

**UNITED STATES
AIR FORCE**

OCCUPATIONAL SURVEY REPORT



A-10/F-15/U-2 AVONICS SYSTEMS

AFSC 2A3X1

OSSN: 2513

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**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
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PREFACE

This report presents the results of an Air Force Occupational Survey of the A-10/F-15/U-2 Avionics Systems career ladder (AFSC 2A3X1). Authority for conducting an occupational survey is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force career field manager, technical training school, all major using commands, and other interested operations and training officials.

Mr. Scott Vap, Inventory Development Specialist, developed the survey instrument. Dr. Burke Burright, Occupational Analyst, analyzed the data and wrote the final report. Mr. Tyrone Hill provided computer-programming support, and Ms. Sherry Evans provided administrative support. Major Jose Caussade, Chief, Enlisted Analysis Section, reviewed and approved this report for release.

Additional copies of this report may be obtained by writing to AFOMS/OAOD, 1550 5th Street East, Randolph AFB TX 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our website at <https://www-r.omsq.af.mil/>. (Note: If you experience a Microsoft Word security problem after clicking on the above link, please copy the web address into the Address window in your web browser.)

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**OCCUPATIONAL SURVEY
A-10/F-15/U-2 AVONICS SYSTEMS
(AFSC 2A3X1)**

EXECUTIVE SUMMARY

1. **Survey Coverage:** The A-10/F-15/U-2 Avionics Systems career ladder was surveyed to obtain current task and equipment data for use in evaluating current training programs. The data will also be used to support specialty knowledge test (SKT) development. Surveys were sent to 1,115 active duty (AD) and 158 Air National Guard (ANG) members. Survey results were based on 724 members responding (644 AD and 80 ANG).

2. **Specialty Jobs:** Job structure analysis identified three clusters of jobs and four independent jobs within the specialty. Eighty percent of the respondents perform work as described in jobs in the Flightline Cluster. As airmen in the career field gain experience, most broaden out from focusing on a specific shred and aircraft to focusing just on the A-10 aircraft or the F-15 aircraft. A handful of airmen remain highly specialized working on the U-2 aircraft.

3. **Career Ladder Progression:** As AD airmen in the career ladder progress from the 3-skill level to the 5-skill level, most continue to work in jobs within the Flightline Cluster; however, a few move to specialized or management jobs. Moreover, all of their jobs become broader; AD airmen at the 3-skill level perform an average of 139 tasks, while AD airmen at the 5-skill level perform an average of 185 tasks.

At the 7-skill level, the percentage of airmen within jobs in the Flightline Cluster shrinks drastically but still remains greater than 50%. The percentage of 7-skill-level airmen in jobs in the Management and Supervision Cluster increases sharply to 28%. However, 7-skill-level personnel in the ANG remain much more focused on hands-on maintenance activities than do 7-skill-level personnel on active duty.

4. **Training Analysis:** The training analysis included separate analyses of the common and three shred-specific sections of the specialty training standard and (STS) as well as the plans of instruction (POIs) for the six 3-skill-level awarding courses. Each analysis was performed with the data for the sub-sample most germane to the section or course. For example, the analysis of the *F-15 Avionics Attack Control Systems Apprentice* course used data for shred first-enlistment and AFSC 2A331A personnel who indicated that they worked on F-15 aircraft.

- The analysis found only a few STS elements that warrant consideration for deletion.
- Several learning objectives involving inspection procedures and ordering line replaceable units (LRUs) could be considered for elimination from various courses. More experienced members of the career ladder appear to conduct inspections and order LRUs.

- Every course, except the *F-15 Avionics Attack Control Systems Apprentice* course, failed to train many tasks with high automated training indicator (ATI) values. These five courses might warrant consideration for lengthening.

5. Job Satisfaction Analysis: Overall job satisfaction is good. Most members of the AFSC 2A3X1 career ladder find that their jobs are interesting and provide them with a sense of accomplishment. However, many members do not feel that their jobs fully use their talents and training. Members in the Equipment Control Independent Job (IJ) (N=7) strongly dislike their jobs. During the 7 years since the last study of the AFSC 2A3X1 career ladder, reenlistment intentions have fallen significantly.

6. Retention Dimensions: Members of AFSC 2A3X1 reenlist because they like the job security, the pay, and the retirement, medical, and educational benefits the Air Force provides. Members of the career ladder are separating (and cross training) because they do not perceive the pay and allowances to be worth the long work hours resulting from low unit manning. This finding is supported by a review of write-in comments as well as by responses to background questions.

INTRODUCTION

Air Force Occupational Measurement Squadron (AFOMS)

Occupational Analysis Program

Our mission is to provide occupational data for decisionmakers, allowing them to make informed personnel, training, and education decisions, based not on opinion and conjecture, but on empirical, quantitative data.

Survey Development Process

An occupational survey begins with a job inventory (JI) -- a list of all the tasks performed by members of a given Air Force specialty code (AFSC) as part of their actual career field work (that is, additional duties and the like are not included). We include every function that career field members perform by working with technical training personnel and operational subject-matter experts (SMEs) to produce a task list that is complete and understandable to the typical job incumbent. The SMEs write each task to the same level of specificity across duty areas, and no task is duplicated in the task list.

In addition to this comprehensive task list, job inventories include a number of background questions that deal with demographic information, job satisfaction, equipment usage, and any other area that our customers, such as career field managers (CFMs) and technical school personnel, may request.

Furthermore, the JI is only one of the survey instruments that AFOMS produces. The JI task list is used in creating several other surveys that are important for developing and refining career field training programs and for developing career field promotion tests; these surveys and how their results are used will be described later in the report.

Survey respondents are asked to examine all tasks in the JI and select each task that they perform in their present job. They are then asked to rate each task they chose on a scale of 1 to 9 according to how much relative time they spend performing that task in their present job, compared to all the other tasks in the inventory. These ratings are converted into estimates of actual relative job time spent performing each task.

