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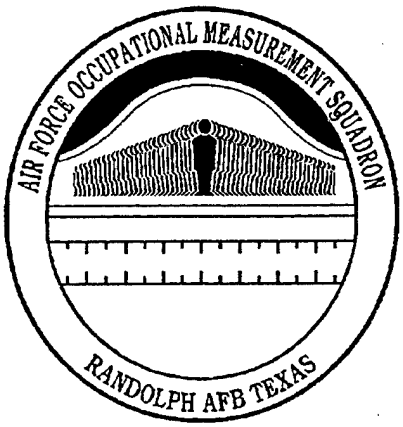

OCCUPATIONAL SURVEY REPORT

F-15/F-111 AVIONIC SYSTEMS

AFSC 2A3X1A/B/C

AFPT 90-452-024

JUNE 1996

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
RANDOLPH AFB, TEXAS 78150-4449

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782 TRG/TTS (710 H AVENUE, BUILDING 920, SHEPPARD AFB TX 76311-2856)	1		1	

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PREFACE

This report presents the results of an Air Force Occupational Survey of the AFSC 2A3X1A/B/C F-15/F-111 Avionic Systems career ladder. Authority to conduct occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Mr. Tom Duffy, Inventory Development Specialist, developed the survey instrument. First Lieutenant James A. Coleman, Occupational Analyst, analyzed the data and wrote the final report. First Lieutenant Sheon Mendoza provided computer programming support, and Mr. Richard Ramos provided administrative support.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the Air Force Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB Texas, 78150-4449 (DSN 487-6623).

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SUMMARY OF RESULTS

1. *Survey Coverage*: The AFSC 2A3X1A/B/C F-15/F-111 Avionic Systems career ladder was surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 1,185 AFSC 2A3X1A/B/C personnel (59 percent of the assigned population). Skill levels and paygrades were well represented.

2. *Career Ladder Structure*: Structure analysis identified two clusters (containing a total of 9 jobs) and five jobs: Flightline Maintenance cluster (containing the F-15 Attack Control Systems job; F-111 Attack Control Systems job; Communication, Navigation, and Penetration Aids job; Instrument and Flight Control Systems job; Multi-System Specialty job; and Test Squadron job), FTD Instructor job, Debriefer job, Maintenance Operations Control Center Coordinator job, Quality Assurance job, Management cluster (containing the Expediter job, Supervisor job, and Manager job), and the Tools and Equipment job. The Flightline Maintenance cluster dominates the specialty, accounting for 77 percent of the respondents.

3. *Career Ladder Progression*: Personnel in the F-15/F-111 Avionic Systems career ladder show a typical pattern of career progression. Three-skill level personnel perform essentially technical tasks. At the 5-skill level, a moderate shift towards supervisory functions occurs, with members still spending about 85 percent of their job time performing technical duties. Seven-skill level personnel split their time almost evenly between supervisory functions and technical tasks, while 9-skill level members focus more heavily on managerial and supervisory functions (almost 90 percent of their job time). Specialty descriptions in the CFETP provide a broad and accurate overview of tasks and duties performed within the career ladder.

4. *Training Analysis*: The STS and the POIs for courses J3ABR2A331A 000/001, J3ABR2A331B 000/001, and J3ABR2A331C 000/001 are well-supported by survey data. However, there are several tasks not matched in either document that require review for possible inclusion in the training documents.

5. *Job Satisfaction Analysis:* Overall, AFSC 2A3X1A/B/C respondents appear satisfied with their jobs. When compared to other non-lateral logistics AFSCs surveyed in 1994, AFSC 2A3X1A/B/C members reported comparable ratings (AFSC members with 1-48 and 49-96 months TAFMS indicated slightly higher responses than respondents in the comparative sample). Additionally, AFSC 2A3X1A/B/C reenlistment intentions, across all TAFMS groups, were slightly lower than the comparative sample.

6. *Implications*: Specialty descriptions for the AFSC 2A3X1A/B/C career ladder are accurate. No serious job satisfaction problems appear to exist within this specialty. AFSC 2A3X1A/B/C military reenlistment intentions are about the same as those of a comparative sample of similar Air Force personnel surveyed in 1994.

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OCCUPATIONAL SURVEY REPORT (OSR)
F-15/F-111 AVIONIC SYSTEMS CAREER LADDER
AFSC 2A3X1A/B/C

INTRODUCTION

This is a report of an occupational survey of the AFSC 2A3X1A/B/C F-15/F-111 Avionic Systems career ladder conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS). This survey will ensure current data for use in updating career ladder documents and training programs. AFSC 2A3X1A/B/C personnel were last surveyed in 1990 (formerly two separate AFSCs according to aircraft: 452X1 and 452X3). This report is the first to provide insight into the success of the merger of the F-15 and F-111 Avionic Systems career ladders.

Background

According to the Specialty Description contained in the Career Field Education and Training Plan 2A3X1A/B/C, dated October 1994, F-15/F-111 Avionics personnel at the 5-skill level maintain on-equipment avionic systems; perform general aircraft handling procedures; identify avionic systems malfunctions; remove, install, and perform checks of external avionics and electronic countermeasures equipment; perform modifications; and maintain inspection and maintenance records. Additionally, 7-skill level personnel: inspect avionic systems to determine operational status; interpret inspection findings; review maintenance management procedures; and evaluate justification and practicality of modifications. Personnel at the 9-skill level superintend maintenance and staff activities engaged in maintenance of F-15/F-111 aircraft systems/components; plan, organize, and superintend maintenance troubleshooting activities; inspect removal, assembly, and installation of mechanical and electrical components; direct aircraft battle damage repair and crash damaged or disabled aircraft recovery operations; establish priorities for completion of maintenance tasks; provide assistance in solving maintenance, supply, and personnel problems; perform supervisory inspections of maintenance actions on avionic systems/components; and interpret and discuss inspection findings and recommend corrective action.

All entry-level personnel must take the L3AQR40020 500, Electronic Principles course. The 3-skill level is awarded when the Electronic Principles course is taken at Lackland AFB TX, and one of the following six courses is taken at Sheppard AFB TX: J3ABR2A331A 000/001, F-15/F-111 Avionics Attack Control Systems Apprentice; J3ABR2A331B 000/001, F-15/F-111 Avionics Instrument and Flight Control Systems Apprentice; or J3ABR2A331C 000/001, F-15/F-111 Avionics Communication, Navigation, and Penetration Aids Systems Apprentice.

The Armed Forces Vocational Aptitude Battery score requirement for AFSC 2A3X1A/B/C is "Electronic 67," and a strength factor of "K" (weight lift of 70 lbs) is required.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI), AFPT 90-452-024, dated November 1993. A tentative task list was prepared after reviewing pertinent career ladder publications and directives and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 22 subject-matter experts (SMEs) at the following locations:

BASE	REASON FOR VISIT
Lowry AFB CO	Technical Training School*
Mountain Home AFB ID	F-15C/D/E, and EF-111 Aircraft
Cannon AFB NM	F-111 Wing
Nellis AFB NV	F-15C/D/E Aircraft

* Tech school has since moved to Sheppard AFB TX

Others contacted included Air Force MAJCOM functional managers and the career field training manager.

The resulting JI contained a comprehensive listing of 587 tasks grouped under 11 duty headings, with a background section requesting such information as grade, job title, time in present job, time in service, time in career field, and job satisfaction indicators.

Survey Administration

From December 1993 through October 1994, survey control monitors at base training offices worldwide administered the inventory to all eligible DAFSC 2A3X1A/B/C personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, 7-, and 9-skill level population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were

administered to the field; and (4) personnel in their jobs less than 6 weeks. Military participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task, compared to other tasks performed. The ratings ranged from 1 (very small amount time spent) to 9 (very large amount time spent).

To determine relative time spent for each task, all of the incumbent's ratings are assumed to account for 100 percent of the time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time spent on each task.

Survey Sample

Personnel were selected to participate in this study so as to ensure an accurate representation across skill levels and paygrades. Table 1 reflects the MAJCOM distributions of assigned AFSC 2A3X1A/B/C personnel and those members included in the survey sample. Table 2 reflects the assigned personnel and sample distributions by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall population of the career ladder.

TABLE 1

MAJCOM DISTRIBUTION OF 2A3X1A/B/C PERSONNEL

COMMAND	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
ACC	50	62
USAFE	16	10
AETC	15	15
PACAF	12	6
Other	7	7

Total Assigned = 2,014
Total Eligible for Survey = 1,726
Total in Survey Sample = 1,185
Percent of Assigned in Sample = 59%
Percent of Eligible in Sample = 69%

* As of November 1993

TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-1 to E-3	24	30
E-4	27	27
E-5	24	21
E-6	17	15
E-7	8	7

* As of November 1993

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 2A3X1A/B/C personnel also completed a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within this report.

Training Emphasis (TE). TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 72 senior AFSC NCOs who completed a TE booklet were asked to select tasks they felt required some sort of structured training for entry-level personnel, and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams, formal on-the-job training (OJT), or any other organized training method. There was acceptable agreement among the 72 raters. The average TE rating was 2.55, with a standard deviation of 1.61. Any task with a TE rating of 4.16 or above is considered to have high TE.

Task Difficulty (TD). TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 68 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting Air Force Specialty entry-level jobs.

CAREER LADDER STRUCTURE

The first step in the analysis process is to identify the structure of career ladders in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Programs (CODAP) assist by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a *Cluster*. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, five jobs and two clusters were identified within the AFSC 2A3X1A/B/C survey sample. Figure 1 illustrates the jobs performed by AFSC 2A3X1A/B/C personnel.

A listing of these jobs and job clusters is provided below. The stage (STG) number shown beside each title references computer-printed information; the letter "N" represents the number of personnel in each group.

I. FLIGHTLINE MAINTENANCE CLUSTER (STG056, N=912)

- A. F-15 Attack Control Systems Job (STG134, N=194)
- B. F-111 Attack Control Systems Job (STG144, N=74)
- C. Communication, Navigation, and Penetration Aids Job (STG136, N=171)
- D. Instrument and Flight Control Systems Job (STG131, N=144)
- E. Multi-System Specialty Job (STG142, N=291)
- F. Test Squadron Job (STG128, N=5)

II. FIELD TRAINING DETACHMENT (FTD) INSTRUCTOR JOB (STG139, N=9)

III. DEBRIEFER JOB (STG127, N=13)

IV. MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB (STG055, N=13)

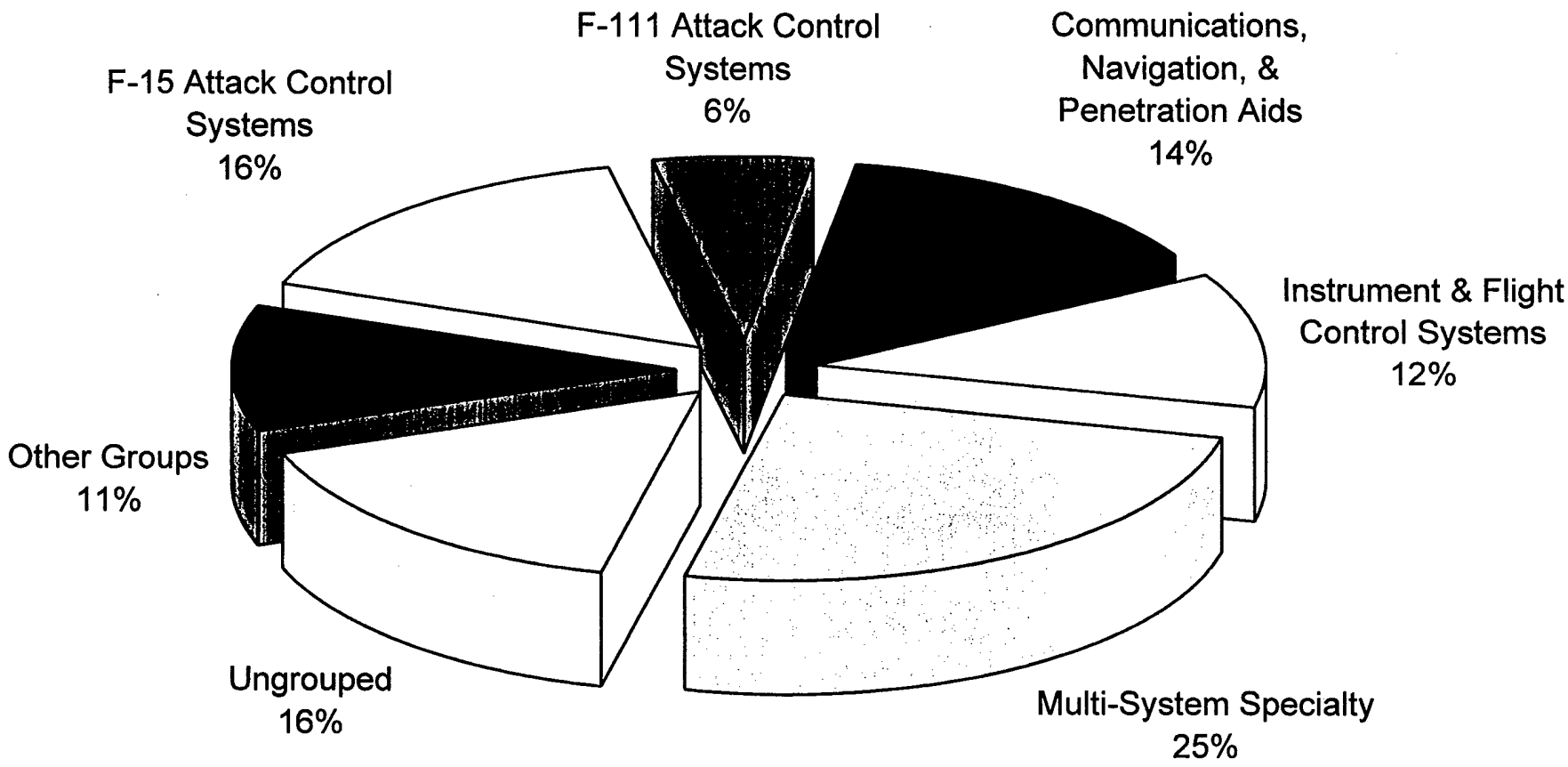
V. QUALITY ASSURANCE JOB (STG117, N=10)

VI. MANAGEMENT CLUSTER (STG044, N=89)

- A. Expediter Job (STG107, N=20)
- B. Supervisor Job (STG354, N=16)
- C. Manager Job (STG233, N=6)

VII. TOOLS AND EQUIPMENT JOB (STG096, N=23)

JOBS PERFORMED BY AFSC 2A3X1A/B/C PERSONNEL



Other Groups include: Test Squadron, FTD Instructor, Debriefer, Maintenance Operations Control Center, Quality Assurance, Expediter, Supervisor, Manager, and Tools & Equipment

FIGURE 1

The respondents forming these groups account for 90 percent of the survey sample. The remaining 10 percent were performing tasks which did not group with any of the other defined jobs. Some of the job titles given by respondents which were representative of these personnel include: Flight Chief, Shift Chief, Mobility NCO, Production Supervisor, and Tool Support Monitor.

Group Descriptions

The following paragraphs contain brief descriptions of the five jobs and two clusters identified through the career ladder structure analysis. Appendix A lists representative tasks performed by identified cluster and job groups. Table 3 displays time spent on duties, while Table 4 provides demographic information for each cluster and job discussed within this report.

I. FLIGHTLINE MAINTENANCE CLUSTER (STG056). The 912 members of this cluster represent 77 percent of the total survey sample. This is the core work of the Avionic Systems career ladder. Personnel within this cluster perform an average of 161 tasks, and there are six different jobs within the cluster which are described below.

A. F-15 Attack Control Systems Job (STG134). The 194 members of this job make up 16 percent of the survey sample. They perform an average of 112 tasks. As seen in Table 3, 37 percent of their time is spent working in Duty H (Maintaining Attack Control Systems). The majority of these tasks pertain to removing, replacing, troubleshooting, inspecting, and operationally checking numerous attack control systems components. Representative tasks for this job include:

- operationally check video recording systems
- troubleshoot video recording systems
- remove or install OWS LRUs
- operationally check OWSs
- remove or replace HUD system LRUs
- troubleshoot HUD systems
- remove or replace CC system LRUs
- operationally or BIT check CC systems

Personnel working in the F-15 Attack Control Systems Job have an average of 3 years, 2 months TAFMS, and 78 percent are in their first enlistment. Ninety percent hold a DAFSC of either 2A331A or 2A351A (see Table 4). Sixty-four percent are in paygrades E-1 through E-3.

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	F-15 ATTACK CONTROL SYSTEMS JOB (STG134)	F-111 ATTACK CONTROL SYSTEMS JOB (STG144)	COMMUNICATION, NAVIGATION, AND PENETRATION AIDS JOB (STG136)	INSTRUMENT AND FLIGHT CONTROL SYSTEMS JOB (STG131)	MULTI-SYSTEM SPECIALTY JOB (STG142)
A ORGANIZING AND PLANNING	*	1	1	1	3
B DIRECTING AND IMPLEMENTING	*	1	1	1	5
C INSPECTING AND EVALUATING	*	1	*	*	3
D TRAINING	*	2	1	1	3
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	3	3	3	3	2
F PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	23	24	18	18	13
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	22	18	18	14	12
H MAINTAINING ATTACK CONTROL SYSTEMS	37	38	4	4	18
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	2	1	1	48	19
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	4	2	44	2	16
K PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	9	9	9	8	6

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	TEST SQUADRON JOB (STG128)	FTD INSTRUCTOR JOB (STG139)	DEBRIEFER JOB (STG127)	MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB (STG55)
A ORGANIZING AND PLANNING	5	11	10	17
B DIRECTING AND IMPLEMENTING	3	9	5	20
C INSPECTING AND EVALUATING	5	8	1	11
D TRAINING	2	20	2	7
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	6	5	18	10
F PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	37	14	0	0
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	14	6	7	0
H MAINTAINING ATTACK CONTROL SYSTEMS	12	13	1	0
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	9	5	0	0
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	6	1	0	0
K PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	1	8	56	35

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	QUALITY ASSURANCE JOB (STG117)	EXPEDITER JOB (STG107)	SUPERVISOR JOB (STG354)	MANAGER JOB (STG233)	TOOLS AND EQUIPMENT JOB (STG96)
A ORGANIZING AND PLANNING	8	22	16	24	11
B DIRECTING AND IMPLEMENTING	7	36	22	19	12
C INSPECTING AND EVALUATING	25	15	21	16	7
D TRAINING	4	2	11	14	1
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	12	4	7	10	65
F PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	11	13	4	*	*
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	24	3	2	*	1
H MAINTAINING ATTACK CONTROL SYSTEMS	1	0	1	0	*
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	1	0	*	0	0
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	*	*	*	0	0
K PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	7	5	16	17	3

