BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU

ANGMS 22110E
16 August 1996

FLIGHT LINE MAINTENANCE
F-15

1. **Objective.** 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 at attachment 1 for varying levels of workload volume.

2. **Authority.** ANGI 21-101, *Maintenance Management of Aircraft*, contains policy and procedural guidance for the Flight Line Maintenance function. This ANGMS has been developed in accordance with functional review procedures contained in AFMAN 38-208V1, *Air Force Management Engineering Program (MEP) Processes.*

3. **Applicability.** This ANGMS applies to all ANG F-15 Fighter Wings and Groups in peacetime operations only.

4. **Standard Data:**
   a. Classification. Type II.
   b. Approval Date. 2 February 1995.
   c. Manpower Data Source. Operational Audit method (historical record and technical estimate techniques).
   d. Standard Manpower Equation. $Y = 1379 + 10.55X$.
   e. Workload Factor:
      (1) Title. A Sortie Flown.
      (2) Definition. The average monthly number of sorties flown by F-15 aircraft.
      (3) Source. USAF Program Document, Volume II, maintained by ANG/FM will be used to obtain programmed flying hours. See paragraph 5, Application Instructions, to calculate sorties.

5. **Application Instructions:**
   a. The valid man-hour range for this ANGMS is 2948.55 through 5999.19.
   b. This ANGMS is appropriate for use with all peacetime civilian man-hour availability factors.
   c. To determine the monthly number of sorties, refer to ANG/XOOO to obtain the average sortie duration (ASD). The ASD is maintained in the computerized historical files for each aircraft by year. Divide programmed flying hours by the ASD which will yield predicted sorties. Substitute this value into the equation for "X." 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 ANG/MPME to determine total whole-man requirements.
   d. Refer to attachment 2, AF Form 1113, Standard Manpower Table, to determine specific Air Force specialties.

6. **Statement of Conditions.** The conditions listed below had no affect on the development of the 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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2 Attachments
1. Work Center Description
2. Standard Manpower Table

WORK CENTER DESCRIPTION

Flight Line Maintenance
(F-15)

DIRECT:

1. FLIGHT LINE INSPECTION:

1.1. PERFORMS AIRCRAFT INSPECTION. Performs aircraft inspection, servicing, and maintenance. Reviews and updates AFTO Form 781, AFORM Aircrew and Mission Flight Data Document.

1.1.1. PERFORMS PREFLIGHT INSPECTION.

1.1.2. PERFORMS END-OF-RUNWAY CHECK.

1.1.3. PERFORMS DAILY WALK-AROUND INSPECTION.

1.1.4. PERFORMS QUICK TURNAROUND INSPECTION.

1.1.5. PERFORMS LAUNCH AND RECOVERY INSPECTION.

1.1.6. PERFORMS THROUGHFLIGHT INSPECTION.

1.1.7. PERFORMS POSTFLIGHT INSPECTION

1.1.8. PERFORMS COMBINED PREFLIGHT/POSTFLIGHT INSPECTION.

1.1.9. PERFORMS INTEGRATED COMBAT TURNAROUNDS.

1.2. ACCOMPLISHES PHASE INSPECTION. Accompanies aircraft through look phase, fix phase, and attends prephase/postphase inspection meeting.

1.2.1. ACCOMPLISHES PHASE INSPECTION ONE AND TWO (200-HOUR).

1.2.2. ACCOMPLISHES PERIODIC INSPECTION (1200-HOUR).

1.3. PERFORMS SPECIAL INSPECTION. Performs engine bay inspections and performs special inspection, servicing, and maintenance.