Survey Administration

The sample of members who receive the JI primarily depends on the size of the career ladder. We typically survey 100% of all eligible members in career ladders numbering 3,000 or fewer assigned members. For career ladders larger than 3,000 members, we select a random sample of half of the eligible members, and for very large career ladders, we may sample one-third of all the eligible members. Return rates (the percentage of completed, usable surveys we receive back from the field) generally run between 50% - 70% or greater. All this combines to produce very large and very representative samples in almost every study we conduct, compared to the

samples obtained by private commercial surveying and marketing firms, and this in turn leads to highly accurate information about the work and demographics of the career field.

Responding to the JI can be somewhat time-consuming when the number of tasks is large, but it is a simple process. Respondents are asked to examine each task and select each task that they perform in their present job. They are then asked to rate each task they chose on a scale of 1 to 9 (unchosen tasks are given a 0 rating), according to how much relative time they spend performing that task in their present job, compared to all the other tasks they chose in the inventory. These ratings are converted into estimates of actual relative job time spent performing each task.

Survey Analysis

Survey responses are processed using a set of computer programs called the Comprehensive Occupational Data Analysis Programs (CODAP). We are able to calculate some important basic information about each task from the information that respondents provide in the JI: the percent members performing (PMP) and the percent time spent (PTS). CODAP forms groups of survey respondents according to the similarity of their task performance, and our analysts study these groupings to identify distinct jobs. Further, we can provide PMP and PTS information for any subgroup. For example, we can easily determine the percent of E-5s or 3-skill-level or first-term airmen who perform each task, and estimate the average amount of job time they spend performing it. This is important because many of the applications of our data target particular subgroups within the career ladder.

Uses of Survey Data

Survey results are formally reported in an **occupational survey report (OSR)**. The OSR is by no means the only product of an occupational survey study. The OSR provides a high-level "snapshot" of an entire AFSC in a compact package, but it is not intended to provide the comprehensive information needed to support important decisions about a career field. That is the purpose of "data extracts," which are comprehensive, detailed sets of CODAP-generated reports designed for particular applications.

The Training Extract -- AFOMS survey data are essential to technical training personnel. The training extract provides information about what career ladder incumbents are actually doing in their jobs at each stage of their career, along with supporting information regarding when and how members should be trained to perform their jobs. The data found in the training extract regarding first-term, first-job, and 3-skill-level members are the *primary source of empirical information* available to support such decisions.

In addition to the JI, AFOMS produces two other surveys that directly support the training community. Depending on the size of the career ladder, a sample of at least 50 (and frequently 100 or more) 7-skill-level craftsmen is selected to complete a training emphasis (TE) survey. A similar-sized sample of other 7-skill-level craftsmen is selected to complete a task difficulty (TD) survey.

The TE survey, like the JI, contains the complete career ladder task list, and, like the JI, respondents are asked to rate tasks on a 1 to 9 scale (tasks not rated by the respondent are assigned a "0" rating). Unlike the JI, however, respondents are asked to rate tasks based on how much emphasis they believe should be placed on that task for entry-level structured training. A "1" rating indicates the respondent's belief that very little emphasis be placed on providing structured training on that task. A rating of "9" indicates that it is essential to provide structured training on the task. Structured training is defined as resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. The responses of the entire sample of raters are averaged for each task, and the result is a TE rating for each task.

The TD survey also contains the full task list and requests that respondents rate each task *with which they are familiar* on a scale of 1 to 9 ("1" is low, "9" is high), but this time respondents are asked to rate the amount of time needed to learn to perform that task satisfactorily. In other words, as the name implies, TD is an indicator of how difficult the task is to perform. The average TD rating for each task in the inventory is standardized with a mean rating of 5.0 and a standard deviation of 1.0.

When used in conjunction with the PMP and PTS for first-enlistment members, average TE and TD ratings provide insight into the appropriate training requirements for new personnel in the career ladder. These four indices (PMP, PTS, TE, and TD) are used to compute a composite index, the automated training indicator (ATI), for each task. The ATI expresses, in a single number between 1 and 18 the most appropriate training setting and approach for providing training for that task. ATIs allow training developers quickly to focus attention on those tasks that are most likely to qualify for resident course consideration. Further information concerning TE and TD ratings and ATIs for the entire task list can be found in the training extract that accompanies this OSR.

The major users of training extract information are attendees at utilization and training workshops (U&TWs). The U&TW is a summit of representative career ladder, training, and classification leaders who evaluate current training efficiency and effectiveness in order to propose and approve changes to the specialty training standard (STS) or course training standard (CTS), particularly with regard to 3-skill-level training, and to address utilization issues. The AFSC's job description in Attachment 6 of AFMAN 36-2108, *Enlisted Classification*, is also reviewed and appropriately revised in light of the survey data to reflect the jobs being performed by the career ladder members.

Part of the process of compiling the training extract involves the *STS matching* process, during which technical school personnel match JI tasks to STS elements; that is, they tell us what particular task or tasks correspond to each STS element when it is covered in training. This is especially useful when STS performance codes are being reviewed for the 3-skill-level course. For example, the U&TW attendees might be asked to consider adding a task performance code to an STS element that previously has been trained only to a knowledge level. JI, TE, and TD data, combined in the form of the ATI, are important in determining the appropriate proficiency code. Separate training extracts are produced for AD, ANG, and AFRC members.

The Specialty Knowledge Test (SKT) Extract -- AFOMS survey data are key to ensuring that SKTs are valid. SKTs are an important part of the Weighted Airman Promotion System (WAPS). Since an airman's test score is frequently the deciding factor in determining who is promoted, SKTs must be valid, fair, and credible.

In terms of SKTs, *valid* means that every question on the test is tied to a task which has been shown to be important to successful performance in the specialty. This tie is crucial to documenting the validity of SKT content.

AFOMS surveys provide test writers with information on the PMP, PTS, TD, and TE. This information is combined to produce a composite index called the predicted testing importance (PTI). Those tasks that are rated highest in PTI are ones that tend to be high in all four of our primary indices -- PMP, PTS, TD, and TE -- exactly the kinds of tasks that one would generally consider job-essential and that should form the basis for test questions. PTI information is used for minor test revisions; how it is used will be explained shortly.