* Denotes less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	F-15 ATTACK CONTROL SYSTEMS JOB	F-111 ATTACK CONTROL SYSTEMS JOB	COMMUNICATION, NAVIGATION, AND PENETRATION AIDS JOB	INSTRUMENT AND FLIGHT CONTROL SYSTEMS JOB	MULTI-SYSTEM SPECIALTY JOB
NUMBER IN GROUP	194	74	171	144	291
PERCENT OF SAMPLE	16	6	14	12%	25%
DAFSC DISTRIBUTION:					
2A331A	56%	46%	0%	0%	2%
2A331B	1%	2%	0%	40%	2%
2A331C	4%	0%	48%	0%	1%
2A351A	34%	47%	1%	1%	27%
2A351B	1%	0%	1%	52%	22%
2A351C	1%	0%	47%	1%	17%
2A371	3%	5%	3%	6%	29%
2A390	0%	0%	0%	0%	0%
PAYGRADE DISTRIBUTION:					
E-1 to E-3	64%	49%	48%	39%	5%
E-4	28%	31%	39%	49%	22%
E-5	6%	19%	11%	8%	47%
E-6	2%	1%	2%	3%	25%
E-7	0%	0%	0%	1%	1%
E-8	0%	0%	0%	0%	0%
Average number of tasks performed	112	101	118	151	247
Average months TAFMS	38	55	52	57	123
Percent in first enlistment	78%	54%	59%	54%	10%
Percent supervising others	18%	32%	25%	26%	81%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	TEST SQUADRON JOB	FTD INSTRUCTOR JOB	DEBRIEFER JOB	MAINTENANCE OPERATIONS CONTROL CENTER COORDINATORS JOB
NUMBER IN GROUP	5	9	13	13
PERCENT OF SAMPLE	1%	1%	1%	1%
DAFSC DISTRIBUTION:				
2A331A	0%	0%	8%	0%
2A331B	0%	0%	0%	0%
2A331C	0%	0%	8%	0%
2A351A	0%	0%	38%	16%
2A351B	0%	11%	8%	0%
2A351C	0%	0%	30%	46%
2A371	100%	89%	8%	38%
2A390	0%	0%	0%	0%
PAYGRADE DISTRIBUTION:				
E-1 to E-3	0%	0%	16%	0%
E-4	0%	0%	62%	15%
E-5	40%	22%	15%	38%
E-6	40%	56%	7%	38%
E-7	20%	22%	0%	9%
E-8	0%	0%	0%	0%
Average number of tasks performed	184	104	16	22
Average months TAFMS	185	156	69	151
Percent in first enlistment	0%	0%	38%	0%
Percent supervising others	20%	78%	15%	69%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	QUALITY ASSURANCE JOB	EXPEDITER JOB	SUPERVISOR JOB	MANAGER JOB	TOOLS AND EQUIPMENT JOB
NUMBER IN GROUP	10	20	16	6	23
PERCENT OF SAMPLE	1%	2%	1%	1%	2%
DAFSC DISTRIBUTION:					
2A331A	0%	0%	0%	0%	0%
2A331B	0%	0%	0%	0%	0%
2A331C	0%	0%	0%	0%	5%
2A351A	10%	5%	0%	0%	43%
2A351B	0%	0%	0%	17%	9%
2A351C	0%	5%	0%	0%	13%
2A371	90%	85%	100%	83%	30%
2A390	0%	5%	0%	0%	0%
PAYGRADE DISTRIBUTION:					
E-1 to E-3	0%	0%	0%	0%	4%
E-4	0%	0%	0%	17%	52%
E-5	30%	10%	0%	0%	18%
E-6	40%	30%	19%	50%	22%
E-7	30%	55%	81%	33%	4%
E-8	0%	5%	0%	0%	0%
Average number of tasks performed	48	38	85	84	27
Average months TAFMS	162	195	219	173	121
Percent in first enlistment	0%	0%	0%	0%	21%
Percent supervising others	60%	85%	100%	50%	52%

B. F-111 Attack Control Systems Job (STG144). The 74 members of this job make up 6 percent of the survey sample. They perform an average of 101 tasks, which are quite similar to those performed by F-15 attack control systems personnel. Likewise, 38 percent of their time is spent in Duty H (Maintaining Attack Control Systems), as shown in Table 3. The majority of these tasks pertain to removing, replacing, troubleshooting, inspecting, and operationally checking numerous attack control systems components. Representative tasks for this job include:

- troubleshoot TFR systems
- operationally or BIT check TFRs
- troubleshoot radar altimeter systems
- operationally check radar altimeters
- confidence test and BIT computer complexes
- operationally check optical sight systems
- remove or replace tracking handle LRUs
- troubleshoot tracking handle

Personnel working in the F-111 Attack Control Systems Job are more experienced than their F-15 counterparts, as reflected by an average of 4 years, 7 months TAFMS. Table 4 shows that only 54 percent are in their first enlistment. Most members of this job have a DAFSC of 2A331A or 2A351A, totaling 93 percent. Forty-nine percent are in the paygrades E-1 through E-3.

C. Communication, Navigation, and Penetration Aids Job (STG136). The 171 members of this job represent 14 percent of the sample. They perform an average of 118 tasks. Table 3 shows that 44 percent of their time is spent working in Duty J (Maintaining Communications, Navigation, and Penetration Aids Systems). The majority of these tasks pertain to removing, replacing, troubleshooting, inspecting, and operationally checking numerous communication and navigation components. Representative tasks for this job include:

- remove or replace AG/IFF transponder system LRUs
- set mode 2 codes in AG/IFF transponder systems
- operationally or BIT check ECM systems
- remove or replace ECM system LRUs
- troubleshoot ECM systems
- troubleshoot secure voice crypto equipment
- reprogram CMDS system LRUs
- remove or replace EWWS LRUs

Personnel working in the Communication, Navigation, and Penetration Aids Job have an average of 4 years, 4 months TAFMS, and 59 percent are in their first enlistment (see Table 4). Ninety-six percent of the members of this have a DAFSC of either 2A331C or 2A351C. Forty-eight percent are in the paygrades E-1 through E-3.

D. Instrument and Flight Control Systems Job (STG131). The 144 members of this job make up 12 percent of the survey sample. They perform an average of 151 tasks. Forty-eight percent of their time is spent working on tasks in Duty I (Maintaining Instrument and Flight Control Systems), as shown in Table 3. The majority of these tasks pertain to removing, replacing, troubleshooting, inspecting, and operationally checking numerous instrument and flight control systems components. Representative tasks for this job include:

- adjust primary or standby instrument system components
- troubleshoot AICSs
- remove or replace primary flight control or trim system LRUs
- troubleshoot flight control trim systems
- operationally check airborne signal data recording systems
- troubleshoot manual flight control systems
- troubleshoot turbine inlet temperature indicating systems
- adjust automatic flight control or trim system components

Personnel working in the Instrument and Flight Control Systems Job average 4 years, 9 months TAFMS, and 54 percent are in their first enlistment. The majority of members in this job have a DAFSC of 2A331B or 2A351B (92 percent), as reflected by Table 4. Eighty-eight percent of the incumbents of this job have a paygrade of E-4 or below.

E. Multi-System Specialty Job (STG142). The 291 members of this job make up 25 percent of the survey sample. They perform the greatest number of tasks among all the groups, averaging 247. As shown in Table 3, 53 percent of their time is spent working in Duties H (Maintaining Attack Control Systems), I (Maintaining Instrument and Flight Control Systems), and J (Maintaining Communication, Navigation, and Penetration Aids Systems). The majority of their tasks pertain to removing, replacing, troubleshooting, inspecting, and operationally checking numerous system components on attack control; instrument and flight control systems; and communication, navigation, and penetration aids. Representative tasks for this job include:

- debrief aircrews
- operationally or BIT check IG systems
- defer equipment maintenance records in CAMS
- remove or replace right-hand throttle grips
- troubleshoot right-hand throttle grips

- troubleshoot control stick grips
- remove or replace BIT system LRUs
- troubleshoot IBSs

Personnel working in the Multi-System Specialty Job average 10 years, 3 months TAFMS, and only 10 percent are in their first enlistment. Table 4 shows 66 percent of the members of this job work at the 5-skill level and another 29 percent work at the 7-skill level. Forty-seven percent of the incumbents for this job are in paygrade E-5.

F. Test Squadron Job (STG128). The five members of this job make up 1 percent of the survey sample. They operationally test and evaluate aircraft to ensure readiness. These members perform an average of 184 tasks, the majority of which pertain to various functions of general aircraft handling, as reflected in Table 3. Representative tasks for this job include:

- accomplish end-of-runway checks
- clean aircraft, other than washing
- single-point or multipoint refuel or defuel aircraft
- assist in removing or installing aircraft engines
- complete aircraft postflight inspection checklists
- determine serviceability of aircraft tires
- operationally check aircraft lighting systems
- inspect aircraft pneumatic systems

Personnel working in the test squadron job average 15 years, 5 months TAFMS, and none are in their first enlistment. All members of this job are at the 7-skill level. Forty percent of the incumbents have paygrades E-5 and E-6, as can be seen in Table 4.

II. FIELD TRAINING DETACHMENT (FTD) INSTRUCTOR JOB (STG139). The 9 members of this job make up 1 percent of the survey sample. They perform an average of 104 tasks, and Table 3 shows that the majority of their time is spent training others. Representative tasks for this job include:

- conduct FTD course classroom training
- maintain TO files
- administer or score tests
- develop FTD course training materials
- assign FTD course instructors

- write test questions
- inspect aircraft egress systems
- operationally check remote map reader systems

As shown in Table 4, personnel working as FTD instructors average 13 years TAFMS, and none of them are in their first enlistment. Eighty-nine percent of these personnel are at the 7-skill level. Fifty-six percent of the incumbents have the paygrade E-6.

III. DEBRIEFER JOB (STG127). The 13 members working in the debriefing functional area make up 1 percent of the survey sample. They perform an average of 16 tasks. Despite the fact that 56 percent of their time is spent working on core automated maintenance systems (CAMS), as shown in Table 3, these incumbents all claim "debriefer" as their job title. Representative tasks for this job include:

- maintain debriefing forms
- debrief aircrews
- correct CAMS errors noted during daily verification process
- correct CAMS work unit codes
- change CAMS performing workcenter codes
- verify accuracy of CAMS daily inputs

Personnel working as Debriefers average 5 years, 9 months TAFMS, and 38 percent are in their first enlistment. Sixty-eight percent have a DAFSC of 2A351A or 2A351C, and only 8 percent work on instrument and flight control systems, according to Table 4. Sixty-two percent of the incumbents of this job are at a paygrade of E-4.

IV. MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB (STG055). The 13 members of this job make up 1 percent of the survey sample. They perform an average of 22 tasks, and most of their time is spent planning and implementing aircraft maintenance from the maintenance operations control center (see Table 3). Representative tasks for this job include:

- coordinate maintenance work with appropriate personnel or agencies
- interpret policies, directives, or procedures for subordinates
- analyze CAMS data
- access CAMS menus and data screens

Personnel working as maintenance coordinators average 12 years, 7 months TAFMS, and none are in their first enlistment. Table 4 shows that 46 percent of these people have a DAFSC of 2A351C and 76 percent of the incumbents of this job are in paygrades E-5 and E-6.

V. QUALITY ASSURANCE JOB (STG117). The 10 members of this job make up 1 percent of the survey sample. They perform an average of 48 tasks, and most of their time is spent inspecting and evaluating aircraft components and procedures, as reflected in Table 3. Representative tasks for this job include:

- inspect TO improvement reports
- investigate accidents or incidents
- evaluate personnel for compliance with performance standards or TOs
- develop inspection procedures
- develop quality assurance programs
- evaluate suggestions

Personnel working in the Quality Assurance Job average 13 years, 6 months TAFMS, and none are in their first enlistment. Ninety percent of these people are at the 7-skill level and 70 percent of the incumbents of this job are in paygrades E-6 and E-7, as seen in Table 4.

VI. MANAGEMENT CLUSTER (STG044). The 89 members of this cluster represent 8 percent of the total survey sample, divided among three jobs. These are the core duties performed by senior NCOs in the Avionic Systems career ladder. Personnel within this cluster perform an average of 53 tasks.

A. Expediter Job (STG107). The 20 members of this job make up 2 percent of the survey sample. They perform an average of 38 tasks, which takes up the majority of their duty time with the directing and implementing of maintenance activities and work assignments (see Table 3). Representative tasks for this job include:

- direct flightline maintenance activity
- adjust daily maintenance plans to meet operational commitments
- supervise F-15/F-111 Avionic Systems Apprentices; Comm, Nav, and Pen Aids (AFSC 2A331C)
- supervise F-15/F-111 Avionic Systems Apprentices; Instruments and Flight Controls (AFSC 2A331B)
- supervise F-15/F-111 Avionic Systems Journeymen; Comm, Nav, and Pen Aids (AFSC 2A351C)

- supervise F-15/F-111 Avionic Systems Journeymen; Instruments and Flight Controls (AFSC 2A351B)
- supervise F-15/F-111 Avionic Systems Journeymen; Attack Control (AFSC 2A351A)

Table 4 shows that personnel working the Expediter Job have an average of 16 years, 3 months TAFMS. Most (85 percent) are at the 7-skill level and 55 percent have achieved the paygrade of E-7

B. Supervisor Job (STG354). The 16 members of this job make up 1 percent of the survey sample. They perform an average of 85 tasks which, as Table 3 shows, mostly deal with the supervision and evaluation of junior NCOs. Representative tasks for this job include:

- conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance
- assign OJT trainers
- conduct CAMS training status inquiries
- indorse EPRs
- evaluate causes of mission operational discrepancies
- analyze workload requirements
- assign personnel to duty positions
- establish work methods or controls

Personnel working in the Supervisor Job have an average of 18 years, 3 months TAFMS (see Table 4). All of the incumbents in this job have a DAFSC of 2A371. Eighty-one percent have achieved the paygrade of E-7. Every member of this job supervises other personnel.

C. Manager Job (STG233). The 6 members of this job make up 1 percent of the survey sample. They perform an average of 84 tasks, spending 24 percent of their time organizing and planning procedures, programs, and assignments in the AFSC 2A3X1A/B/C career ladder, as shown in Table 3. Representative tasks for this job include:

- determine logistics requirements, such as space, personnel, and equipment
- conduct CAMS training
- determine CAMS training requirements
- identify problem areas using deficiency or service reports
- plan safety or security programs

- develop organizational or functional charts
- direct development of status indicators, such as boards, graphs, or charts
- write staff studies, surveys, or special reports, other than training reports

Personnel working in the Manager Job have an average of 14 years, 5 months. Table 4 reflects that most members of this job (83 percent) are at the 7-skill level and 50 percent have a paygrade of E-6.

VII. TOOLS AND EQUIPMENT JOB (STG096). The 23 members of this job make up 2 percent of the survey sample. They perform an average of 27 tasks, which deal with administrative and logistic control of all tools and equipment (65 percent of their time spent). Representative tasks for this job include:

- inventory tools, such as CTKs
- issue tools, equipment, or supplies
- inspect tools or equipment
- maintain tool cribs
- maintain ECLs
- perform security checks of tool cribs, hangars, or vehicles
- inventory equipment or supplies
- process tools or equipment for shipment or deployment

Personnel working in the Tools and Equipment Job have an average of 10 years, 1 month TAFMS, and 21 percent are in their first enlistment. Table 4 shows that most members of this job have a DAFSC of 2A351A and 52 percent have a paygrade of E-4.

Comparison of Current Group Descriptions to Previous Studies

The results of the specialty job analysis were compared to the previous Avionic Systems OSRs: AFSC 452X1A/B/C, F-15 Avionic Systems Career Ladder, dated April 1990, and AFSC 452X3A/B/C, F/FB-111 Avionic Systems Career Ladder, dated August 1990. Table 5 lists the major clusters and jobs identified in the current report and their equivalents from the 1990 reports. A comparison of the jobs identified in the current survey against those jobs identified in the 1990 OSRs showed a very similar job structure across the three studies.

TABLE 5

JOB COMPARISONS BETWEEN CURRENT OSR AND 1990 OSRs

CURRENT 2A3X1 OSR	1990 452X1 OSR	1990 452X3 OSR
Flightline Maintenance Cluster	-	-
- F-15 Attack Control Systems Job	Attack Control Systems Cluster	-
- F-111 Attack Control Systems Job	-	Attack Control Systems Cluster
- Communication, Navigation, and Penetration Aids Job	Communication, Navigation, and Penetration Aids Systems Cluster	Communication, Navigation, and Penetration Aids Systems Cluster
- Instrument and Flight Control Systems Job	Instrument and Flight Control Systems Cluster	Instrument and Flight Control Systems Cluster
- Multi-system Specialty Job	Multisystems Cluster	Avionic Technicians Cluster
- Test Squadron Job	*Not identified*	*Not identified*
FTD Instructor Job	Avionic Systems Training Cluster	Training IJT
Debriefer Job	Debriefers IJT	Debriefers IJT
Maintenance Operations Control Center Coordinator Job	Controllers IJT	*Not identified*
Quality Assurance Job	Quality Assurance Inspectors IJT	Quality Assurance Inspectors IJT
Management Cluster	-	-
- Expediter Job	Flightline Expediters IJT	*Not identified*
- Supervisor Job	Avionics Systems Supervisors Cluster	Supervisors Cluster
- Manager Job	*Not identified*	*Not identified*
Tools and Equipment Job	Logistics Support Cluster	Logistics Support Cluster
Not identified	Preventive Maintenance Cluster	*Not identified*

Summary

In summary, structure analysis reveals the F-15/F-111 Avionic Systems career ladder to be quite heterogeneous, due to the different avionic systems. Eighty-five percent of the survey sample are associated with working on specific avionic systems, with the remaining 15 percent working in supervisory, training, and support jobs. The merger of the previous AFSCs 452X1 and 452X3 is supported by the survey data, with 25 percent of the personnel working on multi-systems.

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis examines differences in tasks performed between skill levels. This information may then be used to evaluate how well career ladder documents, such as the Specialty Descriptions, reflect what career ladder personnel are actually doing in the field.

The distribution of AFSC 2A3X1A/B/C skill-level groups across career ladder clusters and jobs is displayed in Table 6. As shown, very high percentages of members from DAFSCs 2A331A, 2A331B, and 2A331C are performing the core jobs of their respective shreds within the career ladder. Approximately one-third of the personnel in DAFSCs 2A351A, 2A351B, and 2A351C work with all three avionic systems, and can be found in the Multi-System Specialty job. As personnel progress through the career ladder, they begin to move into traditional management and supervisory roles. This represents a typical career progression pattern.

Table 7 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. As expected, 3- and 5-skill level groups are equally involved in performing general aircraft handling and avionic systems maintenance functions. Seven- and 9-skill level members perform more supervisory and management duties. Specific skill-level group discussions are presented below.

Skill-Level Descriptions

DAFSC 2A331A. Three-skill level members of this shred perform an average of 92 tasks and most hold the grade of E-3. Table 6 shows that 67 percent of the 171 members in this group work in the F-15 Attack Control Systems Job. Thirty-six percent of their job time is spent maintaining attack control systems (see Table 7). Table 8 lists representative tasks these members perform.