1.3.1. PERFORMS OIL SAMPLING AND SPECTROMETRIC ANALYSIS.

1.3.2. PERFORMS ACCEPTANCE INSPECTIONS.

1.3.3. PERFORMS EXCESSIVE "G" LOAD INSPECTION.

1.3.4. PERFORMS FUNCTIONAL TAXI CHECK.

1.3.5. PERFORMS HARD LANDING INSPECTION.

1.3.6. PERFORMS LANDING GEAR RETRACTION CHECK.

1.3.7. PERFORMS WHEEL AND BRAKE INSPECTION.

1.3.8. PERFORMS ENGINE AIR INLET INSPECTION.

1.3.9. PERFORMS ENGINE RAMP SYSTEM FUNCTIONAL CHECK.

1.3.10. PERFORMS ENGINE TRIM CHECK.

1.3.11. PERFORMS ENGINE BAY INSPECTION--ENGINE REMOVED.

1.3.12. PERFORMS WEIGHT AND BALANCE.

2. GENERAL SUPPORT MAINTENANCE:

2.1. PERFORMS GROUND HANDLING AND SERVICING. Performs ground handling, servicing, and related task. Tows, positions, parks aircraft, and performs general maintenance.

2.1.1. TOWS AND POSITIONS AIRCRAFT.

2.1.2. PERFORMS PARKING AND PRETAXI.

2.1.3. PERFORMS ENGINE RUNUP.

2.1.4. PERFORMS AIRCRAFT MOORING.

2.1.5. FUELS AND DE-FUELS AIRCRAFT.

2.1.6. PERFORMS FUEL TANK PURGE AND DEPUDDLE.

2.1.7. PERFORMS OIL SERVICING.

2.1.8. SERVICES OXYGEN SYSTEM.

2.1.9. SERVICES AIR PRESSURIZED SYSTEM.

2.1.10. SERVICES HYDRAULIC SYSTEM.

2.1.11. PERFORMS LUBRICATION.

2.1.12. PERFORMS AIRCRAFT JACKING FOR MAINTENANCE.

2.1.13. INSTALLS AND REMOVES POD AND EXTERNAL FUEL TANK.

2.1.14. LOADS AND UNLOADS BALLAST PLATE.

2.2. PERFORMS AIRCRAFT CLEANING. Prepares for and cleans aircraft to include after wash lubrication.

2.2.1. PERFORMS GENERAL AIRCRAFT CLEANING.

2.2.2. PERFORMS AIRCRAFT WASH.

2.2.3. PERFORMS CLEANING AND TREATMENT OF EQUIPMENT.

2.2.4. PERFORMS SNOW, FROST, AND ICE REMOVAL.

2.2.5. PERFORMS VACUUMING AND POLISHING.

3. CORRECTIVE AND PREVENTATIVE MAINTENANCE:

3.1. PERFORMS CORRECTIVE AND PREVENTATIVE MAINTENANCE. Performs corrective and preventative maintenance to ensure aircraft is mission capable.

3.1.1. PERFORMS AIRFRAME MAINTENANCE.

3.1.2. PERFORMS AIRCREW STATION SYSTEM MAINTENANCE.

3.1.3. MAINTAINS LANDING GEAR SYSTEM.

3.1.4. MAINTAINS FLIGHT CONTROL SYSTEM.

3.1.5. MAINTAINS POWER PLANT.

3.1.6. MAINTAINS AUXILIARY POWER PLANT AND JET FUEL STARTER.

3.1.7. PERFORMS MAINTENANCE ON ENVIRONMENTAL CONTROL SYSTEM COMPONENT.

3.1.8. REMOVES AND REPLACES ELECTRICAL POWER SUPPLY COMPONENT.

3.1.9. REMOVES AND REPLACES LIGHTING SYSTEM COMPONENT.

3.1.10. PERFORMS MAINTENANCE ON HYDRAULIC AND PNEUMATIC SYSTEM.

3.1.11. PERFORMS MAINTENANCE ON FUEL SYSTEM.

3.1.12. PERFORMS MISCELLANEOUS UTILITY MAINTENANCE.

3.1.13. PERFORMS MAINTENANCE ON INSTRUMENTS.

3.1.14. REMOVES AND REPLACES STATIC DISCHARGERS.

3.2. MAINTAINS GUN PURGE HYDRAULIC COMPONENT. Inspects, troubleshoots, repairs, adjusts, removes, replaces, modifies, and performs functional check on gun purge hydraulic component.