Field-validated testing importance (FVTI) data are produced for major test revisions. Approximately 6 months before the start of test development, a sample of 100 senior career field NCOs is sent a survey containing a list of the 150-200 tasks rated highest in PTI. Respondents are asked to provide a 1-7 rating ("1" is low, "7" is high) of how important they believe it is to include a question concerning that task on the SKT. The responses are averaged for each task, yielding the FVTI index -- a direct measure of the opinions of career field experts as to what constitutes "job-essential" knowledge.

PTI and FVTI information is included in the SKT extract, which is specifically tailored for use by the SKT teams who come to AFOMS to write the promotion examinations. Two sets of reports are prepared -- one set uses only data for E-5s and the other uses combined data for E-6s and E-7s. Each report gives the SKT team information on every task's PMP, PTS, and PTI, and, for major test revisions, FVTI data. Occupational survey data are thus the only objective source of information available to the team regarding how to make the test they write meet legal requirements for validity and fairness.

The Analysis Extract -- The analysis extract is an archive of all the data collected in the course of a study that are not incorporated into one of the other extracts. We typically produce separate analysis extracts for AD and ANG/AFRC members. The analysis extract is usually an enormous document, a compilation of the many reports that "slice and dice" the data in virtually every potentially useful way. Just about any question anyone has regarding career ladder work, personnel, or training and utilization issues can be answered by consulting one or another of the reports in the analysis extract.

The Occupational Survey Report -- The OSR captures survey data and analysis both in breadth and depth. For ease of reading, the first half of the OSR concentrates on breadth with compelling factors and implications across the specialty. Tables following the narrative show depth with regard to these factors and implications. Where appropriate, highlights of the tables are contained in the body.

**OCCUPATIONAL SURVEY REPORT (OSR)
A-10/F-15/U-2 AVIONICS SYSTEMS
(AFSC 2A3X1)**

This is a report of an occupational survey of the A-10/F-15/U-2 Avionics Systems career ladder, conducted by the Occupational Analysis Flight, AFOMS. The OSR reports the findings of current data that are available for use in guiding the development and evaluation of training and support planned changes within this career ladder. In addition, the data are used to support SKT development. The previous OSR was completed in June 1996, before the realignment of the career ladder and when it was called F-15/F-111 Avionics Systems.

Career Ladder Background

According to the specialty description in AFMAN 36-2108, *Enlisted Classification*, dated 30 April 2003, personnel in this career ladder: isolate malfunctions and repair and inspect A-10, F-15, and U-2 integrated avionics systems at organizational levels; and inspect, service, and perform general aircraft procedures.

Individuals at the 3- and 5-skill levels hold one of three shreds:

- 2A3X1A: Avionics Attack Control Systems
- 2A3X1B: Avionics Instrument and Flight Control Systems
- 2A3X1C: Avionics Communication, Navigation, and Penetration Aids Systems

As airmen progress up the career ladder, they are expected to expand their capabilities beyond their particular shreds. So, when they achieve the 7-skill-level, they drop their shred designations and are simply AFSC 2A371s.

A prerequisite course for entry into the AFSC 2A3X1A/B/C career ladder is Electronic Principles, a 34-day course taught at Keesler AFB MS. Entrants into the career field are then required to complete one of six courses at Sheppard AFB TX:

- J3ABR2A331A 003, *F-15 Avionics Attack Control Systems Apprentice* course, is 15 weeks and 1 day long and provides airmen with the basic skills and knowledge needed to perform organizational-level attack control systems maintenance on F-15 aircraft. The training includes weapons control radar, overload warning, heads-up display, lead computing gyro, inertial navigation, central computer, video tape recording, memory loader verifier, and RF tester systems.
- J3ABR2A331B 003, *F-15 Avionics Instrument and Flight Control Systems Apprentice* course, is 15 weeks and 2 days' long and provides airman with the basic skills and knowledge needed to perform organizational-level maintenance and flight control systems maintenance on F-15 aircraft. Training includes hydraulic pressure

indicating, nozzle position indicating, tachometer, turbine inlet temperature engine pressure ratio indication, fuel flow, translating cowls, spike, engine low compressor bleed, fuel quantity indicating, fuel distribution, pitot static/standby instruments, and air data computer systems. It also includes primary instruments, auxiliary flight reference instruments, flight director, G-exceedance indicating, airborne signal data recording, flight auto pilot, stall warning, and landing configuration caution systems.

- J3ABR2A331C 003, *F-15 Avionics Communication, Navigation, and Penetration Aids Systems Apprentice* course, is 15 weeks and 3 days' long and provides airmen with basic skills and knowledge needed to perform organizational-level communications, navigation, and penetration aids systems maintenance on F-15 aircraft. Training includes UHF communication, audio signals, secure speech, automatic direction finder, instrument landing, tactical air navigation, identification friend or foe (IFF), air-to-air IFF interrogator, radar warning receiver, electronic warfare, internal countermeasures, external countermeasures, interference blanking, and countermeasures dispenser systems.
- J3ABR2A331A 004, *A-10 (MRA) Avionics Attack and Control Systems Apprentice* course, is 10 weeks and 2 days' long and provides airmen with the basic skills and knowledge needed to perform organizational-level attack control systems maintenance on A-10 aircraft. Training includes weapons control radar, overload warning, heads-up display, computing gyro, inertial navigation, central computer, load verifier, and RF tester systems.
- J3ABR2A331B 004, *A-10 (MRA) Avionics Instrument and Flight Control Systems Apprentice* course, is 14 weeks and 3 days' long and provides airmen with the basic skills and knowledge needed to perform organizational-level maintenance and flight control systems maintenance on the A-10 aircraft. Training includes hydraulic pressure indicating, nozzle position indicating, tachometer, turbine inlet temperature engine pressure ratio indication, fuel flow, translating cowls, spike, engine low compressor bleed, fuel quantity indicating, and fuel distribution. It also includes static/standby instruments, auxiliary flight reference instruments, flight director, G-exceedance indicating, airborne signal data recording, flight auto pilot, stall warning, and landing configuration caution systems.
- J3ABR2A331C 004, *A-10 (MRA) Avionics Communication, Navigation, and Penetration Aids Systems Apprentice* course, is 15 weeks' long and provides airmen with the basic skills and knowledge needed to perform organizational-level communication, navigation, and penetration aids systems maintenance on A-10 aircraft. Training includes ultra-high frequency communication, audio signals, secure speech, automatic direction finder, instrument landing, tactical air navigation, IFF, air-to-air identification IFF interrogator, radar warning receiver, electronic warfare, internal/external countermeasures, interference blanking, and countermeasures dispenser systems.