TABLE 6

DISTRIBUTION OF MEMBERS BY DAFSC ACROSS CAREER LADDER JOBS (PERCENT)

JOB	2A331A (N=171)	2A331B (N=77)	2A331C (N=112)	2A351A (N=220)	2A351B (N=154)	2A351C (N=164)	2A371 (N=284)	2A390 (N=3)
Flightline Maintenance Cluster	91	84	88	85	95	87	41	0
-F-15 Attack Control Systems Job	67	1	6	30	1	1	2	0
-F-111 Attack Control Systems Job	20	1	0	16	0	0	1	0
-Communication, Navigation, and Penetration Aids Job	0	0	74	1	1	49	2	0
-Instrument and Flight Control Systems Job	0	74	0	1	49	1	3	0
-Multi-system Specialty Job	4	8	3	36	40	31	30	0
-Test Squadron Job	0	0	0	0	0	0	2	0
FTD Instructor Job	0	0	0	0	1	0	3	0
Debriefer Job	1	0	1	2	1	2	1	0
Maintenance Operations Control Center Coordinator Job	0	0	0	1	0	4	2	0
Quality Assurance Job	0	0	0	1	0	0	3	0
Management Cluster	0	0	0	3	1	1	28	100
-Expediter Job	0	0	0	1	0	1	6	33
-Supervisor Job	0	0	0	0	0	0	6	0
-Manager Job	0	0	0	0	1	0	2	0
Tools and Equipment Job	0	0	1	5	1	2	3	0
Ungrouped	8	16	10	3	1	4	19	0

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF DAFSC GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES		2A331A (N=171)	2A331B (N=77)	2A331C (N=112)	2A351A (N=220)
A	ORGANIZING AND PLANNING	1	1	1	3
B	DIRECTING AND IMPLEMENTING	1	1	1	4
C	INSPECTING AND EVALUATING	1	1	1	3
D	TRAINING	1	1	1	3
E	PERFORMING GENERAL ADMINISTRATION AND SUPPLY FUNCTIONS	2	1	3	7
F	PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	25	19	20	15
G	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	20	14	17	15
H	MAINTAINING ATTACK CONTROL SYSTEMS	36	6	7	27
I	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	2	46	2	7
J	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	2	2	38	7
K	PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	9	8	9	9

TABLE 7 (CONTINUED)

TIME SPENT ON DUTIES BY MEMBERS OF DAFSC GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES		2A351B (N=154)	2A351C (N=164)	2A371 (N=284)	2A390 (N=3)
A	ORGANIZING AND PLANNING	2	4	13	26
B	DIRECTING AND IMPLEMENTING	2	4	14	32
C	INSPECTING AND EVALUATING	2	3	13	23
D	TRAINING	2	2	7	7
E	PERFORMING GENERAL ADMINISTRATION AND SUPPLY FUNCTIONS	3	5	7	8
F	PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	17	14	9	1
G	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	13	15	8	1
H	MAINTAINING ATTACK CONTROL SYSTEMS	9	8	7	0
I	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	35	6	7	0
J	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	7	30	6	0
K	PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	8	9	9	2

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A331A PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=171)
F162	Connect or disconnect aircraft external cooling air units	93
F163	Connect or disconnect aircraft external power	93
H308	Operationally or BIT check radar systems	93
F181	Open or close canopies	91
F180	Open or close airframe components	89
F233	Walk wings or tails during aircraft towing operations	88
F182	Open or close weapons bays, radomes, or pallets	87
G243	Inspect waveguides	87
H305	Operationally or BIT check INSs	87
H336	Remove or replace radar system LRUs	85
F186	Position or remove aircraft chocks or safety pins	85
K560	Access CAMS menus and data screens	84
G256	Safety wire components	84
F234	Wash aircraft	84
G249	Remove or replace waveguides	84
G239	Inspect coaxial cables and connectors	83
H327	Remove or replace INS LRUs	82
G241	Inspect multipin connectors	81
G237	Inspect aircraft wiring	81
G262	Troubleshoot aircraft wiring	80
K581	Load LRU part number or serial numbers in CAMS	78
G242	Inspect triaxial cables and connectors	78
H357	Troubleshoot INSs	77
G260	Trace wiring, system, or interface diagrams	77
K565	Clear or close out completed maintenance discrepancies in CAMS	76
H303	Operationally or BIT check HUD systems	75
H324	Remove or replace HUD system LRUs	75
G265	Troubleshoot multipin connectors	75
H344	Troubleshoot attack radar systems or navigation radar systems	74
F176	Launch or recover aircraft	73
F159	Complete aircraft safe-for-maintenance checks	73
F164	Connect or disconnect aircraft hydraulic test stands or carts	72
G238	Inspect chafing problem areas	72
G235	Analyze avionics status panel latch data	69
F191	Preuse inspect aircraft external cooling air units	67
H354	Troubleshoot HUD systems	66
H315	Remove or replace CC system LRUs	66
H311	Pressurize and leak check radar systems	66
H341	Remove or replace video recording system LRUs	61
H300	Operationally check video recording systems	61
G255	Research technical orders	60
F166	Ground aircraft	59
K561	Analyze CAMS data	56

DAFSC 2A331B. There are 77 members at the 3-skill level for the B shred, who perform an average of 118 tasks. More than half of these members (55 percent) are E-3s. Seventy-four percent of these airmen are members of the Instrument and Flight Control Systems Job (see Table 6). DAFSC 2A331B members spend 46 percent of their time maintaining instrument and flight control systems (see Table 7). Table 9 lists representative tasks for these incumbents.

DAFSC 2A331C. Three-skill level members of this shred perform an average of 102 tasks and most hold the grade of E-3. Table 6 shows that 74 percent of the 112 members in this group are in the Communication, Navigation, and Penetration Aids Job. Thirty-nine percent of their job time is spent maintaining communication, navigation, and penetration aids systems (see Table 7). Table 10 lists representative tasks these members perform.

DAFSC 2A351A. There are 220 members at the 5-skill level for the A shred, who perform an average of 156 tasks. Nearly half of these members (49 percent) are E-4s. Thirty-six percent of these airmen are members of the Multi-System Specialty Job and 30 percent are in the F-15 Attack Control Systems Job (see Table 6). DAFSC 2A351A members spend 27 percent of their time maintaining the attack control systems (see Table 7). Table 11 lists representative tasks for these incumbents.

DAFSC 2A351B. Five-skill level members of this shred perform an average of 191 tasks and most hold the grade of E-4. Table 6 shows that 49 percent of the 154 members in this group are in the Instrument and Flight Control Systems Job and 40 percent work in the Multi-System Specialty Job. Thirty-six percent of their job time is spent maintaining instrument and flight control systems (see Table 7). Table 12 lists representative tasks these members perform.

DAFSC 2A351C. There are 164 members at the 5-skill level for the C shred. They perform an average of 150 tasks. More than half of these members (54 percent) are E-4s. Forty-nine percent of these airmen are members of the Communications, Navigation, and Penetration Aids Systems Job, and another 31 percent are in the Multi-System Specialty Job (see Table 6). DAFSC 2A351C members spend 30 percent of their time maintaining communications, navigation, and penetrations aids systems (see Table 7). Table 13 lists representative tasks for these incumbents.

As Tables 11 through 13 show, DAFSC 2A351 personnel for each shred perform tasks very similar to those performed by their 3-skill level counterparts. Tasks which best distinguish 5-skill level personnel from the junior 3-skill level members are presented in Tables 14 through 16. As expected, the key difference between these groups is an emphasis on training and supervisory functions by 5-skill level members. Examples of tasks with the greatest difference in members performing include conducting OJT, conducting performance feedback worksheet sessions, and counseling trainees on training progress.

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A331B PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=77)
I390	Operationally and leak check pitot static and standby instrument systems	92
G262	Troubleshoot aircraft wiring	92
F163	Connect or disconnect aircraft external power	91
K560	Access CAMS menus and data screens	91
I394	Operationally check AFCSs	91
I393	Operationally check attitude heading reference and instrument systems	91
G256	Safety wire components	91
G260	Trace wiring, system, or interface diagrams	90
I420	Remove or replace attitude heading reference and instrument system LRUs	88
I418	Remove or replace air data computer and primary instrument system LRUs	88
F162	Connect or disconnect aircraft external cooling air units	87
I391	Operationally check air data computer and primary instrument systems	87
I412	Operationally or BIT check fuel quantity indicating systems	87
F164	Connect or disconnect aircraft hydraulic test stands or carts	84
F233	Walk wings or tails during aircraft towing operations	84
I407	Operationally check standby attitude indicators	84
F180	Open or close airframe components	83
F181	Open or close canopies	83
I413	Operationally or BIT check HSI systems	83
G253	Repair aircraft wiring	83
F186	Position or remove aircraft chocks or safety pins	82
I411	Operationally or BIT check AICSs	82
F234	Wash aircraft	82
I434	Remove or replace pitot static, heater, or instrument system LRUs	82
I427	Remove or replace fuel flow indicators	82
G237	Inspect aircraft wiring	81
I396	Operationally check BIT systems	81
I415	Remove or replace AFCS LRUs	79
I403	Operationally check hydraulic pressure indicating systems	79
K581	Load LRU part numbers or serial numbers in CAMS	78
I404	Operationally check primary flight control or trim systems	78
I387	Calibrate fuel quantity indicating systems	78
K565	Clear or close out completed maintenance discrepancies in CAMS	77
I465	Troubleshoot fuel quantity indicating systems	77
I417	Remove or replace AIC LRUs	75
I450	Troubleshoot AFCSs	75
F176	Launch or recover aircraft	75
I472	Troubleshoot pitot static, heater, or instrument systems	75
G235	Analyze ASP latch data	74
G241	Inspect multipin connectors	72
G265	Troubleshoot multipin connectors	72
F159	Complete aircraft safe-for-maintenance checks	71
F198	Preuse inspect hydraulic test stands or servicing carts	71

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A331C PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=112)
F162	Connect or disconnect aircraft external cooling air units	92
F180	Open or close airframe components	89
F163	Connect or disconnect aircraft external power	89
F159	Complete aircraft safe-for-maintenance checks	89
K560	Access CAMS menus and data screens	87
G256	Safety wire components	84
F181	Open or close canopies	84
J506	Operationally or BIT check UHF communication and audio signal systems	83
J492	Operationally or BIT check AA/IFF interrogator systems	83
G239	Inspect coaxial cables and connectors	83
J484	Code mode 4 crypto equipment	82
J509	Remove or replace AA/IFF transponder system LRUs	82
J526	Remove or replace UHF communication and audio signal system LRUs	82
J503	Operationally or BIT check RWRs or CRSs	81
J489	Operationally check intercommunications systems	81
J557	Troubleshoot UHF communication and audio signal systems	81
J504	Operationally or BIT check TACAN systems	81
K565	Clear or close out completed maintenance discrepancies in CAMS	80
F186	Position or remove aircraft chocks or safety pins	79
K581	Load LRU part numbers or serial numbers in CAMS	79
F234	Wash aircraft	79
F233	Walk wings or tails during aircraft towing operations	79
G241	Inspect multipin connectors	79
G237	Inspect aircraft wiring	79
G260	Trace wiring, system, or interface diagrams	79
J523	Remove or replace RWR, CRS, or TTWS LRUs	78
J525	Remove or replace TACAN system LRUs	78
J495	Operationally or BIT check CMDSs	77
J482	Accomplish end-of-runway mode 4/ RWR checks	77
G257	Seal or reseal antennas	77
J539	Troubleshoot AA/IFF interrogator systems	75
G235	Analyze ASP latch data	74
J553	Troubleshoot RWRs or CRSs	71
J511	Remove or replace AG/IFF transponder system LRUs	66
F176	Launch or recover aircraft	63
F166	Ground aircraft	63
J493	Operationally or BIT check AG/IFF interrogator systems	63
J485	Code secure voice crypto equipment	62
K561	Analyze CAMS data	61
G255	Research technical orders	61

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A351A PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=220)
G260	Trace wiring, system, or interface diagrams	85
H305	Operationally or BIT check INSs	84
G239	Inspect coaxial cables and connectors	84
G262	Troubleshoot aircraft wiring	84
K560	Access CAMS menus and data screens	83
F163	Connect or disconnect aircraft external power	83
F162	Connect or disconnect aircraft external cooling air units	83
G241	Inspect multi-pin connectors	83
G243	Inspect waveguides	83
G253	Repair aircraft wiring	82
H308	Operationally or BIT check radar systems	81
F181	Open or close canopies	81
G251	Remove, replace, or repair multi-pin connectors	81
F180	Open or close airframe components	80
G256	Safety wire components	80
H357	Troubleshoot INSs	80
H327	Remove or replace INS LRUs	80
G263	Troubleshoot coaxial cables and connectors	80
G249	Remove or replace waveguides	80
G250	Remove, replace, or repair coaxial connectors	80
K565	Clear or close out completed maintenance discrepancies in CAMS	79
H336	Remove or replace radar system LRUs	79
G237	Inspect aircraft wiring	79
G265	Troubleshoot multi-pin connectors	79
G247	Remove or replace coaxial cables	79
F182	Open or close weapons bays, radomes, or pallets	78
G258	Solder or crimp connections on aircraft wiring	78
H344	Troubleshoot attack radar systems or navigation radar systems	77
G238	Inspect chafing problem areas	76
F233	Walk wings or tails during aircraft towing operations	76
G242	Inspect triaxial cables and connectors	75
F164	Connect or disconnect aircraft hydraulic test stands or carts	72
K581	Load LRU part numbers or serial numbers in CAMS	71
F186	Position or remove aircraft chocks or safety pins	70
F159	Complete aircraft safe-for-maintenance checks	69
F191	Preuse inspect aircraft external cooling air units	68
E120	Inventory tools	65
E118	Inspect tools or equipment	63
H303	Operationally or BIT check HUD systems	63
B49	Supervise F-15/F-111 Avionic Systems Apprentices, Attack Control (2A331A)	60
G236	Debrief aircrews	58
K561	Analyze CAMS data	51
D88	Conduct OJT	51

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A351B PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=154)
G262	Troubleshoot aircraft wiring	95
F163	Connect or disconnect aircraft external power	94
G260	Trace wiring, system, or interface diagrams	94
F162	Connect or disconnect aircraft external cooling air units	94
F164	Connect or disconnect aircraft hydraulic test stands or carts	94
F181	Open or close canopies	92
G237	Inspect aircraft wiring	92
G253	Repair aircraft wiring	92
G256	Safety wire components	92
F180	Open or close airframe components	91
I394	Operationally check AFCSs	90
I390	Operationally and leak check pitot static and standby instrument systems	90
I391	Operationally check air data computer and primary instrument systems	90
I393	Operationally check attitude heading reference and instrument systems	90
I453	Troubleshoot air data computer and primary instrument systems	90
I418	Remove or replace air data computer and primary instrument system LRUs	90
G259	Splice aircraft wiring	89
I415	Remove or replace AFCS LRUs	88
G241	Inspect multipin connectors	88
I387	Calibrate fuel quantity indicating systems	88
I465	Troubleshoot fuel quantity indicating systems	87
G265	Troubleshoot multipin connectors	87
F233	Walk wings or tails during aircraft towing operations	87
K560	Access CAMS menus and data screens	86
F159	Complete aircraft safe-for-maintenance checks	86
F186	Position or remove aircraft chocks or safety pins	86
F166	Ground aircraft	86
I428	Remove or replace fuel quantity indicating system LRUs	86
I420	Remove or replace attitude heading reference and instrument system LRUs	86
I472	Troubleshoot pitot static, heater, or instrument systems	86
G258	Solder or crimp connections on aircraft wiring	86
I434	Remove or replace pitot static, heater, or instrument system LRUs	86
K565	Clear or close out completed maintenance discrepancies in CAMS	85
I450	Troubleshoot AFCSs	85
I455	Troubleshoot attitude heading reference and instrument systems	85
I404	Operationally check primary flight control or trim systems	83
F198	Preuse inspect hydraulic test stands or servicing carts	82
F222	Service aircraft hydraulic systems	82
I412	Operationally or BIT check fuel quantity indicating systems	81
K581	Load LRU part numbers or serial numbers in CAMS	75
G255	Research technical orders	71
E120	Inventory tools	68
E118	Inspect tools or equipment	66

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A351C PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=164)
K560	Access CAMS menus and data screens	88
F163	Connect or disconnect aircraft external power	87
G256	Safety wire components	87
F162	Connect or disconnect aircraft external cooling air units	87
G260	Trace wiring, system, or interface diagrams	85
J506	Operationally or BIT check UHF communication and audio signal systems	84
J526	Remove or replace UHF communication and audio signal system LRUs	84
J489	Operationally check intercommunications systems	84
G237	Inspect aircraft wiring	84
G257	Seal or reseal antennas	83
G262	Troubleshoot aircraft wiring	83
G253	Repair aircraft wiring	83
F180	Open or close airframe components	82
F181	Open or close canopies	82
J525	Remove or replace TACAN system LRUs	82
J504	Operationally or BIT check TACAN systems	82
G258	Solder or crimp connections on aircraft wiring	82
J557	Troubleshoot UHF communication and audio signal systems	81
G239	Inspect coaxial cables and connectors	81
G263	Troubleshoot coaxial cables and connectors	81
J484	Code mode 4 crypto equipment	80
K565	Clear or close out completed maintenance discrepancies in CAMS	79
J551	Troubleshoot intercommunication systems	79
F233	Walk wings or tails during aircraft towing operations	78
J495	Operationally or BIT check CMDSs	78
G241	Inspect multipin connectors	77
J503	Operationally or BIT check RWRs or CRSs	76
J521	Remove or replace intercommunications system LRUs	76
J553	Troubleshoot RWRs or CRSs	74
K581	Load LRU part numbers or serial numbers in CAMS	73
J523	Remove or replace RWR, CRS, or TTWS LRUs	73
J511	Remove or replace AG/IFF transponder system LRUs	73
F159	Complete aircraft safe-for-maintenance checks	72
J493	Operationally or BIT check AG/IFF interrogator systems	72
J496	Operationally or BIT check ECM systems	68
J514	Remove or replace ECM system LRUs	65
J485	Code secure voice crypto equipment	64
G236	Debrief aircrews	63
E120	Inventory tools	59
A1	Assign maintenance or repair work	55
K561	Analyze CAMS data	52
E118	Inspect tools or equipment	51

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A331A AND DAFSC 2A351A PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A331A (N=171)	2A351A (N=220)	DIFFERENCE
F234	Wash aircraft	84	43	41
F176	Launch or recover aircraft	73	50	23
J504	Operationally or BIT check TACAN systems	9	40	-31
J525	Remove or replace TACAN system LRUs	9	40	-31
J506	Operationally or BIT check UHF communication and audio signal systems	15	46	-31
I420	Remove or replace attitude heading reference and instrument system LRUs	8	39	-31
J501	Operationally or BIT check IBSs	4	36	-32
I415	Remove or replace AFCS LRUs	9	41	-32
I393	Operationally check attitude heading reference and instrument systems	6	38	-32
I450	Troubleshoot AFCSs	5	36	-32
C76	Inspect personnel for compliance with military standards	1	34	-33
B53	Supervise F-15/F-111 Avionic Systems Journeymen, Attack Control (2A351A)	1	34	-33
C81	Write recommendations for awards and decorations	0	33	-33
J551	Troubleshoot intercommunication systems	4	37	-33
J557	Troubleshoot UHF communication and audio signal systems	9	44	-35
J526	Remove or replace UHF communication and audio signal system LRUs	12	47	-35
D104	Maintain training records, charts, or graphs	6	42	-36
D100	Evaluate personnel for training needs	0	36	-36
J489	Operationally check intercommunications systems	13	49	-37
D101	Evaluate progress of trainees	1	40	-39
A1	Assign maintenance or repair work	11	50	-39
B30	Counsel personnel on personal or military-related matters	1	42	-41
D91	Counsel trainees on training progress	2	48	-46
C60	Conduct performance feedback worksheet sessions	1	48	-47
D88	Conduct OJT	4	51	-47
C80	Write EPRs	0	51	-51
B49	Supervise F-15/F-111 Avionic Systems Apprentices, Attack Control (2A331A)	5	60	-55

TABLE 15

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A331B AND DAFSC 2A351B PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A331B (N=77)	2A351B (N=154)	DIFFERENCE
F234	Wash aircraft	82	57	25
E117	Initiate, annotate, or review aircraft flight or maintenance records	22	55	-33
J525	Remove or replace TACAN system LRUs	13	47	-34
J484	Code mode 4 crypto equipment	10	44	-34
J492	Operationally or BIT check AA/IFF interrogator systems	13	47	-34
J540	Troubleshoot ADF systems	1	35	-34
J489	Operationally check intercommunications systems	16	51	-35
J504	Operationally or BIT check TACAN systems	10	45	-35
D104	Maintain training records, charts, or graphs	4	40	-36
J550	Troubleshoot ILSs	5	41	-36
I478	Troubleshoot tachometer systems	44	80	-36
J488	Operationally check ILSs	10	46	-36
F182	Open or close weapons bays, radomes, or pallets	43	79	-36
J557	Troubleshoot UHF communication and audio signal systems	9	46	-37
J555	Troubleshoot TACAN systems	8	45	-37
J551	Troubleshoot intercommunication systems	3	40	-37
J521	Remove or replace intercommunications system LRUs	5	43	-38
J526	Remove or replace UHF communication and audio signal system LRUs	10	50	-40
G263	Troubleshoot coaxial cables and connectors	32	72	-40
C60	Conduct performance feedback worksheet sessions	1	42	-41
D101	Evaluate progress of trainees	3	44	-41
F175	Jack or level aircraft	19	62	-43
A1	Assign maintenance or repair work	12	56	-44
J506	Operationally or BIT check UHF communication and audio signal systems	6	51	-45
B51	Supervise F-15/F-11 Avionic Systems Apprentices, Instruments and Flight Controls (2A331B)	12	59	-47
D91	Counsel trainees on training progress	3	53	-50
D88	Conduct OJT	9	61	-52

TABLE 16

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A331C AND DAFSC 2A351C PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A331C (N=112)	2A351C (N=164)	DIFFERENCE
F234	Wash aircraft	79	45	34
G235	Analyze ASP latch data	74	48	26
J492	Operationally or BIT check AA/IFF interrogator systems	83	60	23
I387	Calibrate fuel quantity indicating systems	5	31	-26
C75	Inspect flightline maintenance actions	2	28	-26
I438	Remove or replace standby attitude indicators	4	30	-26
C76	Inspect personnel for compliance with military standards	1	28	-27
G259	Splice aircraft wiring	46	73	-27
D100	Evaluate personnel for training needs	0	27	-27
C81	Write recommendations for awards and decorations	0	27	-27
I434	Remove or replace pitot static, heater, or instrument system LRUs	4	33	-29
A15	Establish performance standards for subordinates	2	31	-29
A19	Plan or schedule work assignments	2	32	-30
D101	Evaluate progress of trainees	0	32	-32
D104	Maintain training records, charts, or graphs	6	39	-33
B54	Supervise F-15/F-111 Avionic Systems Journeymen; Comm, Nav, and Pen Aids (2A351C)	1	34	-33
A20	Plan or schedule work priorities	2	37	-35
B30	Counsel personnel on personal or military-related matters	0	38	-38
D88	Conduct OJT	7	46	-39
D91	Counsel trainees on training progress	2	41	-39
C60	Conduct performance feedback worksheet sessions	1	41	-40
A5	Coordinate maintenance work with appropriate personnel or agencies	5	46	-41
A1	Assign maintenance or repair work	9	55	-46
B50	Supervise F-15/F-111 Avionic Systems Apprentices; Comm, Nav, and Pen Aids (2A331C)	5	52	-47
C80	Write EPRs	1	51	-50

DAFSC 2A371. Seven-skill level members perform an average of 117 tasks and most hold the grade of E-6. Table 6 shows that 30 percent of the 284 members in this group perform the Multi-System Specialty Job and 28 percent work in the Management Cluster. Fourteen percent of their job time is spent directing other personnel and implementing policies and procedures (see Table 7). Table 17 lists representative tasks these members perform.