3.3. PERFORMS TIME-COMPLIANCE TECHNICAL ORDER (TCTO). Accomplishes directed TCTO and completes documentation.

3.4. MAINTAINS AIRCRAFT -21 EQUIPMENT.

4. CRASH RECOVERY RESPONSE. Performs task required to support unit crash recovery program.

5. HAZARDOUS WASTE PROGRAM MANAGEMENT:

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

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

5.3. MAINTAINS PROTECTIVE EQUIPMENT. Inspects and maintains protective equipment.

6. AIRCREW DEBRIEFING. Performs aircrew debriefing.

7. AIRCRAFT DOCUMENTATION MAINTENANCE:

7.1. PREPARES AND MAINTAINS AIRCRAFT FORMS.

7.2. UPDATES AND MAINTAINS CORE AUTOMATED MAINTENANCE SYSTEM DOCUMENTATION.

8. TECHNICAL DATA SUBACCOUNT MAINTENANCE. Receives and posts data and change to technical order file. Maintains file for serviceability.

9. SPECIAL PLANNING OR SCHEDULING:

9.1. PREPARES FOR UNIT TRAINING ASSEMBLY.

9.2. PREPARES FOR MOBILITY/DEPLOYMENT PARTICIPATION.

10. RECOVERY FOR MAINTENANCE. Travels to other locations to recover aircraft down for maintenance.

INDIRECT:

I1. SUPERVISION:

I1.1. ADMINISTERS PERSONNEL:

I1.1.1. HIRES CIVILIAN EMPLOYEE. Develops civilian position description, develops promotion evaluation program, submits request for civilian hire, reviews personnel data, interviews applicant, analyzes applicant interview evaluation/rating, and finalizes selection.

I1.1.2. INDOCTRINATES PERSONNEL:

I1.1.2.2. INDOCTRINATES ENLISTED MEMBER. Conducts initial interview, makes original job assignment, and acquaints new member with the work center.

I1.1.2.3. INDOCTRINATES CIVILIAN. Conducts initial interview, makes original job assignment, and acquaints new member with work center.

I1.1.3. RATES PERFORMANCE:

I1.1.3.1. PREPARES MILITARY EVALUATION:

I1.1.3.1.1. PREPARES ENLISTED EVALUATION. Reviews enlisted performance report or letter of evaluation, researches required information, drafts narrative and referral letter, proofreads typed copy, marks boxes, and signs completed report.

I1.1.3.1.3. PREPARES LETTER OF EVALUATION. Reviews letter of evaluation notice, researches required information, drafts narrative and referral letter, proofreads typed copy, and signs completed report.

I1.1.3.2. IMPLEMENTS CIVILIAN PERFORMANCE AND PROMOTION APPRAISAL-PERFORMANCE PLAN:

I1.1.3.2.1. PREPARES CIVILIAN PERFORMANCE AND PROMOTION APPRAISAL-PERFORMANCE PLAN. Analyzes position, position description, and work center goals; drafts performance plan subtask and standard; discusses proposed performance plan with employee; finalizes performance plan.

I1.1.3.2.2. PREPARES CIVILIAN PERFORMANCE AND PROMOTION APPRAISAL-PERFORMANCE RATING. Researches employee performance, completes performance rating, and discusses performance rating with employee.

I1.1.3.5. PROVIDES PERFORMANCE FEEDBACK:

I1.1.3.5.1. PREPARES FOR PERFORMANCE FEEDBACK SESSION. Gathers and reviews performance information, schedules feedback session, selects and develops agenda, and prepares performance feedback worksheet.

I1.1.3.5.2. CONDUCTS PERFORMANCE FEEDBACK SESSION. Explains duty performance requirements and responsibilities, establishes expectations, and informs ratee if performance is up to expectations.

I1.1.3.5.3. ATTENDS PERFORMANCE FEEDBACK SESSION. Receives performance feedback and discusses performance expectations with supervisor.