The course an airman will attend depends on which shred he or she will acquire and which aircraft he or she will maintain. Airmen who will initially maintain the F-15 attend one of the first three courses; airmen who will initially maintain the A-10 or U-2 attend one of the last three courses.

In addition, airmen slated to maintain the F-15E aircraft go on to one of three 3-skill-level follow-on courses. The J3AZR2A331A 002, *F-15E Avionics Attack Control Systems Apprentice* course, lasts an additional 4 weeks and 3 days and provides additional training for advanced avionics attack control systems installed in the F-15E aircraft. The J3AZR2A331B 002, *F-15E Avionics Instrument and Flight Control Systems Apprentice* course, lasts an additional 2 weeks and provides additional training for advanced avionics instrument and flight control systems installed in the F-15E aircraft. The J3AZR2A331C 002, *F-15E Avionics Communication, Navigation, and Penetration Aids Systems Apprentice* course, lasts an additional 2 weeks and 4 days.

Entry into AFSC 2A3X1 career ladder requires an Armed Forces Vocational Aptitude Battery (ASVAB) "electrical" score of 67 and a strength requirement of "L" (weight lift of 80 lbs). For entry into this specialty, members must have normal color vision as defined in AFI 48-123, *Medical Examination and Standards*. For award and retention in this AFSC, members must be eligible for a Secret security clearance according to AFI 31-501, *Personnel Security Program Management*. Finally, this AFSC is not open to non-United States citizens but is open to US nationals.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF job inventory (JI) occupational survey study number (OSSN) 2513, dated July 2002. During the development of the comprehensive task list, 21 subject-matter experts from 4 operational bases and 1 training unit were interviewed. The survey requested such standard background information as: base of assignment; command of assignment; total active federal military service (TAFMS), time in career field (TICF), and time in present job (TIPJ); job title; work or functional area; paygrade; job satisfaction and reenlistment intentions; and equipment and tools used or operated. Additional background items concerned the aircraft on which one maintained avionics systems and, if one held AFSC 2A371, through which they obtained the 7-skill level. The inventory listed 614 tasks grouped under 11 duty headings and a background section. (The complete survey is available on the CD containing the products from this study.)

<u>BASE</u>	<u>REASON FOR VISIT</u>
Sheppard AFB TX	Technical training school
Nellis AFB NV	A-10A, F-15C/D, and F-15E
Beale AFB CA	U-2
Barnes ANGB MA	A-10
Otis ANGB MA	F-15A/B

AFSC 2A3X1 Survey Administration

From July to November 2002, survey control monitors at the technical training school and operational bases administered the inventory to all eligible DAFSC 2A331, 2A351, and 2A371 AD and ANG personnel. Members ineligible to take the survey included the following: (1) hospitalized members; (2) members in transition for a permanent change of station; (3) members retiring within the time the inventories were administered to the field; and (4) members who had been in their present jobs for less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from data tapes maintained by the Air Force Personnel Center, Randolph AFB, TX.

Survey Sample

The data on survey returns were examined to ensure that the final sample reflected an accurate representation across major commands (MAJCOMs), paygrades, and skill levels. Table 1 displays the distribution of the survey sample by MAJCOM, while Table 2 displays the survey distribution by paygrade groups. Table 3 displays the final sample distribution by skill level. Table 4 displays the component characteristics for the AD and ANG members in the final sample.

TABLE 1

MAJCOM REPRESENTATION OF TOTAL SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
ACC	43	41
PACAF	16	20
AETC	13	11
USAFE	10	12
AFMC	5	5
ANG	12	11
OTHER**	1	0

TOTAL ASSIGNED* = 1,522

TOTAL ELIGIBLE*** = 1,273

TOTAL MAILED**** = 1,209

TOTAL SAMPLED = 724

PERCENT OF ASSIGNED IN SAMPLE = 48%

PERCENT OF ELIGIBLE IN SAMPLE = 57%

PERCENT OF MAILED IN SAMPLE = 60%

* Assigned strength as of June 2002

** Other includes AFOSI, AFOTE, AFSPC, AIA, and USAFA

*** Ineligibility defined as: hospitalized members; members in transition for a permanent change of station; members retiring within the time the inventories were administered to the field; and members who had been in their present jobs for less than 6 weeks.

**** Due to a recent AFSC realignment, the initial mailing list received from AFPC was incomplete. A second mailing was necessary to ensure that the entire career ladder was surveyed. As a result, it is possible only to estimate the total number of surveys mailed.

TABLE 2**PAYGRADE DISTRIBUTION OF SURVEY SAMPLE**

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED**</u>	<u>PERCENT OF SAMPLE</u>
E-1 - E-2	3	1
E-3	16	16
E-4	25	25
E-5	29	34
E-6	16	19
E-7	11	5
E-8	*	0

* Indicates less than 1%

** As of June 2002

Note: Columns may not add to 100% due to rounding.

TABLE 3**SKILL-LEVEL DISTRIBUTION OF SAMPLE**

<u>SKILL LEVEL</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
2A331	29	27
2A351	46	51
2A371	25	22

* As of June 2002

TABLE 4**COMPONENT CHARACTERISTICS**

	<u>AD</u>	<u>ANG</u>
ASSIGNED*	1,334	188
SURVEYED **	1,115	158
SAMPLE	644	80
% OF SURVEYED	58%	51%

* As of June 2002

** Due to a recent AFSC realignment, the initial mailing list received from AFPC was incomplete. A second mailing was necessary to ensure that the entire career ladder was surveyed. As a result, it is possible only to estimate the total number of surveys mailed.

