND ENGINE TRANSPORT TRAILERS.** Inspects and repairs nonpowered AGE, shop industrial equipment, and engine transport trailers.

**3. TECHNICAL DATA SUBACCOUNT MAINTENANCE.** Receives and posts data and change to file. Maintains file for serviceability.

**4. AIRCRAFT DOCUMENTATION ADMINISTRATION.** Prepares and maintains aircraft documentation.

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

**6. HUSH HOUSE SYSTEM.** Analyzes malfunction, troubleshoots system, performs repair, performs inspection, performs modification, and operates equipment to determine condition.

**6.1. MAINTAINS TEST CONTROL CAB AND STAND AM37T20B.**

**6.2. MAINTAINS HUSH HOUSE.**

**6.3. MAINTAINS HALON FIRE SUPPRESSION SYSTEM.**

**7. HAZARDOUS WASTE MANAGEMENT PROGRAM:**

**7.1. PROCESSES HAZARDOUS WASTE.** Identifies, labels, contains, and disposes of hazardous waste.

**7.2. MAINTAINS COLLECTION FACILITY.** Maintains hazardous waste accumulation point, satellite collection area, and container.

**7.3. MAINTAINS PROTECTIVE EQUIPMENT.** Inspects and maintains protective equipment.

**8. MAINTAINS ENGINE DATA COLLECTION UNIT AND ENGINE ANALYZER**

**9. UNIT TRAINING ASSEMBLY (UTA) PREPARATION.** Performs planning and scheduling task associated with preparation for UTA.

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

STANDARD MANPOWER TABLE											
WORK CENTER/FAC * FOR 169FG ONLY Jet Engine/Test Cell/2321CD			APPLICABILITY MAN-HOUR RANGE 1613.95 - 3242.43								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems	2A6XX	CIV	1	1	2	3	3	3	3	3	3
Aerospace Prop, Jet Engines	2A6X1A	CIV	10	11	11	11	12	13	14	15	16
<b>TOTAL</b>			<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems	2A6XX	CIV	3	3	3						
Aerospace Prop, Jet Engines	2A6X1A	CIV	17	18	19						
<b>TOTAL</b>			<b>20</b>	<b>21</b>	<b>22</b>						

AF FORM 1113, Jun 91 (COMPUTER GENERATED). PREVIOUS EDITION IS OBSOLETE

STANDARD MANPOWER TABLE											
WORK CENTER/FAC			APPLICABILITY MAN-HOUR RANGE								
Jet Engine/Test Cell/2321CD			2005.53 - 4141.81								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems	2A6XX	CIV	3	3	3	3	3	3	3	3	3
Aerospace Prop, Jet Engines	2A6X1A	CIV	11	12	13	14	15	16	17	18	19
<b>TOTAL</b>			<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems	2A6XX	CIV	3	3	3	3	3	3			
Aerospace Prop, Jet Engines	2A6X1A	CIV	20	21	22	23	24	25			
<b>TOTAL</b>			<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>			

**BY ORDER OF THE CHIEF,  
NATIONAL GUARD BUREAU**

**CHANGE 1 TO ANGMS 2321CD  
14 AUGUST 1995**

**JET ENGINE/TEST CELL  
(F-16 C/D)**

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**ANGMS 2321CD, 14 February 1995, is changed as follows:**

**SUMMARY OF CHANGES**

Incorporates changes to paragraphs 3, 4d, and 5a and d.

**Page-Insert Changes.** New or revised material is indicated by an asterisk (\*).

<b>Remove</b>	<b>Date</b>	<b>Insert</b>
1-2	14 Feb 95	1-2
5-6	14 Feb 95	5-7

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