Tasks which best distinguish DAFSC 2A371 personnel from 5-skill level members of each shred are presented in Tables 18 through 20. DAFSC 2A371 members show a marked increase in the amount of supervisory and management tasks performed. Examples of tasks with the greatest difference in members performing include planning or scheduling work assignments, evaluating work schedules, and writing recommendations for awards and decorations.

DAFSC 2A390. There are three members at the 9-skill level. They perform an average of 26 tasks. These members are E-7s and above. All of these senior NCOs are members of the Management Cluster (see Table 6). DAFSC 2A390 members spend 32 percent of their time directing others and implementing standards of performance (see Table 7). Table 21 lists representative tasks for these incumbents. It is important to note that with only three people in the 9-skill level sample, these figures may not be representative of true trends at the 9-skill level.

Tasks which best distinguish DAFSC 2A390 personnel from 7-skill level members are presented in Table 22. Nine-skill level members show a marked increase in the amount of implementation and management tasks performed. Examples of tasks with the greatest difference in members performing include monitoring the hazardous waste programs; inspecting flightline maintenance actions; evaluating the maintenance or use of workspace, equipment, or supplies; and coordinating maintenance work with appropriate personnel or agencies.

Specialty Descriptions Analysis

Survey data were compared to the Specialty Descriptions for AFSC 2A3X1A/B/C F-15/ F-111 Avionic Systems Apprentices and Specialists, Technicians, and Superintendents, dated October 1994. The descriptions for the 3-, 5-, 7-, and 9-skill levels and CEM members were accurate, depicting the technical aspects of the job, as well as the supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of AFSC 2A3X1A/B/C members in the applicable clusters and jobs identified by the job structure analysis process.

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A371 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=284)
C80	Write EPRs	72
B30	Counsel personnel on personal or military-related matters	67
K560	Access CAMS menus and data screens	66
C60	Conduct performance feedback worksheet sessions	65
C81	Write recommendations for awards and decorations	63
A1	Assign maintenance or repair work	61
A5	Coordinate maintenance work with appropriate personnel or agencies	60
A19	Plan or schedule work assignments	57
C76	Inspect personnel for compliance with military standards	57
A15	Establish performance standards for subordinates	56
C75	Inspect flightline maintenance actions	55
A20	Plan or schedule work priorities	55
B45	Interpret policies, directives, or procedures for subordinates	54
G260	Trace wiring, system, or interface diagrams	54
F181	Open or close canopies	52
F180	Open or close airframe components	52
B56	Supervise military personnel with AFSCs other than 2A3X1	51
B32	Direct flightline maintenance activities	50
C66	Evaluate personnel for compliance with performance standards or TOs	50
D104	Maintain training records, charts, or graphs	50
B29	Conduct supervisory orientations of newly assigned personnel	49
D101	Evaluate progress of trainees	49
G237	Inspect aircraft wiring	49
K561	Analyze CAMS data	48
D100	Evaluate personnel for training needs	48
G255	Research technical orders	46
K565	Clear or close out completed maintenance discrepancies in CAMS	46
A16	Establish work methods or controls	45
E120	Inventory tools	45
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (2A371)	45
E118	Inspect tools or equipment	44
D91	Counsel trainees on training progress	44
E117	Initiate, annotate, or review aircraft flight or maintenance records	43
B53	Supervise F-15/F-111 Avionic Systems Journeymen, Attack Control (2A351A)	43
B54	Supervise F-15/F-111 Avionic Systems Journeymen, Comm/Nav/Penetration Aids (2A351C)	43
A6	Determine logistics requirements	42
B49	Supervise F-15/F-111 Avionic Systems Apprentices, Attack Control (2A331A)	42
B55	Supervise F-15/F-111 Avionic Systems Journeymen, Instruments and Flight Controls (2A351B)	42
B51	Supervise F-15/F-111 Avionic Systems Apprentices, Instruments and Flight Controls (2A331B)	41

TABLE 18

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A351A AND DAFSC 2A371 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A351A (N=220)	2A371 (N=284)	DIFFERENCE
H357	Troubleshoot INSs	80	30	50
H336	Remove or replace radar system LRUs	79	29	50
H305	Operationally or BIT check INSs	84	34	50
H311	Pressurize and leak check radar systems	76	26	50
H327	Remove or replace INS LRUs	80	31	49
H344	Troubleshoot attack radar systems or navigation radar systems	77	29	48
H282	Isolate waveguide pressure leaks	75	27	48
H308	Operationally or BIT check radar systems	81	34	47
G249	Remove or replace waveguides	80	37	43
G247	Remove or replace coaxial cables	79	38	41
F208	Remove or install aircraft dehumidifiers or desiccants	68	28	40
H284	Load OFPs to computer complexes	65	25	40
G251	Remove, replace, or repair multipin connectors	81	41	40
B30	Counsel personnel on personal or military-related matters	42	67	-25
B32	Direct flightline maintenance activities	25	50	-25
A15	Establish performance standards for subordinates	30	56	-26
C58	Analyze workload requirements	11	37	-26
A20	Plan or schedule work priorities	29	55	-26
A16	Establish work methods or controls	18	45	-27
A24	Schedule personnel for leave or TDY assignments	8	36	-28
B45	Interpret policies, directives, or procedures for subordinates	26	54	-28
C81	Write recommendations for awards and decorations	33	63	-30
C71	Evaluate work schedules	6	36	-30
A6	Determine logistics requirements	11	42	-31
A19	Plan or schedule work assignments	26	57	-31
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (2A371)	13	45	-32
B56	Supervise military personnel with AFSCs other than 2A3X1	15	51	-36

TABLE 19

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A351B AND DAFSC 2A371 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A351B (N=154)	2A371 (N=284)	DIFFERENCE
I403	Operationally check hydraulic pressure indicating systems	87	24	63
I470	Troubleshoot nozzle position indicating systems	83	21	62
I392	Operationally check airborne signal data recording systems	81	21	60
I481	Troubleshoot turbine inlet temperature indicating systems	77	17	60
I464	Troubleshoot fuel flow indicating systems	86	26	60
I478	Troubleshoot tachometer systems	80	20	60
I379	Adjust primary or standby instrument system components	81	21	60
I453	Troubleshoot air data computer and primary instrument systems	90	30	60
I438	Remove or replace standby attitude indicators	86	26	60
I387	Calibrate fuel quantity indicating systems	88	28	60
I393	Operationally check attitude heading reference and instrument systems	90	30	60
I430	Remove or replace hydraulic pressure indicators	86	26	60
I465	Troubleshoot fuel quantity indicating systems	87	28	59
A20	Plan or schedule work priorities	29	55	-26
A17	Plan briefings	3	29	-26
C80	Write EPRs	44	72	-28
A16	Establish work methods or controls	17	45	-28
C75	Inspect flightline maintenance actions	27	55	-28
B29	Conduct supervisory orientations of newly assigned personnel	20	49	-29
A6	Determine logistics requirements	12	42	-30
B30	Counsel personnel on personal or military-related matters	36	67	-31
A24	Schedule personnel for leave or TDY assignments	5	36	-31
C71	Evaluate work schedules	5	36	-31
A19	Plan or schedule work assignments	25	57	-32
C81	Write recommendations for awards and decorations	29	63	-34
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (2A371)	10	45	-35
B56	Supervise military personnel with AFSCs other than 2A3X1	12	51	-39

TABLE 20

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A351C AND DAFSC 2A371 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A351C (N=164)	2A371 (N=284)	DIFFERENCE
G257	Seal or reseal antennas	83	30	53
J525	Remove or replace TACAN system LRUs	82	29	53
J488	Operationally check ILSs	84	31	53
J526	Remove or replace UHF communication and audio signal system LRUs	84	32	52
J506	Operationally or BIT check UHF communication and audio signal systems	84	32	52
J541	Troubleshoot AG/IFF transponder systems	75	23	52
J511	Remove or replace AG/IFF transponder system LRUs	73	22	51
J504	Operationally or BIT check TACAN systems	82	31	51
J513	Remove or replace CMDS LRUs	78	27	51
J520	Remove or replace ILS LRUs	78	27	51
J484	Code mode 4 crypto equipment	80	30	50
J551	Troubleshoot intercommunication systems	79	30	49
C75	Inspect flightline maintenance actions	29	55	-26
C66	Evaluate personnel for compliance with performance standards or TOs	23	50	-27
B45	Interpret policies, directives, or procedures for subordinates	27	54	-27
C58	Analyze workload requirements	9	37	-28
B29	Conduct supervisory orientations of newly assigned personnel	20	49	-29
B30	Counsel personnel on personal or military-related matters	38	67	-29
C76	Inspect personnel for compliance with military standards	28	57	-29
A6	Determine logistics requirements	10	42	-32
A24	Schedule personnel for leave or TDY assignments	2	36	-34
C71	Evaluate work schedules	2	36	-34
C81	Write recommendations for awards and decorations	27	63	-36
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (2A371)	8	45	-37
B56	Supervise military personnel with AFSCs other than 2A3X1	10	51	-41

TABLE 21

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A390 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=3)
C75	Inspect flightline maintenance actions	100
A5	Coordinate maintenance work with appropriate personnel or agencies	100
B32	Direct flightline maintenance activities	67
A1	Assign maintenance or repair work	67
B27	Adjust daily maintenance plans to meet operational commitments	67
C76	Inspect personnel for compliance with military standards	67
A20	Plan or schedule work priorities	67
A19	Plan or schedule work assignments	67
B56	Supervise military personnel with AFSCs other than 2A3X1	67
A6	Determine logistics requirements	67
C65	Evaluate maintenance or use of workspace, equipment, or supplies	67
A9	Develop inspection procedures	67
B30	Counsel personnel on personal or military-related matters	67
A24	Schedule personnel for leave or TDY assignments	67
C80	Write EPRs	67
D102	Evaluate training methods and techniques	33
E150	Verify MICAP conditions	33
C63	Evaluate maintenance and inspection report findings	33
C61	Evaluate causes of mission operational discrepancies	33
B39	Implement safety or security programs	33
B53	Supervise F-15/F-111 Avionic Systems Journeymen, Attack Control (2A351A)	33
B50	Supervise F-15/F-111 Avionic Systems Apprentices, Comm/Nav/Penetration Aids (2A331C)	33
B55	Supervise F-15/F-111 Avionic Systems Journeymen, Instruments and Flight Controls (2A351B)	33
B54	Supervise F-15/F-111 Avionic Systems Journeymen, Comm/Nav/Penetration Aids (2A351C)	33

TABLE 22

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A371 AND DAFSC 2A390 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2A371 (N=284)	2A390 (N=3)	DIFFERENCE
B45	Interpret policies, directives, or procedures for subordinates	54	0	54
G260	Trace wiring, system, or interface diagrams	54	0	54
F181	Open or close canopies	52	0	52
F180	Open or close airframe components, such as panels or doors	52	0	52
G239	Inspect coaxial cables and connectors	51	0	51
F163	Connect or disconnect aircraft external power	50	0	50
F162	Connect or disconnect aircraft external cooling air units	50	0	50
G241	Inspect multipin connectors	50	0	50
G237	Inspect aircraft wiring	49	0	49
G255	Research technical orders	46	0	46
B28	Conduct staff meetings	13	33	-20
E150	Verify MICAP conditions	11	33	-22
A6	Determine logistics requirements	42	67	-25
E128	Maintain property CA/CRLs	7	33	-26
A24	Schedule personnel for leave or TDY assignments	36	67	-31
B27	Adjust daily maintenance plans to meet operational commitments	32	67	-35
A9	Develop inspection procedures	31	67	-36
E138	Participate in TCTO meetings	28	67	-39
A5	Coordinate maintenance work with appropriate personnel or agencies	60	100	-40
C65	Evaluate maintenance or use of workspace, equipment, or supplies	24	67	-43
C75	Inspect flightline maintenance actions	55	100	-45
E136	Monitor hazardous waste programs	6	67	-61

TRAINING ANALYSIS

Occupational surveys provide information which can be useful in the development and revision of relevant training programs. Factors used to evaluate entry-level AFSC 2A3X1A/B/C training include duties being performed by first-enlistment (1-48 months TAFMS) personnel across career ladder jobs, percentages of members performing specific tasks, ratings of how much training emphasis tasks should receive in formal training, and relative TD ratings.

First-Enlistment Personnel

In this study, there are 452 AFSC 2A3X1A/B/C members in their first enlistment, representing 38 percent of the total survey sample. Table 23 shows that the time spent on duties varies, depending upon aircraft and avionic system. Overall, members spend the majority of their time working on the shred-specific duty that corresponds to their avionic system specialty. Table 24 displays representative tasks performed by all AFSC 2A3X1A/B/C personnel with 1-48 months TAFMS. Tables 25-30 show tasks performed by first-enlistment personnel according to the aircraft and avionic system on which they work. Table 31 shows some of the equipment commonly used by personnel in their first 48 months of service, and Figure 2 shows the percent of first-enlistment members performing each job.

TE and TD Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs, provide a rank-ordering of those tasks considered important for airmen with 1-48 months TAFMS (TE) and a measure of the relative difficulty of those tasks (TD). When combined with data on the percentages of entry-level personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages for performance, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages for performance, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for new personnel. These decisions must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and the percentage of 1-48 months TAFMS personnel performing tasks to produce Automated Training Indicators (ATI). ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, AETCR 52-22. ATIs allow training developers to quickly focus attention on those tasks which are most likely to qualify for resident course consideration.

TABLE 23

RELATIVE PERCENT OF TIME SPENT ON DUTIES BY FIRST-ENLISTMENT PERSONNEL

DUTIES	F-15 2A3X1A (N=173)	F-15 2A3X1B (N=90)	F-15 2A3X1C (N=112)	F-111 2A3X1A (N=41)	F-111 2A3X1B (N=19)	F-111 2A3X1C (N=17)
A ORGANIZING AND PLANNING	1	*	*	*	1	*
B DIRECTING AND IMPLEMENTING	1	*	*	*	2	*
C INSPECTING AND EVALUATING	*	*	*	*	1	*
D TRAINING	*	*	*	*	*	*
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	3	2	4	3	2	3
F PERFORMING GENERAL AIRCRAFT HANDLING FUNCTIONS	24	20	20	27	16	25
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE FUNCTIONS	21	15	18	20	12	16
H MAINTAINING ATTACK CONTROL SYSTEMS	35	8	8	40	7	5
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	3	43	2	1	51	1
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	3	3	39	2	2	42
K PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FUNCTIONS	9	9	9	7	6	8

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY ALL FIRST-ENLISTMENT 2A3X1 PERSONNEL

TASKS		F-15 2A3X1A (N=173)	F-15 2A3X1B (N=90)	F-15 2A3X1C (N=112)	F-111 2A3X1A (N=41)	F-111 2A3X1B (N=19)	F-111 2A3X1C (N=17)
F162	Connect or disconnect aircraft external cooling air units	94	93	95	93	74	88
F163	Connect or disconnect aircraft external power	94	93	92	93	84	88
F181	Open or close canopies	90	89	83	95	68	100
F180	Open or close airframe components, such as panels or doors	88	88	89	90	74	94
F186	Position or remove aircraft chocks or safety pins	88	89	79	80	74	65
G256	Safety wire components	88	93	88	78	79	86
F233	Walk wings or tails during aircraft towing operations	88	87	80	90	79	71
G239	Inspect coaxial cables and connectors	87	67	86	85	47	82
K560	Access CAMS menus and data screens	86	97	87	71	68	82
G237	Inspect aircraft wiring	84	89	82	73	68	88
G241	Inspect multipin connectors	84	81	80	78	58	76
K565	Clear or close out completed maintenance discrepancies in CAMS	82	82	85	63	74	71
G262	Troubleshoot aircraft wiring	82	96	79	90	89	82
F234	Wash aircraft	80	80	79	90	79	82
G260	Trace wiring, system, or interface diagrams	78	91	83	93	89	88
G265	Troubleshoot multipin connectors	78	78	73	78	63	71
G253	Repair aircraft wiring	77	88	64	78	74	76
G258	Solder or crimp connections on aircraft wiring	72	78	72	63	74	71

TABLE 25

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT DAFSC 2A3X1A PERSONNEL WHO WORK ON THE F-15

TASKS		PERCENT MEMBERS PERFORMING (N=173)
H303	Operationally or BIT check HUD systems	95
H308	Operationally or BIT check radar systems	95
H324	Remove or replace HUD system LRUs	92
H305	Operationally or BIT check INSs	88
H336	Remove or replace radar system LRUs	87
H354	Troubleshoot HUD systems	85
H315	Remove or replace CC system LRUs	83
H296	Operationally check OWSs	80
H327	Remove or replace INS LRUs	80
H344	Troubleshoot attack radar systems or navigation radar systems	78
H301	Operationally or BIT check CC systems	77
H357	Troubleshoot INSs	77
H341	Remove or replace video recording system LRUs	73
H300	Operationally check video recording systems	72
H282	Isolate waveguide pressure leaks	69
H372	Troubleshoot video recording systems	68
H365	Troubleshoot OWSs	68
H311	Pressurize and leak check radar systems	66
H346	Troubleshoot CC systems	64
H313	Remove or install OWS LRUs	62
H306	Operationally or BIT check LCGs	55
H304	Operationally or BIT check IG systems	54
H338	Remove or replace right-hand throttle grips	53
H318	Remove or replace control stick grips	52
H330	Remove or replace LCGs	50
H369	Troubleshoot system malfunction using NCI and CC data word recalls	49
H267	Boresight align HUD mounts	46
H278	Confidence test and BIT computer complexes	42
H360	Troubleshoot LCGs	42
H321	Remove or replace DRD units	42
H375	Upload or download targeting pods	39
H298	Operationally check remote map reader systems	38
H374	Upload or download FLIR pods	36
H326	Remove or replace IG system LRUs	36
H337	Remove or replace remote map reader system LRUs	35
H307	Operationally or BIT check MFDs	34
H290	Operationally check FLIR systems	34
H309	Operationally or BIT check TFRs	33
H294	Operationally check laser targeting systems	32
H352	Troubleshoot FLIR systems	31
H329	Remove or replace laser targeting system LRUs	30