The command, paygrade, and skill-level distributions of the survey sample are close to the percent assigned, indicating that the sample is a true representation of the career ladder.

AFSC 2A3X1 SPECIALTY JOBS

The first step in the analysis process is to identify the career ladder structure in terms of the jobs performed by the respondents. CODAP creates 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. Human analysis of the final output, aided by additional measures of similarities and differences between groups, determines the final job structure of the career field as described below.

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. Jobs not falling within any cluster are identified as Independent Jobs (IJs). The structure of the career ladder is then defined in terms of clusters, jobs, and independent jobs. The job structure resulting from this grouping process (the various jobs within the AFSC) can be used to evaluate the changes that have occurred in the AFSC since the previous OSR. It can also be used to guide future changes in the AFSC. The above terminology will be used in the discussion of the AFSC 2A3X1 career ladder.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, three clusters and four independent jobs were identified within the A-10/F-15/U-2 Avionics Systems career ladder. Figures 1, 1A, 1B, and 1C display this job structure. Table 5 displays the relative percent time spent on duty areas by specialty clusters and jobs. A written outline of the job structure follows. The stage (STG) number shown beside each title refers to computer-generated tracking information of no importance to the reader. The letter "N" represents the number of sample members in each group. Demographic information is displayed in Table 6. Tables A7-A13 provide detailed descriptions of the clusters and IJs listed below. In addition, the tables show some distinguishing tasks performed by members of jobs identified within clusters.

I. FLIGHTLINE CLUSTER (STG 027, N = 562)

- A. Wiring and Cable Job (STG 220)
- B. U-2 Electronic Warfare Job (STG 112)
- C. F-15 Attack Control Systems Job (STG 090)
- D. Communications, Navigation, and Penetration Aids Job (STG 102)
- E. F-15 Flight Control Job (STG 155)
- F. U-2 Flight Control Job (STG 215)
- G. F-15 Mid-Career Generalist Job (STG 171)
- H. U-2 Communications Job (STG 164)
- I. A-10 Mid-Career Generalist Job (STG 145)

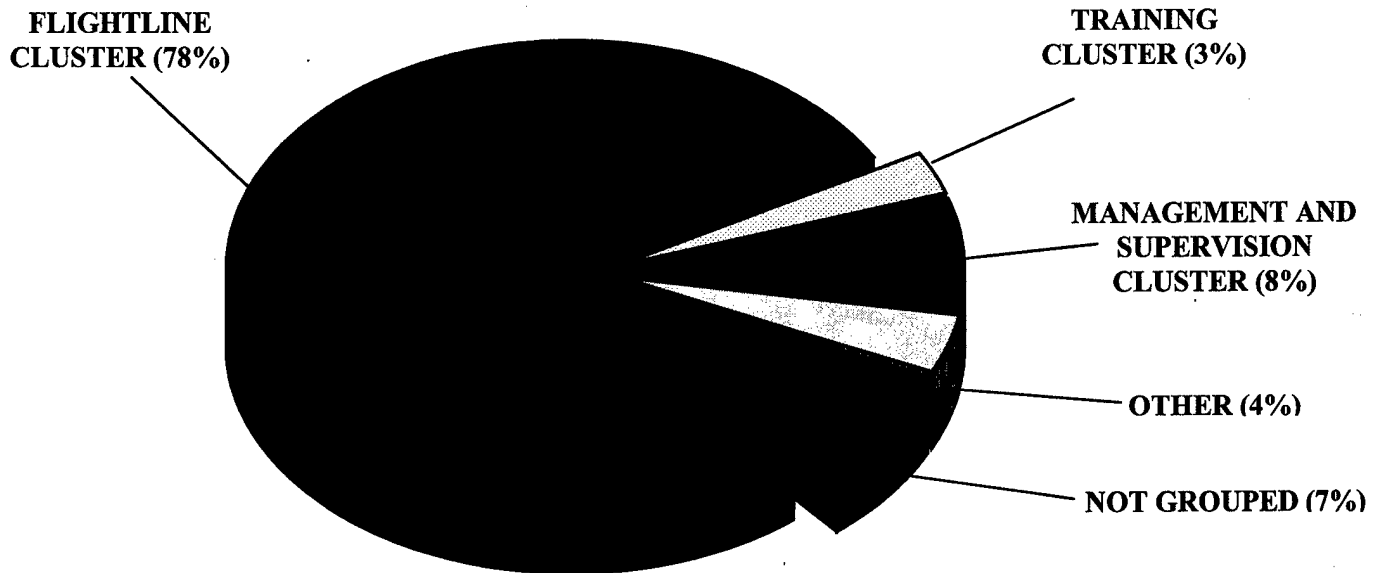
- II. TRAINING CLUSTER (STG 038, N = 21)**
 - A. Technical School Instruction Job (STG 064)
 - B. Continuation Training Instruction Job (STG 069)
- III. DEBRIEFER IJ (STG 133, N = 10)**
- IV. MANAGEMENT AND SUPERVISION CLUSTER (STG 048, N = 58)**
 - A. Expeditor Job (STG 819)
 - B. Quality Assurance Job (STG 187)
 - C. Flightline NCOIC Job (STG 099)
 - D. Non-Flightline NCOIC Job (STG 089)
- V. SCHEDULE CONTROL IJ (STG 058, N = 6)**
- VI. EQUIPMENT CONTROL IJ (STG 045, N = 7)**
- VII. DEPLOYMENT MANAGEMENT IJ (STG 113, N = 6)**

The military members forming these jobs and clusters account for 93% of the survey sample. The remaining 7% were performing tasks or series of tasks that did not group with any of the defined jobs. Job titles given by the respondents of these personnel include F-22 Acceptance Inspector, Hazardous Waste Material Manager, Technical Order Distributor, and Courseware Developer.