I1.1.5. NOMINATES PERSONNEL FOR AWARD:

I1.1.5.1.3. PREPARES ENLISTED AWARD NOMINATION. Reviews and returns award submission consideration letter, researches directive, drafts nomination and citation, proofreads nomination and citation final typed copy, and signs as required.

I1.1.5.1.4. PREPARES ENLISTED DECORATION NOMINATION. Reviews and returns decoration submission consideration letter, reviews report of individual personnel, researches directive, drafts nomination and citation, proofreads nomination and citation final typed copy, and signs as required.

I1.1.5.2. PREPARES CIVILIAN AWARD NOMINATION. Researches data, drafts recommendation, and finalizes recommendation.

I1.2. SUPERVISES PERSONNEL:

I1.2.1. SCHEDULES PERSONNEL. Reviews work requirement and priority, reviews personnel status, and prepares duty schedule.

I1.2.2. DEVELOPS STANDARD PUBLICATION OR OTHER DIRECTIVE:

I1.2.2.1. DEVELOPS POLICY LETTER, PROCEDURE, OR OPERATING INSTRUCTION. Researches applicable document, develops draft, coordinates draft, and proofreads and signs final copy.

I1.2.2.2. DEVELOPS PERFORMANCE STANDARD OR CHECKLIST. Researches applicable document, develops draft, coordinates draft, and proofreads and signs final copy.

I1.2.3. DIRECTS WORK CENTER ACTIVITY:

I1.2.3.1. OVERSEES WORK IN PROGRESS. Inspects and reviews subordinates' work.

I1.2.3.2. COORDINATES ON WORK CENTER OR PERSONNEL STATUS. Coordinates with supervisor or other unit or agency on work center or personnel status.

I1.2.3.3. INFORMS WORK CENTER PERSONNEL:

I1.2.3.3.1. INFORMS WORK CENTER PERSONNEL. Informs work center personnel on change affecting individual or work center activity.

I1.2.3.3.2. INFORMS INDIVIDUAL. Informs individual on changes affecting the individual.

I1.2.4. COUNSELS PERSONNEL:

I1.2.4.2. COUNSELS ENLISTED MEMBER. Counsels and assists individual with morale, welfare, or disciplinary problems. Takes necessary action required to maintain discipline.

I1.2.4.3. COUNSELS CIVILIAN. Counsels and assists individual with morale, welfare, or disciplinary problems. Takes necessary action required to maintain discipline.

I1.2.5. MAINTAINS TIME AND ATTENDANCE FORM. Annotates form, completes form, reviews for accuracy, obtains required signature, and forwards form to civilian pay.

I1.3. REVIEWS INCOMING DISTRIBUTION. Reviews incoming correspondence for information and necessary action and marks for routing.

I1.4. REVIEWS OUTGOING DISTRIBUTION. Reviews outgoing correspondence for completeness and accuracy and signs.

I1.5. DEVELOPS BUDGET ESTIMATE. Prepares budget input by researching, evaluating, coordinating, and drafting estimate; forwards estimate to unit resource advisor; and answers follow-on inquiry on estimate.

I1.6. ASSISTS IN MISHAP OR INCIDENT INVESTIGATION. Notifies emergency response agency, informs safety office, and assists in investigation.

I1.7. INSPECTS FACILITY:

I1.7.1. INSPECTS OFFICE FACILITY. Periodically inspects work center facility for housekeeping, safety, fire hazard, or equipment conditions that require attention, and completes necessary documentation.

I1.7.2. INSPECTS WAREHOUSE/MAINTENANCE FACILITY. Periodically inspects work center facility for housekeeping, safety, fire hazard, or equipment conditions that require attention and completes necessary documentation.

I1.9. REVIEWS REPORT AND STATISTICAL DATA. Reviews information contained in report and statistical data for impact on work center status and to identify possible trends that require management attention.

I1.10. PREPARES SUGGESTION. Researches information, prepares suggestion, and submits to unit suggestion monitor or base suggestion manager.