TABLE 26

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT
DAFSC 2A3X1B PERSONNEL WHO WORK ON THE F-15

TASKS		PERCENT MEMBERS PERFORMING (N=90)
I394	Operationally check AFCSs	94
I411	Operationally or BIT check AICSs	93
I412	Operationally or BIT check fuel quantity indicating systems	93
I420	Remove or replace attitude heading reference and instrument system LRUs	93
I393	Operationally check attitude heading reference and instrument systems	93
I390	Operationally and leak check pitot static and standby instrument systems	92
I391	Operationally check air data computer and primary instrument systems	92
I418	Remove or replace air data computer an primary instrument system LRUs	92
I415	Remove or replace AFCS LRUs	89
I413	Operationally or BIT check HSI systems	89
I407	Operationally check standby attitude indicators	88
I438	Remove or replace standby attitude indicators	87
I450	Troubleshoot AFCSs	86
I434	Remove or replace pitot static, heater, or instrument system LRUs	86
I417	Remove or replace AICS LRUs	84
I396	Operationally check BIT systems	84
I403	Operationally check hydraulic pressure indicating systems	84
I387	Calibrate fuel quantity indicating systems	83
I428	Remove or replace fuel quantity indicating system LRUs	83
I430	Remove or replace hydraulic pressure indicators	83
I452	Troubleshoot AICSs	82
I427	Remove or replace fuel flow indicators	82
I419	Remove or replace airborne signal data recording system LRUs	81
I392	Operationally check airborne signal data recording systems	81
I472	Troubleshoot pitot static, heater, or instrument systems	81
I465	Troubleshoot fuel quantity indicating systems	81
I453	Troubleshoot air data computer and primary instrument systems	81
I455	Troubleshoot attitude heading reference and instrument systems	80
I404	Operationally check primary flight control or trim systems	80
I439	Remove or replace standby compasses	79
I379	Adjust primary or standby instrument system components	77
I476	Troubleshoot standby attitude indicators	76
I468	Troubleshoot hydraulic pressure indicating systems	74
I477	Troubleshoot standby compasses	72
I440	Remove or replace tachometers	70
I454	Troubleshoot airborne signal data recording systems	70
I376	Adjust airborne signal data recording system components	69
I408	Operationally check standby compasses	69
I433	Remove or replace oil pressure indicators	69
I414	Remove or replace acceleration indicating system LRUs	68
I470	Troubleshoot nozzle position indicating systems	67

TABLE 27

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT
DAFSC 2A3X1C PERSONNEL WHO WORK ON THE F-15

TASKS		PERCENT MEMBERS PERFORMING (N=112)
J484	Code mode 4 crypto equipment	88
J509	Remove or replace AA/IFF transponder system LRUs	88
J492	Operationally or BIT check AA/IFF interrogator systems	88
J503	Operationally or BIT check RWRs or CRSs	87
J506	Operationally or BIT check UHF communication and audio signal systems	85
J504	Operationally or BIT check TACAN systems	85
J523	Remove or replace RWR, CRS, or TTWS LRUs	84
J526	Remove or replace UHF communication and audio signal system LRUs	83
J489	Operationally check intercommunications systems	83
J557	Troubleshoot UHF communication and audio signal systems	83
J525	Remove or replace TACAN system LRUs	81
J482	Accomplish end-of-runway mode 4/ RWR checks	80
J495	Operationally or BIT check CMDSs	79
J539	Troubleshoot AA/IFF interrogator systems	78
J553	Troubleshoot RWRs or CRSs	78
J555	Troubleshoot TACAN systems	77
J488	Operationally check ILSs	75
J513	Remove or replace CMDS LRUs	73
J520	Remove or replace ILS LRUs	73
J501	Operationally or BIT check IBSs	72
J490	Operationally check secure voice crypto equipment	71
J524	Remove or replace secure voice crypto equipment LRUs	71
J515	Remove or replace EWWS LRUs	71
J497	Operationally or BIT check EWWSs	71
J521	Remove or replace intercommunications system LRUs	71
J551	Troubleshoot intercommunication systems	70
J494	Operationally or BIT check ADF systems	69
J543	Troubleshoot CMDSs	69
J554	Troubleshoot secure voice crypto equipment	68
J545	Troubleshoot EWWSs	68
J485	Code secure voice crypto equipment	68
J518	Remove or replace IBS LRUs	68
J528	Reprogram CMDS system LRUs	65
J511	Remove or replace AG/IFF transponder system LRUs	64
J493	Operationally or BIT check AG/IFF interrogator systems	62
J531	Reprogram RWR system LRUs	62
J541	Troubleshoot AG/IFF transponder systems	62
J496	Operationally or BIT check ECM systems	61
J487	Operationally check avionics interface units	60
J512	Remove or replace avionics interface units	52

TABLE 28

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT
DAFSC 2A3X1A PERSONNEL WHO WORK ON THE F-111

TASKS		PERCENT MEMBERS PERFORMING (N=41)
H327	Remove or replace INS LRUs	98
H339	Remove or replace TFR system LRUs	93
H305	Operationally or BIT check INSs	93
H308	Operationally or BIT check radar systems	93
H309	Operationally or BIT check TFRs	90
H357	Troubleshoot INSs	90
H370	Troubleshoot TFR systems	85
H335	Remove or replace radar altimeter system LRUs	83
H336	Remove or replace radar system LRUs	83
H299	Operationally check tracking handles	78
H344	Troubleshoot attack radar systems or navigation radar systems	78
H366	Troubleshoot radar altimeter systems	76
H297	Operationally check radar altimeters	76
H284	Load OFPs to computer complexes	76
H311	Pressurize and leak check radar systems	76
H340	Remove or replace tracking handle LRUs	73
H317	Remove or replace computer complex system LRUs	73
H334	Remove or replace optical sight system LRUs	71
H312	Pressurize and leak check TFRs	71
H278	Confidence test and BIT computer complexes	71
H295	Operationally check optical sight systems	68
H348	Troubleshoot computer complexes	66
H280	Enter automatic data to computer complexes	61
H371	Troubleshoot tracking handles	61
H281	Enter manual data to computer complexes	56
H282	Isolate waveguide pressure leaks	56
H364	Troubleshoot optical sight systems	51
H275	Calibrate INSs	49
H307	Operationally or BIT check MFDs	46
H286	Mode check computer complexes	44
H342	Swing and make compensation adjustments of INSs	41
H291	Operationally check GPSs	39
H283	Key GPSs	39
H285	Load OFP to PDGs or MPDPs	39
H353	Troubleshoot GPSs	39
H310	Phase, align, and tune TFRs	37
H332	Remove or replace MFD system LRUs	37
H362	Troubleshoot MFDs	37
H323	Remove or replace GPS LRUs	34
H320	Remove or replace data transfer system LRUs	34

TABLE 29

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT DAFSC 2A3X1B PERSONNEL WHO WORK ON THE F-111

TASKS		PERCENT MEMBERS PERFORMING (N=19)
I400	Operationally check flight control position indicating systems	84
I390	Operationally and leak check pitot static and standby instrumental systems	84
I435	Remove or replace primary flight control or trim system LRUs	79
I393	Operationally check attitude heading reference and instrument systems	79
I465	Troubleshoot fuel quantity indicating systems	79
I461	Troubleshoot flight control trim systems	79
I395	Operationally check AFRSs	74
I425	Remove or replace flight control position indicating system LRUs	74
I378	Adjust flight control position indicating system components	74
I443	Remove or replace turbine inlet temperature indicators	74
I377	Adjust automatic flight control or trim system components	74
I379	Adjust primary or standby instrument system components	74
I453	Troubleshoot air data computer and primary instrument systems	74
I473	Troubleshoot spike systems	68
I416	Remove or replace AFRS LRUs	68
I436	Remove or replace stability augmentation/stall inhibitor system LRUs	68
I431	Remove or replace local Mach probes	68
I437	Remove or replace stall warning and LCCS LRUs	68
I460	Troubleshoot flight control position indicating systems	68
I384	Apply flight instrument range markings	68
I481	Troubleshoot turbine inlet temperature indicating systems	68
I469	Troubleshoot manual flight control systems	68
I404	Operationally check primary flight control or trim systems	68
I391	Operationally check air data computer and primary instrument systems	68
I418	Remove or replace air data computer and primary instrument system LRUs	68
I428	Remove or replace fuel quantity indicating system LRUs	68
I394	Operationally check AFSCs	68
I472	Troubleshoot pitot static, heater, or instrument systems	68
I438	Remove or replace standby attitude indicators	68
I424	Remove or replace EPR pressure indicating system LRUs	63
I451	Troubleshoot AFRSs	63
I381	Adjust spoiler switches	63
I399	Operationally check EPR indicating systems	63
I406	Operationally check stall warning and LCCSs	63
I444	Schedule check spike systems	58
I459	Troubleshoot EPR indicating systems	58
I446	Swing and make compensation adjustments of AFRS and instrument systems	58
I421	Remove or replace BIT system LRUs	58
I387	Calibrate fuel quantity indicating systems	58
I401	Operationally check flight director systems	58
I480	Troubleshoot translating cowl systems	32

TABLE 30

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT DAFSC 2A3X1C PERSONNEL WHO WORK ON THE F-111

TASKS		PERCENT MEMBERS PERFORMING (N=17)
J506	Operationally or BIT check UHF communication and audio signal systems	94
J489	Operationally check intercommunication systems	94
J526	Remove or replace UHF communication and audio signal system LRUs	88
J488	Operationally check ILSs	88
J499	Operationally or BIT check HF communications systems	82
J496	Operationally or BIT check ECM systems	82
J511	Remove or replace AG/IFF transponder system LRUs	82
J493	Operationally or BIT check AG/IFF interrogator systems	82
J557	Troubleshoot UHF communication and audio signal systems	82
J520	Remove or replace ILS LRUs	82
J555	Troubleshoot TACAN systems	82
J495	Operationally or BIT check CMDSs	82
J504	Operationally or BIT check TACAN systems	82
J513	Remove or replace CMDS LRUs	76
J525	Remove or replace TACAN system LRUs	76
J551	Troubleshoot intercommunications systems	76
J550	Troubleshoot ILSs	76
J517	Remove or replace HF communications system LRUs	71
J516	Remove or replace external ECM system LRUs (pods)	71
J487	Operationally check avionics interface units	71
J543	Troubleshoot CMDSs	71
J541	Troubleshoot AG/IFF transponder systems	65
J521	Remove or replace intercommunications system LRUs	65
J514	Remove or replace ECM system LRUs	65
J559	Upload or download ECM pods	65
J547	Troubleshoot HF communications systems	65
J498	Operationally or BIT check external ECM systems (pods)	65
J544	Troubleshoot ECM systems	65
J503	Operationally or BIT check RWRs or CRSs	59
J537	Transport ECM pods	59
J484	Code mode 4 crypto equipment	53
J523	Remove or replace RWR, CRS, or TTWS LRUs	53
J519	Remove or replace ICNIS LRUs	53
J492	Operationally or BIT check AA/IFF interrogator systems	53
J512	Remove or replace avionics interface units	53
J483	Adjust CRS indicators	53
J509	Remove or replace AA/IFF transponder system LRUs	47
J529	Reprogram external ECM pods	47
J535	Test ECM transmission lines	47
J522	Remove or replace JSS LRUs	35

TABLE 31

EQUIPMENT USED BY FIRST-ENLISTMENT 2A3X1 PERSONNEL

EQUIPMENT	F-15 2A3X1A (N=173)	F-15 2A3X1B (N=90)	F-15 2A3X1C (N=112)	F-111 2A3X1A (N=41)	F-111 2A3X1B (N=19)	F-111 2A3X1C (N=17)
Digital multimeters	90	92	88	80	84	71
External cooling air units	86	83	79	80	63	65
Wire repair kits	84	81	82	71	63	47
Maintenance stands	82	82	76	49	74	59
Portable hydraulic test stands (-6 carts)	82	62	54	2	32	6
Portable lighting equipment	77	79	71	66	79	53
Waveguide pressure testers	71	17	50	54	11	12
Weight off wheels (WOW) proximity boxes	66	84	70	2	16	6
Hydraulic servicing carts	62	66	39	5	42	12
Gas turbine generators/compressors	59	64	55	41	68	41
Heat guns, HT-900	57	66	53	37	42	18
Gaseous nitrogen servicing equipment	53	26	31	15	21	12
Hydraulic tests stands	51	92	32	5	89	18
Memory loader verifiers	51	11	46	15	16	65
Pod cradles	45	29	42	29	16	59
Time domain reflectometers (TDRs)	40	18	33	61	11	35
Bomb lifts (jammers)	35	18	38	20	5	47
Ground heaters and blowers	33	52	24	56	84	53
Trailers	31	19	21	7	16	41
Air compressors	25	34	26	12	32	29
TTU-205 D/F digital test sets	18	88	14	7	95	6
Automatic flight control system test sets	16	69	12	5	42	6

JOBS PERFORMED BY FIRST-ENLISTMENT AFSC 2A3X1A/B/C PERSONNEL

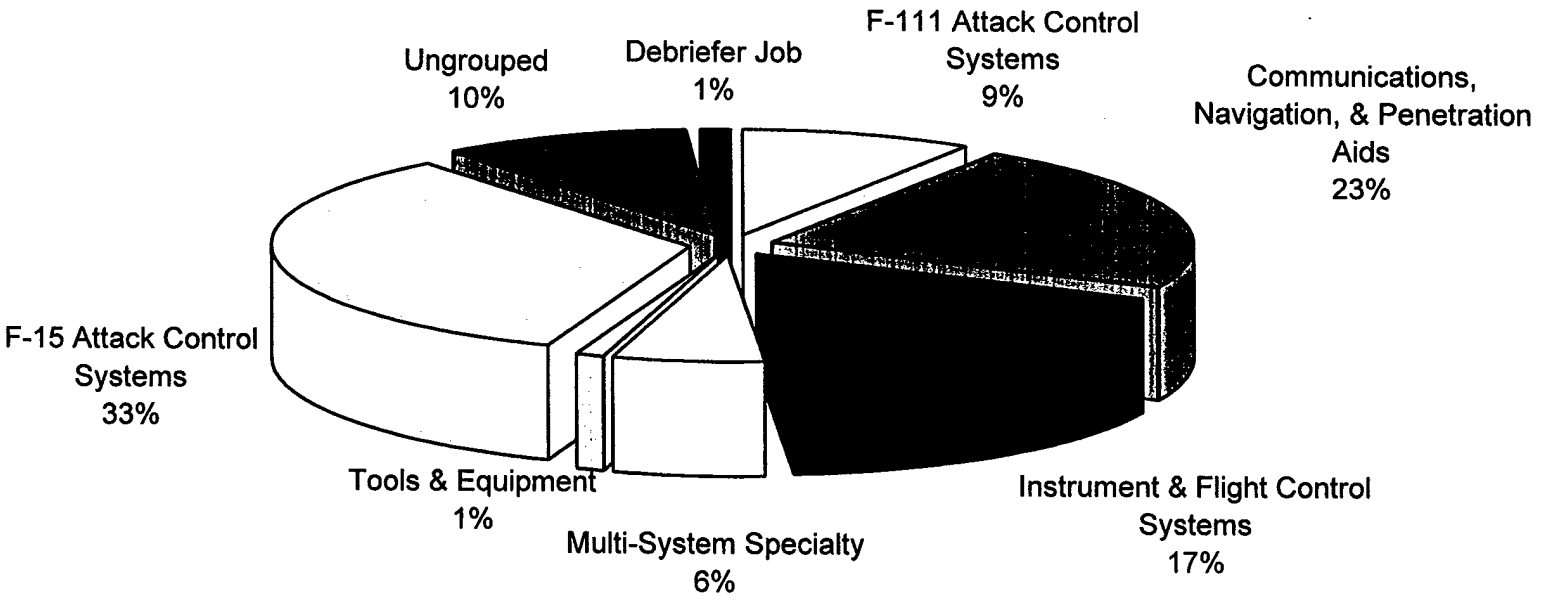


FIGURE 2

Tasks having the highest TE ratings for AFSC 2A3X1A/B/C personnel with 1-48 months TAFMS who work on the F-15 aircraft are listed in Table 32. Included for each task are the percentages of 1-48 months TAFMS performing the task for each of the three shreds, and the TD rating. Tasks with the highest TE ratings deal with troubleshooting and repairing aircraft wiring, cables, and connectors. These tasks are performed by high percentages of 1-48 months TAFMS personnel.

Tasks with the highest TE ratings for personnel who work on the F-111 aircraft are listed in Table 33. The same information is included as in Table 32, and the highest rated tasks are parallel to the F-15 aircraft.

Table 34 lists the tasks having the highest TD ratings for personnel who work on the F-15. The percentages of 2A3X1A/B/C personnel performing these tasks are included for those respondents with 1-48 months TAFMS, at the 5- and 7-skill level, and their TE ratings. The first enlistment and 5-skill level percentages are divided into the three shreds. Most tasks with high TD ratings deal with developing course training materials. For this reason, the majority of tasks with high TD ratings have low TE ratings and are performed by relatively low percentages of 1-24 months TAFMS, 1-48 months TAFMS, and 5- and 7-skill level members.

Tasks with the highest TD ratings for personnel who work on the F-111 aircraft are listed in Table 35. These tasks deal more with troubleshooting, adjusting, and checking various avionic systems.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should by reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

Specialty Training Standard (STS) Analysis

A comprehensive review of the AFSC 2A3X1A/B/C draft STS, dated October 1994, was made by comparing survey data to STS elements. To assist in the examination of the STS, technical school SMEs from Sheppard AFB matched JI tasks to appropriate sections and subsections of the STS. Elements with performance objectives were reviewed in terms of TE, TD, and percent members performing information, using the guidance provided in AFI 36-2623 and AETCR 52-22. Typically, tasks performed by 20 percent or more personnel in appropriate experience or skill-level groups, such as entry-level respondents (1-48 months TAFMS), and 5- and 7- skill level groups, should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion. STS paragraphs containing general knowledge information, mandatory entries, or basic supervisory responsibilities were not examined.