The figures and tables suggest several key points.

- As is clear in Figure 1, almost 80% of the respondents perform tasks as described in the Flightline Cluster.
- As airmen gain experience in the Flightline Cluster, many move into the F-15 or A-10 Mid-Career Generalist Jobs. Airmen in these two jobs typically have been in the Air Force longer and perform more tasks than airmen in most other jobs within the Flightline Cluster (see Table 6). These two jobs encompass work from more than one shred.
- A handful of airmen remain highly specialized working on the U-2 aircraft. The less experienced of the U-2 specialists are in the U-2 Electronic Warfare Job. Airmen in the U-2 Flight Control Job and the U-2 Communications Job are among the most experienced individuals within the Flightline Cluster (see Table 6).
- Less than 5% of the career ladder are in four highly distinct niche jobs: the Debriefing IJ, the Schedule Control IJ, the Equipment Control IJ, and the Deployment Management IJ (see Table 5).

**AFSC 2A3X1 A-10/F-15/U-2 AVIONICS SYSTEMS
SPECIALTY JOBS
(N=724)**

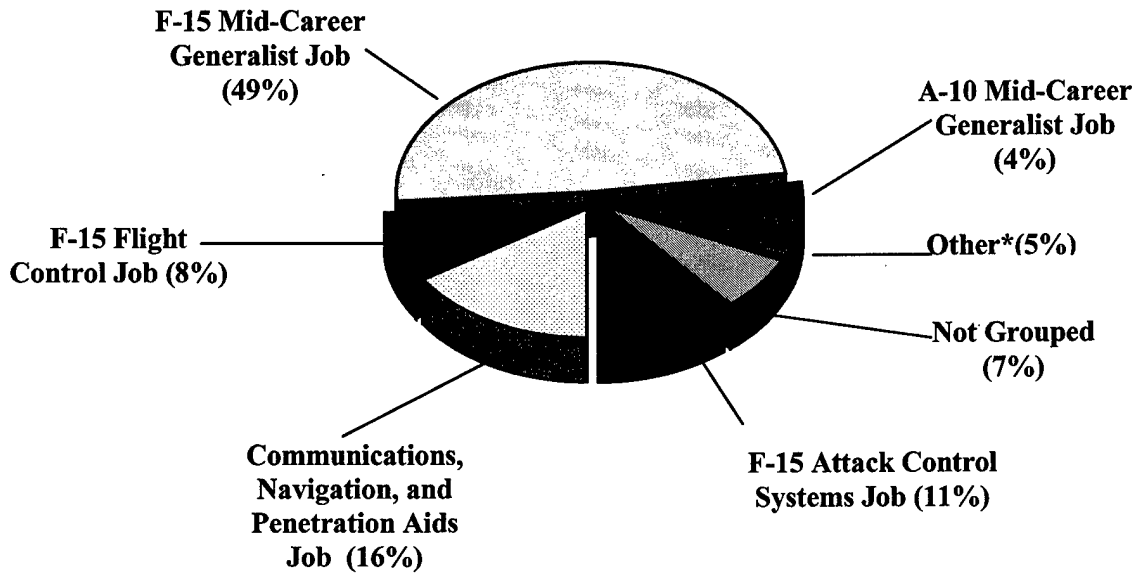


***Other includes:**

- Debriefing IJ (1%)
- Schedule Control IJ (1%)
- Equipment Control IJ (1%)
- Deployment Management IJ (1%)

FIGURE 1

JOBS WITHIN THE FLIGHTLINE CLUSTER
(N=562)



*Other includes:

- Wiring and Cable Job (1%)
- U-2 Electronic Warfare Job (1%)
- U-2 Flight Control Job (1%)
- U-2 Communications Job (2%)

FIGURE 1A

JOBS WITHIN THE TRAINING CLUSTER
(N=21)