I2. ADMINISTRATION:

I2.3. MAINTAINS UNCLASSIFIED CORRESPONDENCE FILE:

I2.3.1. ESTABLISHES NEW FILE. Researches new regulation, amends file plan, prepares file control label, and prepares new file folder.

I2.3.2. UPDATES FILE. Reviews file for currency, updates file plan, updates file control label, and updates file guide and folder label.

I2.3.3. FILES CORRESPONDENCE. Obtains correspondence from filing tray, marks correspondence, sorts correspondence, and files correspondence.

I2.3.4. REVIEWS FILE FOR DISPOSAL. Separates active file from inactive file, prepares material for transfer to staging area, and stores material for disposal.

I2.3.5. DISPOSES OF DOCUMENTATION. Disposes of material within the work center and outside the work area.

I2.4. MAINTAINS SUSPENSE FILE. Determines need for suspense, assigns suspense, posts file, reviews file for compliance, reminds individual of suspense, and annotates file at completion of action.

I2.5. MAINTAINS LOG AND REGISTER. Obtains book or form, makes entry, and puts book or form away.

I2.6. MAINTAINS PERSONNEL LOCATOR FILE. Prepares card or record, posts change, and disposes of card or record.

I2.8. MAINTAINS UNCLASSIFIED PUBLICATION FILE. Determines requirement for publication, orders administrative publication, maintains index, and maintains publication.

I2.9. OPERATES COPY MACHINE. Makes copy, annotates log, and collates copy.

I2.10. MAINTAINS STOCK OF BLANK FORMS. Determines requirement, prepares requisition form, receives form, distributes form, files form, requisitions and maintains accountable form, disposes of obsolete form, and removes and deletes unneeded requisition form.

I2.11. MAINTAINS BULLETIN BOARD. Posts new information and removes obsolete information.

I2.12. MAINTAINS APPOINTMENT RECORD. Receives request, annotates record, coordinates appointment with supervisor, and finalizes appointment.

I2.13. ACKNOWLEDGES VISITOR. Greets visitor, answers query, and refers visitor to appropriate person or location.

I3. MEETING:

I3.1. PREPARES FOR MEETING:

I3.1.2. PREPARES FOR UNIT MEETING. Gathers information, organizes material, prepares chart or slide, and practices presentation.

I3.1.4. PREPARES FOR DIRECTORATE/DIVISION/BRANCH MEETING. Gathers information, organizes material, prepares chart or slide, and practices presentation.

I3.1.5. PREPARES FOR WORK CENTER MEETING. Gathers information, organizes material, prepares chart or slide, and practices presentation.

I3.2. CONDUCTS OR ATTENDS MEETING:

I3.2.2. CONDUCTS OR ATTENDS UNIT MEETING.

I3.2.4. CONDUCTS OR ATTENDS DIRECTORATE/DIVISION/BRANCH MEETING.

I3.2.5. CONDUCTS OR ATTENDS WORK CENTER MEETING.

I4. TRAINING:

I4.1. ADMINISTERS TRAINING:

I4.1.1. DEVELOPS TRAINING PLAN. Determines training requirement, develops training chart and equivalent, develops job qualification standard continuation sheet, and develops or revises training schedule.

I4.1.2. EVALUATES INDIVIDUAL TRAINING REQUIREMENT. Prepares new training record, compares technical school graduation requirement with classification manual, prepares and submits training quality report, compares member's qualification with work center duty requirement, and designates trainer.

I4.1.4. COUNSELS TRAINEE. Conducts initial interview, counsels trainee on training progress, and documents counseling on training record.

I4.2. DEVELOPS TRAINING MATERIAL. Researches required information, updates existing training material, drafts new training material, develops training aid, and revises training aid.

I4.3. CONDUCTS TRAINING. Prepares training situation, makes presentation, observes performance, administers test, and annotates training record.

I4.4. RECEIVES TRAINING. Prepares for training, receives instruction, performs procedures, and takes test.