TABLE 32

TASKS WITH HIGHEST TRAINING EMPHASIS (F-15 AIRCRAFT)

TASKS		F-15 TE	PERCENT MEMBERS PERFORMING F-15 1ST ENL-A (N=173)	F-15 1ST ENL-B (N=90)	F-15 1ST ENL-C (N=112)	F-15 TD
G260	Trace wiring, system, or interface diagrams	6.71	78	91	83	5.96
G262	Troubleshoot aircraft wiring	6.38	82	96	79	6.25
G265	Troubleshoot multipin connectors	6.38	78	78	73	6.26
G263	Troubleshoot coaxial cables and connectors	6.38	76	41	74	6.52
G253	Repair aircraft wiring	6.25	77	88	64	5.55
G251	Remove, replace, or repair multipin connectors	6.12	78	70	68	5.73
I465	Troubleshoot fuel quantity indicating systems	6.12	6	81	3	6.19
I404	Operationally check primary flight control or trim systems	6.08	6	80	4	5.53
I461	Troubleshoot flight control trim systems	6.04	3	70	4	6.48
I387	Calibrate fuel quantity indicating systems	6.00	8	83	7	5.44
I405	Operationally check stability augmentation/ stall inhibitor systems	6.00	1	23	0	5.10
I435	Remove or replace primary flight control or trim system LRUs	5.88	4	61	6	4.76
G258	Solder or crimp connections on aircraft wiring	5.71	72	78	72	5.53
I446	Swing and make compensation adjustments of AFRS and instrument systems	5.71	1	19	1	6.52
K565	Clear or close out completed maintenance discrepancies in CAMS	5.71	82	82	85	5.27
H344	Troubleshoot attack radar systems or navigations radar systems	5.67	78	20	19	6.60
I394	Operationally check AFCSs	5.67	17	94	12	5.95
I406	Operationally check stall warning and LCCSs	5.67	1	32	0	5.72
H357	Troubleshoot INSs	5.67	77	28	15	5.17
G250	Remove, replace, or repair coaxial connectors	5.62	76	39	71	5.69
I436	Remove or replace stability augmentation/ stall inhibitor system LRUs	5.58	1	28	1	4.54
H309	Operationally or BIT check TFRs	5.58	33	13	9	5.39
I474	Remove or replace stability augmentation/ stall inhibitor systems	5.50	0	20	1	6.10
G238	Inspect chafing problem areas	5.50	77	76	79	4.62
F163	Connect or disconnect aircraft external power	5.50	94	93	92	3.01

TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)
TD MEAN = 5.00; S.D. = 1.00

TABLE 33

TASKS WITH HIGHEST TRAINING EMPHASIS (F-111 AIRCRAFT)

TASKS		F-111 TE	PERCENT MEMBERS PERFORMING F-111 1ST ENL-A (N=41)	F-111 1ST ENL-B (N=19)	F-111 1ST ENL-C (N=17)	F-111 TD
G262	Troubleshoot aircraft wiring	7.28	90	89	82	6.40
G253	Repair aircraft wiring	7.11	78	74	76	6.02
G263	Troubleshoot coaxial cables and connectors	7.11	59	42	71	6.21
I450	Troubleshoot AFCSs	7.06	2	42	6	7.43
I465	Troubleshoot fuel quantity indicating systems	6.67	0	79	0	7.51
J553	Troubleshoot RWRs or CRSs	6.61	5	5	47	6.20
I394	Operationally check AFCSs	6.61	5	68	6	6.35
G251	Remove, replace, or repair multipin connectors	6.56	76	58	53	5.87
F159	Complete aircraft safe-for-maintenance checks	6.56	44	37	65	4.54
J545	Troubleshoot EWWSs	6.56	0	5	29	6.07
G265	Troubleshoot multipin connectors	6.56	78	63	71	6.03
H296	Operationally check OWSs	6.50	7	11	6	4.87
H308	Operatiionally or BIT check radar systems	6.50	93	16	12	5.68
G255	Research technical orders	6.50	66	58	65	5.44
I390	Operationally and leak check pitot static and standby instrument systems	6.44	2	84	6	5.74
H346	Troubleshoot CC systems	6.44	12	5	6	5.74
H303	Operationally or BIT check HUD systems	6.44	5	16	6	4.16
I453	Troubleshoot air data computer and primary instrument systems	6.44	5	74	6	6.32
G264	Troubleshoot electrical relays	6.39	39	58	47	6.13
G258	Solder or crimp connections on aircraft wiring	6.39	63	74	71	5.11
G266	Troubleshoot triaxial cables and connectors	6.39	29	32	35	6.11
G259	Splice aircraft wiring	6.39	49	74	53	5.34
G250	Remove, replace, or repair coaxial connectors	6.39	66	53	59	5.96
J557	Troubleshoot UHF communication and audio signal systems	6.39	5	11	82	5.21
J539	Troubleshoot AA/IFF interrogator systems	6.39	2	5	47	6.19
H365	Troubleshoot OWSs	6.39	2	16	6	5.64
H301	Operationally or BIT check CC systems	6.39	32	16	6	4.86

TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)
TD MEAN = 5.00; S.D. = 1.00

TABLE 34

TASKS WITH HIGHEST TASK DIFFICULTY (F-15 AIRCRAFT)

TASKS			PERCENT MEMBERS PERFORMING							
		F-15 TD	F-15 1ST ENL-A (N=173)	F-15 1ST ENL-B (N=90)	F-15 1ST ENL-C (N=112)	F-15 51A (N=141)	F-15 51B (N=105)	F-15 51C (N=95)	F-15 71 (N=284)	F-15 TE
D94	Develop FTD course training materials	8.44	0	1	0	1	1	0	8	.04
D93	Develop CDC materials	8.25	0	2	0	1	0	0	1	.08
D96	Develop resident course training materials	7.87	0	1	0	1	1	0	4	.04
C79	Write civilian performance appraisals	7.73	0	1	0	2	3	0	3	.04
A13	Draft budget requirements	7.60	1	1	1	3	0	0	12	.04
I469	Troubleshoot manual flight control systems	7.23	4	66	4	18	77	18	20	5.00
A14	Establish organizational policies	7.14	1	1	1	1	1	2	23	.21
D95	Develop new equipment training programs	7.14	0	1	0	2	0	3	7	.21
I450	Troubleshoot AFCSs	7.04	9	86	8	43	91	44	30	5.12
H269	Boresight align navigation systems mounts	7.00	35	7	4	48	22	18	9	1.50
C73	Indorse civilian performance appraisals	6.95	0	1	0	0	0	0	4	.04
E113	Annotate civilian time cards	6.91	0	1	0	0	0	0	2	.04
H270	Boresight align optical sight systems	6.90	16	6	1	20	12	6	9	2.71
A8	Develop cost-reduction programs	6.87	2	1	2	6	2	3	15	.25
I447	Swing and make compensation adjustments of standby compasses	6.85	1	49	1	16	66	18	14	3.88
H267	Boresight align HUD mounts	6.85	46	12	5	58	30	24	13	1.38
H271	Boresight align radar antenna mounts	6.85	22	4	3	26	13	16	6	1.71
B37	Draft recommendations for changes in equipment or personnel requirements	6.83	1	1	0	3	2	2	21	.58

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)

TABLE 35

TASKS WITH HIGHEST TASK DIFFICULTY (F-111 AIRCRAFT)

TASKS		F-111 TD	PERCENT MEMBERS PERFORMING							F-111 TE
			F-111 1ST ENL-A (N=41)	F-111 1ST ENL-B (N=19)	F-111 1ST ENL-C (N=17)	F-111 51A (N=65)	F-111 51B (N=50)	F-111 51C (N=59)	F-111 71 (N=284)	
J552	Troubleshoot JSSs	8.75	0	0	24	8	9	46	4	.72
A13	Draft budget requirements	7.79	0	5	0	6	2	3	12	.28
I465	Troubleshoot fuel quantity indicating systems	7.51	0	79	0	28	86	5	28	6.67
I388	Conduct magnetic surveys	7.46	0	21	0	11	46	0	4	.94
I450	Troubleshoot AFCSs	7.43	2	42	6	31	78	2	30	7.06
H271	Boresight align radar antenna mounts	7.12	10	11	0	17	4	2	6	2.61
H269	Boresight align navigation systems mounts	7.12	7	11	0	22	10	0	9	3.06
H272	Boresight align radar antennas	7.12	17	11	0	18	2	5	6	2.72
H342	Swing and make compensation adjustments of INSs	6.95	41	0	6	40	8	8	5	1.22
J502	Operationally or BIT check JSSs	6.94	0	0	29	14	2	47	4	1.22
J448	Swing and make compensation checks of AHRSs	6.92	0	32	0	3	42	0	13	4.28
I474	Troubleshoot stability augmentation/stall inhibitor systems	6.91	0	53	0	31	80	5	10	1.44
I446	Swing and make compensation adjustments of AFRS and instrument systems	6.90	0	58	0	28	82	7	8	1.56
C77	Investigate accidents or incidents	6.86	0	5	0	6	2	2	18	1.11
H273	Boresight FLIR systems	6.85	2	5	0	6	0	0	11	3.17
J536	Test JSS transmission lines	6.78	0	0	35	8	2	36	2	.89

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)

Survey data indicate the STS is well-constructed and provides comprehensive coverage of the work performed by personnel in this career ladder. Nearly all of the essential paragraphs and subparagraphs were adequately supported.

Examples of unsupported STS items for each aircraft, along with accompanying JI tasks and survey data, are listed in Tables 36 and 37. Training personnel and SMEs should review these items, as well as accompanying training documents, to determine if inclusion in future revisions is warranted.

Tasks not matched to any element of the STS are listed at the end of the computer listing located in associated training documents. These were reviewed to determine if any tasks concentrate around particular functions or jobs. Most of the unreferenced tasks for personnel working on the F-15 are technical tasks related to communication, navigation, and penetration aids. For F-111 personnel, most of the tasks deal with the instrument and flight control system. These tasks are listed in Tables 38 and 39.

Plan of Instruction (POI) Analysis

Technical school SMEs matched JI tasks to the training objectives in the six POIs in this career ladder: J3ABR2A331A 000, J3ABR2A331B 000, J3ABR2A331C 000, J3ABR2A331A 001, J3ABR2A331B 001, and J3ABR2A331C 001. All the POIs are dated 31 January 1995. Training objectives were evaluated in a method similar to the STS analysis, as percent members performing data for entry-level personnel, TE, and TD ratings were examined.

POI blocks, units of instruction, and criterion objectives were compared against guidance provided by AETCR 52-22 (30 percent or more entry-level personnel performing trained tasks). In accordance with this guidance, tasks trained in the course not meeting these criteria should be considered for elimination from formal course training if not justified on some other acceptable basis. Examples of unsupported POI objectives are listed in Tables 40 and 41 according to aircraft. These objectives deal with work performed on the specific avionic systems.

Several technical tasks performed by over 30 percent of entry-level personnel were not matched to the POIs. Examples of these tasks with survey data are listed in Tables 42 and 43, separated according to aircraft. Training personnel and SMEs should review these and other unreferenced tasks to determine if these areas should be incorporated into the formal course.

TABLE 36

EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA (F-15 AIRCRAFT)

STS REFERENCE/TASKS		3-LVL COURSE PROF CODE	TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=173)	"B" 1ST ENL (N=90)	"C" 1ST ENL (N=112)	"A" 5-SKILL LEVEL (N=141)	"B" 5-SKILL LEVEL (N=105)	"C" 5-SKILL LEVEL (N=95)	7-SKILL LEVEL (N=284)	TSK DIFF
0151	10a(4) (c) 3. Tow vehicle operator	-									
F232	Tow aircraft		1.29	7	7	9	18	17	18	11	4.12
0286	11m(2). Use	-									
F224	Service aircraft pneumatic systems		1.92	3	7	0	6	10	2	5	4.32
0387	16a. Boresight equipment	-									
I386	Boresight probes		4.08	1	8	0	1	8	1	9	5.85
0392	16f. Transmission line tester	-									
J534	Test CRS transmission lines		3.17	1	0	10	2	0	12	7	5.97
0815	60c. Perform operational checkout	-									
H295	Operationally check optical sight systems		3.17	14	2	1	16	8	7	9	5.37
0830	62c. Perform operational checkout and BIT	2b									
H291	Operationally check GPSs		3.00	5	1	0	5	2	1	5	5.13
0896	70d. Isolate malfunctions	-									
H347	Troubleshoot CDSs		2.54	8	2	3	9	4	2	4	5.84
0902	71c. Perform operation checkout	-									
H287	Operationally check bombing timers		3.38	2	0	0	4	0	3	5	5.13
0932	75c. Perform operational checkout	2b									
I395	Operationally check AFRSs		5.25	1	16	2	6	10	3	10	5.73

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)

TABLE 37

EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA (F-111 AIRCRAFT)

STS REFERENCE/TASKS		3-LVL COURSE PROF CODE	TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=41)	"B" 1ST ENL (N=19)	"C" 1ST ENL (N=17)	"A" 5-SKILL LEVEL (N=65)	"B" 5-SKILL LEVEL (N=50)	"C" 5-SKILL LEVEL (N=59)	7-SKILL LEVEL (N=284)	TSK DIFF
0219	10g(3) (a). Defuel team member	-									
F185	Over-the-wing refuel or defuel aircraft		1.28	2	5	0	6	10	0	5	4.75
0223	10g(5) (a). Remove	-									
F210	Remove or install aircraft external fuel tanks		1.17	0	16	0	6	6	3	7	4.04
0240	10I(2). Install safety pins	-									
F209	Remove or install aircraft egress system safety pins		4.83	2	11	6	6	6	0	15	3.00
0288	11n(1). Perform pre-use inspection	-									
F202	Preuse inspect oil servicing carts		1.50	0	5	0	6	0	3	10	2.87
0337	13f, Practice ESD Procedures	2b									
G246	Remove or install electrostatic discharge devices		3.11	15	16	12	15	8	3	12	3.82
0510	25g(2). Upload	-									
H375	Upload or download targeting pods		3.78	10	5	0	8	2	0	13	4.86
0519	26f. Install system LRUs	-									
H337	Remove or replace remote map reader system LRUs		3.72	0	16	6	3	4	0	12	4.87
0760	53b(3). Perform operational checkout and BIT	-									
H302	Operationally or BIT check data link systems		4.06	5	11	6	14	2	7	12	5.24

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)

TABLE 38

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 20 PERCENT OR MORE AFSC 2A3X1A/B/C PERSONNEL (WORKING ON F-15 AIRCRAFT) AND NOT REFERENCED TO THE STS

TASKS		PERCENT MEMBERS PERFORMING								
		"A" 1ST ENL (N=173)	"B" 1ST ENL (N=90)	"C" 1ST ENL (N=112)	"A" 5-SKILL LEVEL (N=141)	"B" 5-SKILL LEVEL (N=105)	"C" 5-SKILL LEVEL (N=95)	7-SKILL LEVEL (N=284)	TNG EMP	TSK DIFF
G257	Seal or reseal antennas	45	42	79	66	68	89	30	2.92	3.74
H313	Remove or install OWS LRUs	62	19	8	77	59	40	17	1.29	4.10
J482	Accomplish end-of-runway mode 4/RWR checks	24	23	80	46	45	83	24	3.79	4.09
J528	Reprogram CMDS system LRUs	7	9	65	35	30	81	21	3.25	4.79
J531	Reprogram RWR system LRUs	6	12	63	36	46	85	21	3.21	5.07
K581	Load LRU port numbers or serial numbers in CAMS	83	84	82	79	81	86	42	4.96	4.81

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)

TABLE 39

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 20 PERCENT OR MORE AFSC 2A3X1A/B/C PERSONNEL (WORKING ON F-111 AIRCRAFT) AND NOT REFERENCED TO THE STS

TASKS		PERCENT MEMBERS PERFORMING								
		"A" 1ST ENL (N=41)	"B" 1ST ENL (N=19)	"C" 1ST ENL (N=17)	"A" 5-SKILL LEVEL (N=65)	"B" 5-SKILL LEVEL (N=50)	"C" 5-SKILL LEVEL (N=59)	7-SKILL LEVEL (N=284)	TNG EMP	TSK DIFF
E120	Inventory tools, such as CTKs	39	47	47	72	66	58	45	3.67	3.58
F166	Ground aircraft	68	63	53	69	80	78	42	4.44	1.94
H299	Operationally check tracking handles	78	5	0	83	12	12	9	1.33	4.66
I381	Adjust spoiler switches	0	63	0	23	82	8	7	.83	4.87
I405	Operationally check stability augmentation/stall inhibitor systems	2	58	0	28	80	10	12	1.89	6.40
I436	Remove or replace stability augmentation/stall inhibitor system LRUs	0	68	0	34	82	8	10	.94	6.19
I444	Schedule check spike systems	0	58	0	34	80	15	8	.44	5.84
I445	Self-test turbine inlet temperature systems	0	47	0	20	76	3	8	1.06	4.09
I469	Troubleshoot manual flight control systems	2	68	0	25	82	5	20	3.56	6.45
I474	Troubleshoot stability augmentation/stall inhibitor systems	0	53	0	31	80	5	10	1.44	6.91
K581	Load LRU part numbers or serial numbers in CAMS	68	63	65	72	68	63	42	4.78	5.98

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)

TABLE 40

EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA (F-15 AIRCRAFT)

POI OBJECTIVES/TASKS		TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=173)	"B" 1ST ENL (N=90)	"C" 1ST ENL (N=112)	"A" ATI	"B" ATI	"C" ATI	TSK DIFF
0474	V 1a, Using applicable TOs, support equipment, and an aircraft or trainer, remove and install MFDS LRUs with limited instructor assistance. Meas: PC								
H332	Remove or replace MFD system LRUs	2.79	16	7	5	7	7	7	4.02
0476	V 1c. Using applicable TOs, support equipment, and an aircraft or trainer, isolate malfunctions within the MFDS with limited instructor assistance. Meas: PC/W								
H362	Troubleshoot MFDs	3.21	16	6	6	7	7	7	5.14
0480	V 2c. Using applicable TOs, support equipment, and an aircraft or trainer, perform an operational checkout of the ICNIS with limited instructor assistance. Meas: PC/W								
J549	Troubleshoot ICNISs	2.50	1	1	13	2	2	2	4.99
0512	IX 1d. Using applicable TOs, support equipment, and an aircraft or trainer, isolate malfunctions within the GPS with limited instructor assistance. Meas: PC/W								
H353	Troubleshoot GPSs	3.17	3	1	0	7	7	0	6.16
0526	XII 1a. Using applicable TOs, support equipment, and an aircraft or trainer, remove and install TFR system LRUs with limited instructor assistance. Meas: PC								
H339	Remove or replace TFR system LRUs	4.75	27	7	6	11	11	11	4.33

TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)
TD MEAN = 5.00; S.D. = 1.00

TABLE 41

EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA (F-111 AIRCRAFT)

POI OBJECTIVES/TASKS		TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=41)	"B" 1ST ENL (N=19)	"C" 1ST ENL (N=17)	"A" ATI	"B" ATI	"C" ATI	TSK DIFF
0070	IV 1d. Using applicable TOs, support equipment, and an aircraft or trainer, isolate malfunctions within the CC system with limited instructor assistance. Meas: PC/W								
H346	Troubleshoot CC systems	6.44	12	5	6	11	11	11	5.74
0243	VII 3c. Using applicable TOs, support equipment, and an aircraft or trainer, perform an AIC static BIT checkout with limited instructor assistance. Meas: PC/W								
I411	Operationally or BIT check AICSs	6.28	2	26	6	11	11	11	5.29
0380	VII 2d. Using applicable TOs, support equipment, and an aircraft or trainer, isolate malfunctions within the EWWS with limited instructor assistance. Meas: PC/W								
J545	Troubleshoot EWWSs	6.56	0	5	29	0	11	11	6.07
0539	XIII 2c. Using applicable TOs, support equipment, and an aircraft or trainer, perform an operational checkout of the CAVR system with limited instructor assistance. Meas: PC/W								
H300	Operationally check video recording systems	6.00	24	11	6	11	11	11	4.96
0865	XIII 2f. Using applicable TOs, support equipment, and an aircraft, perform a pressurization test using the nitrogen pressure test set with limited instructor assistance. Meas: PC								
J507	Pressure test ECM systems	2.11	0	0	29	0	0	2	5.15

TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)
TD MEAN = 5.00; S.D. = 1.00

TABLE 42

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 30 PERCENT OR MORE AFSC 2A3X1A/B/C PERSONNEL (WORKING ON F-15 AIRCRAFT) AND NOT REFERENCED TO THE POI

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=173)	"B" 1ST ENL (N=90)	"C" 1ST ENL (N=112)	"A" ATI	"B" ATI	"C" ATI	TSK DIFF
F209	Remove or install aircraft egress system safety pins	2.04	42	40	41	4	4	4	3.77
G237	Inspect aircraft wiring	5.38	84	89	82	18	18	18	4.58
G253	Repair aircraft wiring	6.25	77	88	64	18	18	18	5.55
G262	Troubleshoot aircraft wiring	6.67	82	96	79	18	18	18	6.25
G264	Troubleshoot electrical relays	5.46	38	61	46	12	18	12	6.17
H282	Isolate waveguide pressure leaks	4.62	69	17	35	18	11	12	5.76
H349	Troubleshoot control stick grips	1.96	35	34	8	14	14	2	5.49
I471	Troubleshoot oil pressure indicating systems	4.04	2	64	2	7	17	7	5.26
I478	Troubleshoot tachometer systems	4.42	1	56	2	11	18	11	5.26
J515	Remove or replace EWWS LRUs	1.83	13	11	71	1	1	6	3.85
J525	Remove or replace TACAN systems LRUs	3.83	17	21	81	7	7	17	4.04
J548	Troubleshoot IBSs	2.92	2	6	62	7	7	17	4.53
K581	Load LRU part numbers or serial numbers in CAMS	4.96	83	84	82	18	18	18	4.81

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.56; S.D. = 1.75 (HIGH = 4.31)

TABLE 43

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 30 PERCENT OR MORE AFSC 2A3X1A/B/C PERSONNEL (WORKING ON F-111 AIRCRAFT) AND NOT REFERENCED TO THE POI

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING "A" 1ST ENL (N=41)	"B" 1ST ENL (N=19)	"C" 1ST ENL (N=17)	"A" ATI	"B" ATI	"C" ATI	TSK DIFF
F186	Position or remove aircraft chocks or safety pins	4.33	80	74	65	8	8	8	2.66
G237	Inspect aircraft wiring	5.50	73	68	88	18	18	18	4.77
G253	Repair aircraft wiring	7.11	78	74	76	18	18	18	6.02
H280	Enter automatic data to computer complexes	2.78	61	5	6	17	7	7	4.94
H284	Load OFPs to computer complexes	4.94	76	16	0	18	11	0	4.54
H312	Pressurize and leak check TFRs	2.17	71	5	0	16	2	0	4.81
I381	Adjust spoiler switches	.83	0	63	0	0	16	0	4.87
I401	Operationally check flight director systems	2.28	0	58	0	0	16	0	5.22
I445	Self-test turbine inlet temperature systems	1.06	0	47	0	0	14	0	4.09
I470	Troubleshoot nozzle position indicating systems	4.39	0	63	0	0	17	0	5.53
I474	Troubleshoot stability augmentation/stall inhibitor systems	1.44	0	53	0	0	16	0	6.91
I481	Troubleshoot turbine inlet temperature indicating systems	3.72	0	68	6	0	17	7	5.95
K581	Load LRU part numbers or serial numbers in CAMS	4.78	68	63	65	18	18	18	5.98

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.73; S.D. = 1.97 (HIGH = 4.70)

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can be very useful for career ladder managers as they attempt to determine possible factors affecting job performance of career ladder airmen. Job satisfaction data can be expanded to provide indications of general attitudes within specific DAFSC groups.