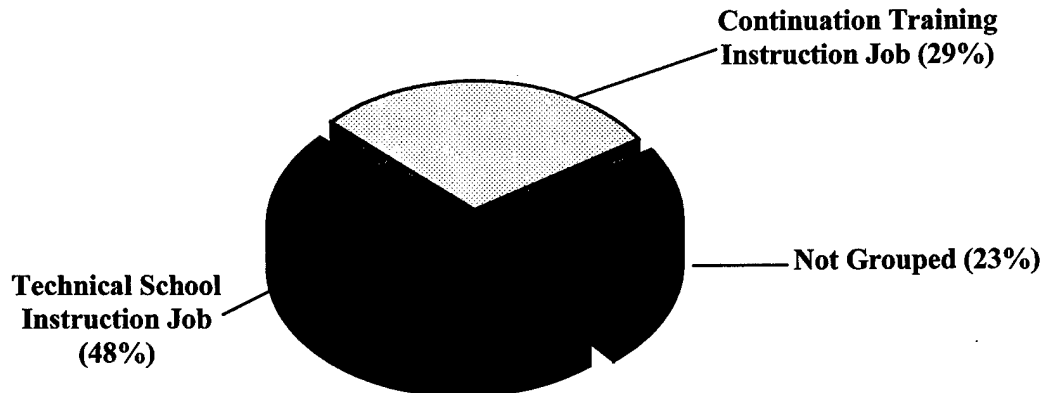


FIGURE 1B

**JOBS WITH THE MANAGEMENT AND SUPERVISION CLUSTER
(N=58)**

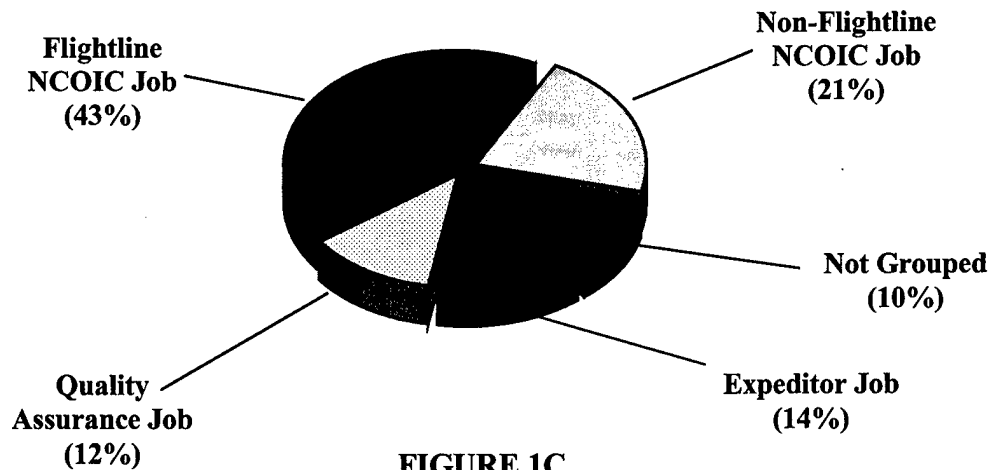


FIGURE 1C

Comparison of Current Specialty Jobs to Previous Survey

The Air Force Occupational Measurement Squadron last studied the AFSC 2A3X1 career ladder in 1996. In the intervening years, the career ladder experienced a major restructuring. With the retirement of the F-111, the career ladder lost the responsibility for maintaining its avionics. However, it gained the responsibilities for maintaining the avionics on the A-10 and U-2 aircraft.

Table A14 displays the clusters and IJs identified in this study compared to the previous study conducted in 1996. What is striking is the close correspondence in the distribution of personnel to similar clusters and jobs in 2003 and 1996 in spite of the major restructuring.

- In both years, slightly less than 80% of the career ladder worked in flightline maintenance
- In both years, management and quality assurance jobs accounted for 8% to 9% of career ladder personnel
- Both OSRs identified a Debriefer IJ, a Schedule Control IJ, and an Equipment Control IJ (through named slightly differently in the two studies)
- The current report identified a Training Cluster with two jobs rather than a single Field Training Detachment Job. The new job is the Technical School Instruction Job
- The current report identifies the Deployment Management IJ as a job for the first time

TABLE 5

**RELATIVE PERCENT TIME SPENT ON DUTIES
BY SPECIALTY CLUSTERS AND JOBS**

DUTIES	FLIGHTLINE CLUSTER (N=562)	FLIGHTLINE CLUSTER							
		Wiring &		U-2	F-15	CN&PA	F-15	U-2	F-15 M-C Gen Job (N=274)
		Cable Job (N=5)	Warfare Job (N=7)	ACS Job (N=61)	Job (N=88)	Flight Control Job (N=45)	Flight Control Job (N=6)		
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	17	88	35	25	19	18	13	13	13
B MAINTAINING ATTACK CONTROL SYSTEMS	17	7	5	41	8	4	14	18	18
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	22	2	1	5	3	60	51	25	25
D MAINTAINING COMMUNICATIONS, NAVIGATION, & PENETRATION AIDS SYSTEMS	20	0	32	8	44	1	3	20	20
E PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9	1	8	10	9	10	7	8	8
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5	1	7	5	5	4	5	5	5
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3	1	3	1	4	1	0	3	3
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	0	4	2	2	1	1	2	2
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	0	1	1	1	0	2	1	1
J PERFORMING TRAINING ACTIVITIES	2	0	1	1	2	0	0	2	2
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3	0	3	0	2	0	3	3	3

Note: Columns may not add up to 100% due to rounding

TABLE 5 (Cont.)

**RELATIVE PERCENT TIME SPENT ON DUTIES
BY SPECIALTY CLUSTERS AND JOBS**

DUTIES	FLIGHTLINE CLUSTER			TRAINING CLUSTER CLUSTER (N=21)	TRAINING CLUSTER				DEBRIEFER IJ (N=10)
	U-2 Comm Job (N=12)	A-10 M-C			Tech Sch (N=10)	Cont Training			
		Gen Job (N=25)				Ins Job (N=6)			
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	13	15		8	10	6		9	
B MAINTAINING ATTACK CONTROL SYSTEMS	9	24		10	20	1		5	
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	19	33		3	4	1		0	
D MAINTAINING COMMUNICATIONS, NAVIGATION, & PENETRATION AIDS SYSTEMS	22	4		7	0	1		0	
E PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	10	6		3	5	1		*	
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	6	5		7	9	3		51	
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	2		9	6	14		14	
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4	2		5	6	4		1	
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	2	2		0	0	0		1	
J PERFORMING TRAINING ACTIVITIES	4	3		38	30	65		7	
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	7	4		8	11	5		10	

* Indicates less than 1 %

Note: Columns may not add up to 100% due to rounding

TABLE 5 (Cont.)

**RELATIVE PERCENT TIME SPENT ON DUTIES
BY SPECIALTY CLUSTERS AND JOBS**

DUTIES	M&S CLUSTER (N=58)	MANAGEMENT & SUPERVISION CLUSTER			
		Expeditor Job (N=8)	QA Job (N=7)	Flightline NCOIC Job (N=25)	Non-Flightline NCOIC Job (N=12)
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	9	16	17	8	3
B MAINTAINING ATTACK CONTROL SYSTEMS	2	3	1	3	0
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	2	5	2	2	1
D MAINTAINING COMMUNICATIONS, NAVIGATION, & PENETRATION AIDS SYSTEMS	3	6	*	5	0
E PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	4	6	15	3	0
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	9	15	12	9	3
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	10	9	10	11	7
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	6	6	8	6	8
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	4	2	2	6	3
J PERFORMING TRAINING ACTIVITIES	14	9	7	13	25
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	37	23	28	34	51

* Indicates less than 1 %

Note: Columns may not add up to 100% due to rounding

TABLE 5 (Cont.)