I5. SUPPLY:

I5.1. PROCESSES EQUIPMENT REQUEST. Determines need and authorization for equipment, researches stock number or nomenclature, prepares justification, submits request, takes follow-up action, and receives or turns in equipment.

I5.2. CONDUCTS INVENTORY. Inventories equipment on hand and ensures accuracy of records.

I5.3. MAINTAINS CUSTODIAN DOCUMENT. Receives listing from supply, posts change to record, and resolves inconsistency.

I5.4. OBTAINS EXPENDABLE SUPPLIES. Determines need, researches stock number, picks up expendable supplies from supply custodian, and distributes supplies.

I6. EQUIPMENT MAINTENANCE:

I6.1. MAINTAINS SHOP EQUIPMENT:

I6.1.1. MAINTAINS MACHINERY:

I6.1.1.2. MAINTAINS MACHINERY (AIRCRAFT MAINTENANCE FUNCTIONS). Performs periodic inspection and performs preuser inspection.

I6.1.2. MAINTAINS TEST EQUIPMENT:

I6.1.2.2. MAINTAINS TEST EQUIPMENT (AIRCRAFT MAINTENANCE FUNCTIONS). Maintains a list of equipment requiring Precision Measurement Equipment Laboratory (PMEL) calibration or testing, turns in or picks up equipment from PMEL or PMEL coordinator, prepares letter of justification for peculiar equipment code equipment, performs preuser inspection, and performs periodic inspection.

I6.1.3. MAINTAINS CONSOLIDATED TOOL KIT (CTK):

I6.1.3.2. MAINTAINS CTK (AIRCRAFT MAINTENANCE FUNCTIONS). Orders new or replacement tool, conducts periodic inventory, and reports missing tool.

I6.1.4. MAINTAINS INDIVIDUAL TOOL KIT. Reports to supply for initial issue, replaces broken or lost tool, and conducts periodic inventory.

I6.2. MAINTAINS ASSIGNED VEHICLE:

I6.2.2. MAINTAINS ASSIGNED VEHICLE (AIRCRAFT MAINTENANCE FUNCTIONS). Performs operator inspection, washes vehicle, waxes vehicle, and refuels vehicle.

I7. CLEANUP:

I7.1. PREPARES WORK AREA. Places tool or equipment in proper location at beginning of duty period and arranges area to conform with any sanitary, safety, or security requirement.

I7.2. PUTS WORK AWAY. Stores tool or equipment in proper location at the end of the duty period and arranges area to conform with any sanitary, safety, or security requirement.

I7.3. CLEANS WORK AREA:

I7.3.1. CLEANS OFFICE AREA. Dusts, sweeps, mops, waxes, buffs, washes window, and performs other associated janitorial tasks.

I7.3.2. CLEANS MAINTENANCE OR WAREHOUSE AREA. Dusts, sweeps, mops, waxes, buffs, washes window, and performs other associated janitorial tasks.

STANDARD MANPOWER TABLE											
WORK CENTER/FAC Flight Line Maintenance/FAC 22110E			APPLICABILITY MAN-HOUR RANGE 2948.55 - 5999.19								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Aircraft Manager	2A3XX	CIV	2	2	2	2	2	2	2	2	2
Tac Acft Maint Crftmn	2A3X3A	CIV	18	19	20	21	22	23	24	25	26
TOTAL			20	21	22	23	24	25	26	27	28
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Aircraft Manager	2A3XX	CIV	2	2	2	2	2	2	2	2	2
Tac Acft Maint Crftmn	2A3X3A	CIV	27	28	29	30	31	32	33	34	35
TOTAL			29	30	31	32	33	34	35	36	37

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STANDARD MANPOWER TABLE											
WORK CENTER/FAC Flight Line Maintenance/FAC 22110E			APPLICABILITY MAN-HOUR RANGE 2948.55 - 5999.19								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Aircraft Manager	2A3XX	CIV	2	2	2	2					
Tac Acft Maint Crftmn	2A3X3A	CIV	36	37	38	39					
TOTAL			38	39	40	41					
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
TOTAL											

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