With this in mind, job satisfaction responses for AFSC 2A3X1A/B/C personnel were analyzed and provide a comparison among TAFMS groups of the AFSC 2A3X1A/B/C career ladder, and a comparative sample of other non-lateral logistics personnel surveyed in 1994.

Table 44 shows this comparison of TAFMS group data of AFSC 2A3X1A/B/C personnel to the comparative sample surveyed the same calendar year. These data give a relative measure of how AFSC 2A3X1A/B/C personnel job satisfaction responses compare with similar Air Force specialties. Overall, job satisfaction declines as time in service increases across the TAFMS groups, except for reenlistment intentions. Reenlistment intentions increase with time in service across TAFMS groups, but remain lower than those of the comparative sample. AFSC 2A3X1A/B/C members with 1-48 and 49-96 months TAFMS indicated higher levels of satisfaction than those of the comparative sample in all categories, except reenlistment intentions.

In addition, job satisfaction data for identified job groups and clusters are provided on Table 45. Again, members across most identified groups provided generally positive job satisfaction responses. F-111 Attack Control Systems personnel and Debriefers, however, reported much lower responses when referring to the expressed interest in their job when compared to other job groups and clusters. F-111 Attack Control Systems personnel, supervisors, and Tools and Equipment personnel reported lower responses for their sense of accomplishment than did the other job groups. Low responses were also reported for the perceived use of talents by Debriefers and Tools and Equipment personnel; and the Debriefers and Supervisors indicated that their majority would retire. Also, the Tools and Equipment personnel indicated that many did not feel that they were using their training.

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to ensure a current data base for the Avionic Systems career ladder (AFSC 2A3X1A/B/C). Data compiled from this survey supports the successful merger of what was formerly two career fields, one for each aircraft. Furthermore, the Specialty Descriptions for the AFSC 2A3X1A/B/C career ladder accurately portray the clusters and jobs identified in this study. The majority of personnel perform technical tasks, but are differentiated according to one of the three avionic systems involved. A portion of the more experienced personnel work on all three areas.

TABLE 44

COMPARISON OF JOB SATISFACTION TO A COMPARATIVE SAMPLE

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	2A3X1 (N=455)	COMP SAMPLE (N=11,582)	2A3X1 (N=227)	COMP SAMPLE (N=11,582)	2A3X1 (N=503)	COMP SAMPLE (N=11,582)
EXPRESSED JOB INTEREST						
INTERESTING	83	63	75	61	72	69
SO-SO	11	23	17	26	17	22
DULL	6	13	8	12	11	9
PERCEIVED USE OF TALENTS						
FAIRLY WELL TO PERFECT	83	69	82	71	83	79
NONE TO VERY LITTLE	17	32	18	29	18	21
PERCEIVED USE OF TRAINING						
FAIRLY WELL TO PERFECT	90	87	88	84	78	80
NONE TO VERY LITTLE	10	11	11	14	22	18
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	75	68	72	68	69	73
NEUTRAL	13	17	15	15	11	11
DISSATISFIED	12	15	14	16	20	15
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	56	65	71	80	73	76
NO OR PROBABLY NO	43	34	27	19	12	6
WILL RETIRE	0	0	0	1	14	18

Comparative data are from AFSCs 2A5X2 (Helicopter Maintenance), 2A6X4 (Aircraft Fuel Systems), 2A7X2 (Nondestructive Inspection), 2A7X4 (Fabrication and Parachute), 2E3X1 (Secure Communications Systems), 2F0X1 (Fuels), and 2W1X1 (Aircraft Armament Systems). They were all surveyed in 1994.

TABLE 45

JOB SATISFACTION ACROSS JOBS

	F-15 ATTACK CONTROL SYSTEMS JOB (STG134)	F-111 ATTACK CONTROL SYSTEMS JOB (STG144)	COMMUNICATION, NAVIGATION, AND PENETRATION AIDS JOB (STG136)	INSTRUMENT AND FLIGHT CONTROL SYSTEMS JOB (STG131)	MULTI-SYSTEM SPECIALTY JOB (STG142)
EXPRESSED JOB INTEREST					
INTERESTING	86	57	80	74	81
SO-SO	9	27	12	17	14
DULL	6	16	8	8	5
PERCEIVED USE OF TALENTS					
FAIRLY WELL TO PERFECT	86	72	81	80	90
NONE TO VERY LITTLE	13	28	19	20	10
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	86	85	93	93	89
NONE TO VERY LITTLE	14	15	6	6	11
SENSE OF ACCOMPLISHMENT FROM JOB					
SATISFIED	74	57	70	72	78
NEUTRAL	14	20	14	15	9
DISSATISFIED	11	23	16	12	14
REENLISTMENT INTENTIONS					
YES OR PROBABLY YES	64	64	67	57	79
NO OR PROBABLY NO	34	35	31	38	18
WILL RETIRE	1	0	2	3	3

TABLE 45 (CONTINUED)

JOB SATISFACTION ACROSS JOBS

EXPRESSED JOB INTEREST	TEST SQUADRON JOB (STG128)	FTD INSTRUCTOR JOB (STG139)	DEBRIEFER JOB (STG127)	MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB (STG55)
INTERESTING	100	100	38	77
SO-SO	0	0	38	15
DULL	0	0	23	8
PERCEIVED USE OF TALENTS				
FAIRLY WELL TO PERFECT	100	100	46	70
NONE TO VERY LITTLE	0	0	54	31
PERCEIVED USE OF TRAINING				
FAIRLY WELL TO PERFECT	100	100	77	54
NONE TO VERY LITTLE	0	0	23	46
SENSE OF ACCOMPLISHMENT FROM JOB				
SATISFIED	100	100	62	62
NEUTRAL	0	0	23	23
DISSATISFIED	0	0	15	15
REENLISTMENT INTENTIONS				
YES OR PROBABLY YES	100	78	23	62
NO OR PROBABLY NO	0	0	69	15
WILL RETIRE	0	22	0	23

TABLE 45 (CONTINUED)

JOB SATISFACTION ACROSS JOBS

	QUALITY ASSURANCE JOB (STG117)	EXPEDITER JOB (STG107)	SUPERVISOR JOB (STG354)	MANAGER JOB (STG233)	TOOLS AND EQUIPMENT JOB (STG96)
EXPRESSED JOB INTEREST					
INTERESTING	70	60	63	67	61
SO-SO	30	25	25	33	17
DULL	0	15	13	0	22
PERCEIVED USE OF TALENTS					
FAIRLY WELL TO PERFECT	100	80	82	100	43
NONE TO VERY LITTLE	0	20	19	0	57
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	100	80	75	67	48
NONE TO VERY LITTLE	0	20	25	33	52
SENSE OF ACCOMPLISHMENT FROM JOB					
SATISFIED	70	70	56	67	57
NEUTRAL	10	0	13	17	4
DISSATISFIED	20	30	31	17	39
REENLISTMENT INTENTIONS					
YES OR PROBABLY YES	90	55	19	67	52
NO OR PROBABLY NO	10	15	13	17	22
WILL RETIRE	0	30	69	17	26

Most of the STS and the POIs are supported by survey data, but there are still several areas which are performed by a minimal percentage of personnel. Conversely, there are several tasks not matched in either document that require review for possible inclusion in the training documents.

F-111 Attack Control Systems personnel, Debriefers, and Tools and Equipment personnel report much lower job satisfaction than members of the other job groups. In general, they have a reduced interest in the job, a lower sense of accomplishment, and lowered perception of the use of their talents and training. Poor job satisfaction is especially evident in the F-111 Attack Control Systems personnel when they are compared to their F-15 counterparts. For all AFSC 2A3X1A/B/C personnel, reenlistment intentions are slightly lower than for similar Air Force personnel surveyed in 1994.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF SPECIALTY JOBS

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TABLE A1

F-15 ATTACK CONTROL SYSTEMS JOB (STG134)

TASKS		PERCENT MEMBERS PERFORMING (N=194)
H303	Operationally or BIT check HUD systems	98
H308	Operationally or BIT check radar systems	97
F162	Connect or disconnect aircraft external cooling air units	96
F163	Connect or disconnect aircraft external power	96
H324	Remove or replace HUD system LRUs	96
H305	Operationally or BIT check INSs	96
G256	Safety wire components	94
G243	Inspect waveguides	94
F181	Open or close canopies	93
G242	Inspect triaxial cables and connectors	93
G249	Remove or replace waveguides	93
H336	Remove or replace radar system LRUs	92
G239	Inspect coaxial cables and connectors	92
H354	Troubleshoot HUD systems	92
G262	Troubleshoot aircraft wiring	92
G241	Inspect multipin connectors	91
F233	Walk wings or tails during aircraft towing operations	91
F180	Open or close airframe components, such as panels or doors	90
F186	Position or remove aircraft chocks or safety pins	90
F164	Connect or disconnect aircraft hydraulic test stands or carts	90
F182	Open or close weapons bays, radomes, or pallets	90
G235	Analyze ASP latch data	89
G237	Inspect aircraft wiring	89
F159	Complete aircraft safe-for-maintenance checks	88
K560	Access CAMS menus and data screens	88
H327	Remove or replace INS LRUs	88
G247	Remove or replace coaxial cables	88
G260	Trace wiring, system, or interface diagrams	87
G248	Remove or replace triaxial cables	87
G265	Troubleshoot multipin connectors	87
K565	Clear or close out completed maintenance discrepancies in CAMS	86
H315	Remove or replace CC system LRUs	86
K581	Load LRU part numbers or serial numbers in CAMS	85
H301	Operationally or BIT check CC systems	85
G263	Troubleshoot coaxial cables and connectors	85
G250	Remove, replace, or repair coaxial connectors	85
H344	Troubleshoot attack radar systems or navigation radar systems	84
H357	Troubleshoot INSs	84
G252	Remove, replace, or repair triaxial connectors	84
G266	Troubleshoot triaxial cables and connectors	84
H296	Operationally check OWSs	82
G258	Solder or crimp connections on aircraft wiring	79

TABLE A2

F-111 ATTACK CONTROL SYSTEMS JOB (STG144)

TASKS		PERCENT MEMBERS PERFORMING (N=74)
H327	Remove or replace INS LRUs	99
F181	Open or close canopies	97
H305	Operationally or BIT check INSs	97
F163	Connect or disconnect aircraft external power	96
F162	Connect or disconnect aircraft external cooling air units	96
H339	Remove or replace TFR system LRUs	96
F233	Walk wings or tails during aircraft towing operations	95
H370	Troubleshoot TFR systems	95
G260	Trace wiring, system, or interface diagrams	95
G262	Troubleshoot aircraft wiring	95
F180	Open or close airframe components, such as panels or doors	93
H357	Troubleshoot INSs	92
F182	Open or close weapons bays, radomes, or pallets	92
H308	Operationally or BIT check radar systems	92
H309	Operationally or BIT check TFRs	92
G243	Inspect waveguides	89
H366	Troubleshoot radar altimeter systems	89
G239	Inspect coaxial cables and connectors	88
H299	Operationally check tracking handles	86
G249	Remove or replace waveguides	86
H344	Troubleshoot attack radar systems or navigation radar systems	85
G241	Inspect multipin connectors	85
H297	Operationally check radar altimeters	85
H311	Pressurize and leak check radar systems	85
H335	Remove or replace radar altimeter system LRUs	85
H284	Load OFPs to computer complexes	84
G253	Repair aircraft wiring	84
H336	Remove or replace radar system LRUs	82
G237	Inspect aircraft wiring	82
F234	Wash aircraft	82
G265	Troubleshoot multipin connectors	82
G251	Remove, replace, or repair multipin connectors	82
G256	Safety wire components	81
H312	Pressurize and leak check TFRs	80
F186	Position or remove aircraft chocks or safety pins	79
K560	Access CAMS menus and data screens	78
K565	Clear or close out completed maintenance discrepancies in CAMS	77
H278	Confidence test and BIT computer complexes	76
H317	Remove or replace computer complex system LRUs	76
H348	Troubleshoot computer complexes	76
G263	Troubleshoot coaxial cables and connectors	76
F176	Launch or recover aircraft	72

TABLE A3

COMMUNICATION, NAVIGATION, AND PENETRATION AIDS JOB (STG136)

TASKS		PERCENT MEMBERS PERFORMING (N=171)
J504	Operationally or BIT check TACAN systems	97
F162	Connect or disconnect aircraft external cooling air units	96
J506	Operationally or BIT check UHF communication and audio signal systems	96
J526	Remove or replace UHF communication and audio signal system LRUs	95
J489	Operationally check intercommunications systems	95
J557	Troubleshoot UHF communication and audio signal systems	95
F163	Connect or disconnect aircraft external power	94
J525	Remove or replace TACAN system LRUs	94
J555	Troubleshoot TACAN systems	94
G256	Safety wire components	93
G260	Trace wiring, system, or interface diagrams	93
J484	Code mode 4 crypto equipment	92
J495	Operationally or BIT check CMDSs	92
K560	Access CAMS menus and data screens	91
K565	Clear or close out completed maintenance discrepancies in CAMS	91
G257	Seal or reseal antennas	91
J488	Operationally check ILSs	91
F180	Open or close airframe components, such as panels or doors	90
G237	Inspect aircraft wiring	90
G262	Troubleshoot aircraft wiring	90
J503	Operationally or BIT check RWRs or CRSs	89
F181	Open or close canopies	88
G239	Inspect coaxial cables and connectors	88
J551	Troubleshoot intercommunication systems	88
J550	Troubleshoot ILSs	88
J523	Remove or replace RWR, CRS, or TTWS LRUs	87
J482	Accomplish end-of-runway mode 4/RWR checks	87
J513	Remove or replace CMDS LRUs	86
J553	Troubleshoot RWRs or CRSs	85
J543	Troubleshoot CMDSs	85
G263	Troubleshoot coaxial cables and connectors	85
G238	Inspect chafing problem areas	85
F233	Walk wings or tails during aircraft towing operations	84
J541	Troubleshoot AG/IFF transponder systems	83
J521	Remove or replace intercommunications system LRUs	83
F159	Complete aircraft safe-for-maintenance checks	82
K581	Load LRU part numbers or serial numbers in CAMS	82
G241	Inspect multipin connectors	82
G265	Troubleshoot multipin connectors	82
G258	Solder or crimp connections on aircraft wiring	82
J509	Remove or replace AA/IFF transponder system LRUs	81
J511	Remove or replace AG/IFF transponder system LRUs	81

TABLE A4

INSTRUMENT AND FLIGHT CONTROL SYSTEMS JOB (STG131)

TASKS		PERCENT MEMBERS PERFORMING (N=144)
G262	Troubleshoot aircraft wiring	99
I394	Operationally check AFCSs	97
F163	Connect or disconnect aircraft external power	97
I391	Operationally check air data computer and primary instrument systems	97
I418	Remove or replace air data computer and primary instrument system LRUs	97
I390	Operationally and leak check pitot static and standby instrument systems	96
I407	Operationally check standby attitude indicators	96
G260	Trace wiring, system, or interface diagrams	95
F162	Connect or disconnect aircraft external cooling air units	95
I393	Operationally check attitude heading reference and instrument systems	95
F164	Connect or disconnect aircraft hydraulic test stands or carts	94
I420	Remove or replace attitude heading reference and instrument system LRUs	94
I453	Troubleshoot air data computer and primary instrument systems	94
I434	Remove or replace pitot static, heater, or instrument system LRUs	94
I438	Remove or replace standby attitude indicators	94
I415	Remove or replace AFCS LRUs	93
K560	Access CAMS menus and data screens	92
F181	Open or close canopies	92
I472	Troubleshoot pitot static, heater, or instrument systems	92
I428	Remove or replace fuel quantity indicating system LRUs	92
I430	Remove or replace hydraulic pressure indicators	92
F180	Open or close airframe components, such as panels or doors	91
I465	Troubleshoot fuel quantity indicating systems	91
G256	Safety wire components	91
G253	Repair aircraft wiring	91
I450	Troubleshoot AFCSs	90
I404	Operationally check primary flight control or trim systems	90
G237	Inspect aircraft wiring	90
I455	Troubleshoot attitude heading reference and instrument systems	90
I403	Operationally check hydraulic pressure indicating systems	90
I427	Remove or replace fuel flow indicators	90
F233	Walk wings or tails during aircraft towing operations	88
I476	Troubleshoot standby attitude indicators	88
F186	Position or remove aircraft chocks or safety pins	87
I387	Calibrate fuel quantity indicating systems	87
I379	Adjust primary or standby instrument system components	87
I419	Remove or replace airborne signal data recording system LRUs	87
I468	Troubleshoot hydraulic pressure indicating systems	86
I412	Operationally or BIT check fuel quantity indicating systems	85
G265	Troubleshoot multipin connectors	85
K565	Clear or close out completed maintenance discrepancies in CAMS	84
F159	Complete aircraft safe-for-maintenance	81

TABLE A5

MULTI-SYSTEM SPECIALTY JOB (STG142)

TASKS		PERCENT MEMBERS PERFORMING (N=291)
G260	Trace wiring, system, or interface diagrams	99
G256	Safety wire components	99
G253	Repair aircraft wiring	99
G262	Troubleshoot aircraft wiring	98
G241	Inspect multipin connectors	98
G239	Inspect coaxial cables and connectors	98
G243	Inspect waveguides	98
F163	Connect or disconnect aircraft external power	97
F162	Connect or disconnect aircraft external cooling air units	97
G265	Troubleshoot multipin connectors	97
G263	Troubleshoot coaxial cables and connectors	97
G251	Remove, replace, or repair multipin connectors	97
G258	Solder or crimp connections on aircraft wiring	97
F180	Open or close airframe components, such as panels or doors	96
F181	Open or close canopies	96
F164	Connect or disconnect aircraft hydraulic test stands or carts	96
G250	Remove, replace, or repair coaxial connectors	96
K565	Clear or close out completed maintenance discrepancies in CAMS	95
G237	Inspect aircraft wiring	95
J489	Operationally check intercommunications systems	94
G247	Remove or replace coaxial cables	94
G249	Remove or replace waveguides	94
K560	Access CAMS menus and data screens	93
J557	Troubleshoot UHF communication and audio signal systems	93
G259	Splice aircraft wiring	93
G254	Repair chafed areas	93
H308	Operationally or BIT check radar systems	92
H305	Operationally or BIT check INSs	92
G238	Inspect chafing problem areas	92
J526	Remove or replace UHF communication and audio signal system LRUs	92
G242	Inspect triaxial cables and connectors	91
J506	Operationally or BIT check UHF communication and audio signal systems	91
K581	Load LRU part numbers or serial numbers in CAMS	90
I390	Operationally and leak check pitot static and standby instrument systems	90
F233	Walk wings or tail during aircraft towing operations	90
I418	Remove or replace air data computer and primary instrument system LRUs	90
F159	Complete aircraft safe-for-maintenance checks	89
J504	Operationally or BIT check TACAN systems	88
G248	Remove or replace triaxial cables	87
G252	Remove, replace, or repair triaxial connectors	87
G245	Remove or install electrical relays	87
I453	Troubleshoot air data computer and primary instrument systems	86

TABLE A6

TEST SQUADRON JOB (STG128)

TASKS		PERCENT MEMBERS PERFORMING (N=5)
F176	Launch or recover aircraft	100
F180	Open or close airframe components, such as panels or doors	100
F151	Accomplish end-of-runway checks	100
F163	Connect or disconnect aircraft external power	100
F162	Connect or disconnect aircraft external cooling air units	100
F212	Remove or install airframe components, such as panels, doors, or radomrs	100
E117	Initiate, annotate, or review aircraft flight or maintenance records	100
G260	Trace wiring, system, or interface diagrams	100
F154	Clean aircraft, other than washing	100
G262	Troubleshoot aircraft wiring	100
F166	Ground aircraft	100
F230	Single-point or multipoint refuel or defuel aircraft	100
F153	Assist in removing or installing aircraft engines	100
G263	Troubleshoot coaxial cables and connectors	100
E120	Inventory tools, such as CTKs	100
F233	Walk wings or tails during aircraft towing operations	100
F181	Open or close canopies	100
G265	Troubleshoot multipin connectors	100
G238	Inspect chafing problem areas	100
G237	Inspect aircraft wiring	100
G241	Inspect multipin connectors	100
G239	Inspect coaxial cables and connectors	100
G256	Safety wire components	100
H305	Operationally or BIT check INSs	100
G264	Troubleshoot electrical relays	100
G258	Solder or crimp connections on aircraft wiring	100
F207	Raise or lower ejection seats	100
G251	Remove, replace, or repair multipin connectors	100
G266	Troubleshoot triaxial cables and connectors	100
G250	Remove, replace, or repair coaxial connectors	100
G261	Treat electrical components for corrosion	100
F157	Complete aircraft postflight inspection checklists	80
F158	Complete aircraft preflight inspection checklists	80
F156	Complete aircraft periodic inspection workcard items	80
F165	Determine serviceability of aircraft tires	80
G255	Research TOs	80
F183	Operationally check aircraft indicator warning lights	80
F161	Complete aircraft thruflight inspection checklists	80
F184	Operationally check aircraft lighting systems	80
A5	Coordinate maintenance work with appropriate personnel or agencies	80
H290	Operationally check FLIR systems	80
H303	Operationally or BIT check HUD systems	80

TABLE A7

FTD INSTRUCTOR JOB (STG139)

TASKS		PERCENT MEMBERS PERFORMING (N=9)
D87	Conduct FTD course classroom training	100
E134	Maintain TO files	100
D94	Develop FTD course training materials	100
D91	Counsel trainees on training progress	100
F162	Connect or disconnect aircraft external cooling air units	100
F163	Connect or disconnect aircraft external power	100
F164	Connect or disconnect aircraft hydraulic test stands or carts	100
F180	Open or close airframe components, such as panels or doors	100
F200	Preuse inspect maintenance stands	100
D83	Administer or score tests	89
D109	Score tests	89
B34	Direct maintenance of TO files	89
A19	Plan or schedule work assignments	89
C71	Evaluate work schedules	89
D101	Evaluate progress of trainees	89
B30	Counsel personnel on personal or military-related matters	89
F171	Inspect aircraft egress systems	89
F198	Preuse inspect hydraulic test stands or servicing carts	89
F181	Open or close canopies	89
G260	Trace wiring, system,, or interface diagrams	78
C66	Evaluate personnel for compliance with performance standards or TOs	78
D111	Write test questions	78
G255	Research TOs	78
D103	Maintain training devices	78
H308	Operationally or BIT check radar systems	78
C80	Write EPRs	78
A20	Plan or schedule work priorities	78
C60	Conduct performance feedback worksheet sessions	78
A15	Establish performance standards for subordinates	78
F159	Complete aircraft safe-for-maintenance checks	78
A24	Schedule personnel for leave or TDY assignments	78
A17	Plan briefings	78
C81	Write recommendations for awards and decorations	78
F166	Ground aircraft	78
F191	Preuse inspect aircraft external cooling air units	78
H298	Operationally check remote map reader systems	78
G235	Analyze ASP latch data	78
B56	Supervise military personnel with AFSCs other than 2A3X1	67
D84	Assign FTD course instructors	67
B45	Interpret policies, directives, or procedures for subordinates	67
D104	Maintain training records, charts, or graphs	67
D108	Procure training aids, space, or equipment	67

TABLE A8

DEBRIEFER JOB (STG127)

TASKS		PERCENT MEMBERS PERFORMING (N=13)
K560	Access CAMS menus and data screens	100
E124	Maintain debriefing forms	100
K563	Change CAMS workcenter event narratives	85
K561	Analyze CAMS data	77
K571	Correct CAMS errors noted during daily verification process	77
K587	Verify accuracy of CAMS daily inputs	69
K562	Change CAMS performing workcenter codes	69
K573	Correct CAMS work unit codes	69
G236	Debrief aircrews	54
K578	Initiate equipment maintenance discrepancies in CAMS	46
E117	Initiate, annotate, or review aircraft flight or maintenance records	38
K576	Establish CAMS historical reports	38
K572	Correct CAMS job standard narratives	38
K583	Start or stop CAMS job following events	31
K585	Update CAMS historical reports	31
E122	Maintain aircraft analysis historical records	31
A16	Establish work methods or controls	31
A1	Assign maintenance or repair work	23
A5	Coordinate maintenance work with appropriate personnel or agencies	23
B40	Implement self-inspection programs	23
B43	Implement work methods	23
K570	Conduct CAMS uncompleted maintenance event listing inquiries	23
A12	Develop self-inspection programs	23
G235	Analyze ASP latch data	15
B31	Direct development of status indicators, such as boards, graphs, or charts	15
A19	Plan or schedule work assignments	15
K569	Conduct CAMS training status inquiries	15
G244	Record ASP latch data	15
K564	Change equipment maintenance schedules in CAMS	15

TABLE A9

MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB
(STG55)

TASKS		PERCENT MEMBERS PERFORMING (N=13)
K560	Access CAMS menus and data screens	100
A5	Coordinate maintenance work with appropriate personnel or agencies	85
K561	Analyze CAMS data	85
B45	Interpret policies, directives, or procedures for subordinates	77
K587	Verify accuracy of CAMS daily inputs	62
B56	Supervise military personnel with AFSCs other than 2A3X1	62
C80	Write EPRs	62
C60	Conduct performance feedback worksheet sessions	62
B30	Counsel personnel on personal or military-related matters	62
A20	Plan or schedule work priorities	54
E123	Maintain aircraft or parts status indicators	46
K573	Correct CAMS work unit codes	46
K571	Correct CAMS errors noted during daily verification process	46
B31	Direct development of status indicators, such as boards, graphs, or charts	46
B29	Conduct supervisory orientations of newly assigned personnel	46
E150	Verify MICAP conditions	38
A19	Plan or schedule work assignments	38
B43	Implement work methods	38
A15	Establish performance standards for subordinates	38
D100	Evaluate personnel for training needs	38
K576	Establish CAMS historical reports	31
B36	Draft maintenance and inspection reports or charts	31
B32	Direct flightline maintenance activities	31
K570	Conduct CAMS uncompleted maintenance event listing inquiries	31
K578	Initiate equipment maintenance discrepancies in CAMS	23
K565	Clear or close out completed maintenance discrepancies in CAMS	23
C58	Analyze workload requirements	15

TABLE A10

QUALITY ASSURANCE JOB (STG117)

TASKS		PERCENT MEMBERS PERFORMING (N=10)
G241	Inspect multipin connectors	100
G239	Inspect coaxial cables and connectors	100
G237	Inspect aircraft wiring	100
G243	Inspect waveguides	100
G240	Inspect electrical relays	100
A9	Develop inspection procedures	100
C75	Inspect flightline maintenance actions	90
E118	Inspect tools or equipment	90
G242	Inspect triaxial cables and connectors	90
C77	Investigate accidents or incidents	90
G238	Inspect chafing problem areas	90
A11	Develop quality assurance programs	80
C69	Evaluate suggestions	80
C70	Evaluate TO improvement reports	80
C66	Evaluate personnel for compliance with performance standards or TOs	70
K560	Access CAMS menus and data screens	70
G255	Research TOs	70
C76	Inspect personnel for compliance with military standards	60
C82	Write staff studies, surveys, or special reports, other than training reports	60
K561	Analyze CAMS data	60
G260	Trace wiring, system, or interface diagrams	60
F181	Open or close canopies	60
E138	Participate in TCTO meetings	60
C63	Evaluate maintenance and inspection report findings	60
F180	Open or close airframe components, such as panel or doors	50
E120	Inventory tools, such as CTKs	50
B30	Counsel personnel on personal or military-related matters	50
C72	Identify problem areas using deficiency or service reports	40
B36	Draft maintenance and inspection reports or charts	40
C65	Evaluate maintenance or use of workspace, equipment, or supplies	40

TABLE A11

EXPEDITER JOB (STG107)

TASKS		PERCENT MEMBERS PERFORMING (N=20)
A1	Assign maintenance or repair work	100
A5	Coordinate maintenance work with appropriate personnel or agencies	100
B32	Direct flightline maintenance activities	95
B49	Supervise F-15/F-111 Avionic Systems Apprentices, Attack Control (AFSC 2A331A)	85
B50	Supervise F-15/F-111 Avionic Systems Apprentices, Comm, nav, and Pen Aids (AFSC 2A331C)	80
B51	Supervise F-15/F-111 Avionic Systems Apprentices, Instruments and Flight Controls (AFSC 2A331B)	80
B27	Adjust daily maintenance plans to meet operational commitments	75
A19	Plan or schedule work assignments	75
C75	Inspect flightline maintenance actions	75
B56	Supervise military personnel with AFSCs other than 2A3X1	75
B54	Supervise F-15/F-111 Avionic Systems Journeyman, Comm, Nav, and Pen Aids (AFSC 2A351C)	75
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (AFSC 2A371)	75
B53	Supervise F-15/F-111 Avionic Systems Journeymen, Attack Control (AFSC 2A351A)	75
B55	Supervise F-15/F-111 Avionic Systems Journeymen, Instruments and Flight Controls (AFSC 2A351B)	75
A20	Plan or schedule work priorities	70
K560	Access CAMS menus and data screens	70
C80	Write EPRs	65
F181	Open or close canopies	60
A6	Determine logistics requirements, such as space, personnel, or equipment	55
C58	Analyze workload requirements	55
A16	Establish work methods or controls	50
B45	Interpret policies, directives, or procedures for subordinates	50
A15	Establish performance standards for subordinates	50

TABLE A12

SUPERVISOR JOB (STG354)

TASKS		PERCENT MEMBERS PERFORMING (N=16)
C80	Write EPRs	100
B30	Counsel personnel on personal or military-related matters	100
C81	Write recommendations for awards and decorations	100
C71	Evaluate work schedules	100
C76	Inspect personnel for compliance with military standards	100
C75	Inspect flightline maintenance actions	100
C58	Analyze workload requirements	100
C60	Conduct performance feedback worksheet sessions	100
K560	Access CAMS menus and data screens	94
K561	Analyze CAMS data	94
A15	Establish performance standards for subordinates	94
C66	Evaluate personnel for compliance with performance standards or TOs	94
B56	Supervise military personnel with AFSCs other than 2A3X1	94
B52	Supervise F-15/F-111 Avionic Systems Craftsmen (AFSC 2A371)	94
B53	Supervise F-15/F-111 Avionic Systems Journeymen, Attack Control (AFSC 2A351A)	94
B55	Supervise F-15/F-111 Avionic Systems Journeymen, Instruments and Flight Controls (AFSC 2A351B)	94
B554	Supervise F-15/F-111 Avionic Systems Journeymen, Comm, Nav, and Pen Aids (AFSC 2A351C)	94
A1	Assign maintenance or repair work	94
B27	Adjust daily maintenance plans to meet operational commitments	87
A24	Schedule personnel for leave or TDY assignments	87
K587	Verify accuracy of CAMS daily inputs	87
A5	Coordinate maintenance work with appropriate personnel or agencies	87
B29	Conduct supervisory orientations of newly assigned personnel	87
A19	Plan or schedule work assignments	87
B32	Direct flightline maintenance activities	87
D85	Assign OJT trainers	87
D104	Maintain training records, charts, or graphs	87
K566	Conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance	81
A20	Plan or schedule work priorities	81
A2	Assign personnel to duty positions	81
A16	Establish work methods or controls	81
E117	Initiate, annotate, or review aircraft flight or maintenance records	81
B45	Interpret policies, directives, or procedures for subordinates	75
D100	Evaluate personnel for training needs	75
A3	Assign sponsors for newly assigned personnel	75
K570	Conduct CAMS uncompleted maintenance event listing inquiries	69
K569	Conduct CAMS training status inquiries	69
C74	Indorse EPRs	69

TABLE A13

MANAGER JOB (STG233)

TASKS		PERCENT MEMBERS PERFORMING (N=6)
A6	Determine logistics requirements, such as space, personnel, or equipment	100
D100	Evaluate personnel for training needs	100
A9	Develop inspection procedures	100
A21	Plan safety or security programs	100
B45	Interpret policies, directives, or procedures for subordinates	100
C81	Write recommendations for awards and decorations	100
B43	Implement work methods	100
B30	Counsel personnel on personal or military-related matters	100
K561	Analyze CAMS data	83
K560	Access CAMS menus and data screens	83
B31	Direct development of status indicators, such as boards, graphs, or charts	83
A5	Coordinate maintenance work with appropriate personnel or agencies	83
K568	Conduct CAMS training	83
K575	Determine CAMS training requirements	83
A19	Plan or schedule work assignments	83
D92	Determine training requirements, other than CAMS training	83
A15	Establish performance standards for subordinates	83
A16	Establish work methods or controls	83
E119	Inventory equipment or supplies	83
D101	Evaluate progress of trainees	83
C72	Identify problem areas using deficiency or service reports	83
A20	Plan or schedule work priorities	83
A10	Develop organizational or functional charts	83
C58	Analyze workload requirements	83
D108	Procure training aids, space, or equipment	83
D97	Direct or implement training programs	83
A17	Plan briefings	83
A2	Assign personnel to duty positions	83
C76	Inspect personnel for compliance with military standards	83
D103	Maintain training devices	83
C68	Evaluate safety or security programs	83
D104	Maintain training records, charts, or graphs	83
C65	Evaluate maintenance or use of workspace, equipment, or supplies	83
A23	Schedule or project equipment replacements	83
C59	Complete graduate evaluation questionnaires or forms	83
A22	Schedule equipment or facility inspections	83
B39	Implement safety or security programs	83
B40	Implement self-inspection programs	83
B29	Conduct supervisory orientations of newly assigned personnel	83
A26	Write job descriptions	83
A11	Develop quality assurance programs	83
B38	Implement cost-reduction programs	83

TABLE A14

TOOLS AND EQUIPMENT JOB (STG96)

TASKS		PERCENT MEMBERS PERFORMING (N=23)
E120	Inventory tools, such as CTKs	100
E118	Inspect tools or equipment	100
E121	Issue tools, equipment, or supplies	96
E119	Inventory equipment or supplies	96
E135	Maintain tool cribs	87
E126	Maintain ECLs	83
E139	Perform security checks of tool cribs, hangars, or vehicles	74
E143	Process tools or equipment for shipment or deployment	70
C80	Write EPRs	57
E141	Process damaged tools for distribution or replacement	52
B47	Review test equipment calibration schedules	52
C60	Conduct performance feedback worksheet sessions	48
E134	Maintain TO files	43
E114	Dress or resurface tools, such as brass hammers or chisels	43
B35	Direct utilization or maintenance of equipment	43
E130	Maintain special tools or equipment calibration records	43
B30	Counsel personnel on personal or military-related matters	43
E147	Review or update PMEL or TMDE listings	39
A4	Coordinate calibration of special tools or test equipment with PMEL	39
E148	Schedule test equipment for repair or calibration	39
A12	Develop self-inspection programs	39
A9	Develop inspection procedures	39
A20	Plan or schedule work priorities	35
C57	Analyze recurring troubles on equipment identified by deficiency or service reports	35
B34	Direct maintenance of TO files	30
B56	Supervise military personnel with AFSCs other than 2A3X1	30
E136	Monitor hazardous waste programs	30
E132	Maintain test equipment calibration or repair reports	30
E128	Maintain property CA/CRLs	26
E146	Report TO deficiencies	17

APPENDIX B

ACRONYM/ABBREVIATION LIST

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ACRONYM/ABBREVIATION LIST

AA/IFF - air-to-air identification friend or foe
ADF - automatic direction finder
AFCS - automatic flight control system
AFPC - Air Force Personnel Center (formerly AFMPC)
AFRS - auxiliary flight reference system
AG/IFF - air-to-ground identification friend or foe
AICS - air inlet control system
ASP - avionics status panel
BIT - built-in test
CA/CRL - custodian authorization/custody receipt listing
CAMS - core automated maintenance system
CC - central computer
CDS - control and display system
CMDS - countermeasures dispenser system
CRS - countermeasures receiver system
CTK - consolidated tool kit
DG - displacement gyro
DIFM - due in from maintenance
DRD - digital readout display
ECL - equipment control listing
ECM - electronic countermeasure
EPR - engine pressure ratio
EWWS - electronic warfare warning system
FLIR - forward looking infrared
FTD - field training detachment
GPS - global positioning system
HSI - horizontal situation indicating
HUD - heads-up display
IBS - interference blanker system
ICNIS - integrated communication navigation and identification system
IDS - integrated display system
IG - indicator group
ILS - instrument landing system
INS - inertial navigation system
JQS - job qualification standard
JSS - jamming subsystem
JTIDS - joint tactical information display system
LCCS - landing configuration caution system
LCG - lead computing gyro
LRU - line replaceable unit
MDC - maintenance data collection
MFD - multifunction display
MICAP - mission capability
MPDP - multipurpose display processor
MUX BUSS- multiplex data buss
NCI - navigator control indicator
OFP - operational flight program
OJT - on-the-job training
OWS - overload warning system
PDG - programmable display generator
PMEL - precision measurement equipment laboratory
POI - plan of instruction
RWR - radar warning receiver
SPRAM - special purpose recoverable authorized maintenance
STS - specialty training standard
TACAN - tactical air navigation
TAFMS - total active force military service
TCTO - time compliance technical order
TFR - terrain following radar
TMDE - test, meteorological, diagnostic equipment
TO - technical order
TTWS - terminal threat warning system