**RELATIVE PERCENT TIME SPENT ON DUTIES
BY SPECIALTY CLUSTERS AND JOBS**

<u>DUTIES</u>	SCHEDULE CONTROL IJ (N=6)			EQUIPMENT CONTROL IJ (N=7)			DEPLOYMENT MANAGEMENT IJ (N=6)		
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	1			12			0		
B MAINTAINING ATTACK CONTROL SYSTEMS	0			2			0		
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	0			*			0		
D MAINTAINING COMMUNICATIONS, NAVIGATION, & PENETRATION AIDS SYSTEMS	0			*			0		
E PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	3			1			0		
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	15			*			2		
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	20			17			21		
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	15			47			2		
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	4			14			51		
J PERFORMING TRAINING ACTIVITIES	4			1			2		
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	38			6			22		

* Indicates less than 1 %

Note: Columns may not add up to 100% due to rounding

TABLE 6

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	FLIGHTLINE CLUSTER (STG 27)	FLIGHTLINE CLUSTER			
		W & C Job (STG 220)	U-2 Elec Warfare Job (STG 112)	F-15 ACS Job (STG 90)	CN&PA Job (STG 102)
NUMBER IN CLUSTERS AND JOBS	562				
PERCENT OF SAMPLE	78%				
PERCENT ASSIGNED OVERSEAS	38%	80%	0%	34%	51%
<u>DAFSC DISTRIBUTION:</u>					
2A331A	9%	0%	0%	57%	0%
2A331B	10%	0%	0%	0%	0%
2A331C	12%	40%	29%	7%	45%
2A351A	20%	20%	0%	28%	5%
2A351B	14%	20%	0%	3%	0%
2A351C	20%	20%	71%	5%	43%
2A371	15%	0%	0%	0%	7%
<u>COMPONENT STATUS:</u>					
PERCENT IN AD	86%	100%	100%	100%	100%
PERCENT IN ANG	14%	0%	0%	0%	0%
<u>GRADE</u>					
E-2 to E-3	19%	40%	43%	36%	31%
E-4	30%	20%	43%	51%	39%
E-5	37%	40%	14%	11%	28%
E-6	11%	0%	0%	2%	2%
E-7	2%	0%	0%	0%	0%
Avg MONTHS TAFMS (AD)	74 months	82 months	35 months	44 months	52 months
PERCENT IN FIRST ENLISTMENT (AD)	41%	60%	85%	75%	63%
PERCENT SUPERVISING	42%	20%	14%	15%	31%
AVERAGE NUMBER OF TASKS PERFORMED	204	31	78	114	124
PREDOMINANT AD MAJCOM(S)	ACC = 42%	PACAF = 80%	ACC = 100%	ACC = 56%	ACC = 49%

Note: Columns may not add up to 100% due to rounding

TABLE 6 (Cont.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

FLIGHTLINE CLUSTER					
	F-15 Flight Control Job (STG 155)	U-2 Flight Control Job (STG 215)	F-15 M-C Gen Job (STG 171)	U-2 Comm Job (STG 164)	A-10 M-C Gen Job (STG 14)
NUMBER IN CLUSTERS AND JOBS					
PERCENT OF SAMPLE					
PERCENT ASSIGNED OVERSEAS	36%	17%	35%	42%	36%
DAFSC DISTRIBUTION:					
2A331A	2%	0%	4%	0%	0%
2A331B	82%	17%	5%	0%	4%
2A331C	0%	0%	5%	0%	0%
2A351A	0%	0%	27%	0%	32%
2A351B	13%	33%	18%	17%	32%
2A351C	0%	0%	19%	42%	4%
2A371	2%	50%	21%	42%	28%
COMPONENT STATUS:					
PERCENT IN AD	98%	100%	74%	100%	100%
PERCENT IN ANG	2%	0%	26%	0%	0%
GRADE					
E-2 to E-3	60%	0%	8%	0%	4%
E-4	33%	33%	19%	42%	24%
E-5	7%	67%	50%	33%	56%
E-6	0%	0%	18%	25%	16%
E-7	0%	0%	4%	0%	0%
AVG MONTHS TAFMS (AD)	34 months	94 months	96 months	110 months	110 months
PERCENT IN FIRST ENLISTMENT (AD)	88%	34%	18%	25%	28%
PERCENT SUPERVISING	13%	83%	55%	67%	68%
AVERAGE NUMBER OF TASKS PERFORMED	131	129	282	185	197
PREDOMINANT AD MAJCOM(S)	ACC = 56%	ACC = 100%	ACC = 29%	ACC = 100%	ACC = 52%

Note: Columns may not add up to 100% due to rounding

TABLE 6 (Cont.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	TRAINING CLUSTER (STG 38)	TRAINING CLUSTER		DEBRIEFER IJ (STG 133)
		Tech Sch Ins Job (STG 64)	Cont Training Ins Job (STG 69)	
NUMBER IN CLUSTERS AND JOBS	21			10
PERCENT OF SAMPLE	3%			1%
PERCENT ASSIGNED OVERSEAS	0%	0%	0%	50%
<u>DAFSC DISTRIBUTION:</u>				
2A331A	0%	0%	0%	10%
2A331B	0%	0%	0%	0%
2A331C	0%	0%	0%	0%
2A351A	42%	60%	49%	30%
2A351B	24%	30%	17%	20%
2A351C	24%	0%	17%	10%
2A371	10%	10%	17%	30%
<u>COMPONENT STATUS:</u>				
PERCENT IN AD	100%	100%	100%	90%
PERCENT IN ANG	0%	0%	0%	10%
<u>GRADE</u>				
E-2 to E-3	0%	0%	0%	0%
E-4	0%	0%	0%	30%
E-5	57%	60%	50%	40%
E-6	43%	40%	50%	20%
E-7	0%	0%	0%	10%
<u>AVG MONTHS TAFMS (AD)</u>				
PERCENT IN FIRST ENLISTMENT (AD)	148 months	150 months	151 months	162 months
PERCENT SUPERVISING	0%	0%	0%	10%
AVERAGE NUMBER OF TASKS PERFORMED	19%	40%	0%	40%
PREDOMINANT AD MAJCOM(S)	47	65	20	21
	AETC = 100%	AETC = 100%	AETC = 100%	None

Note: Columns may not add up to 100% due to rounding

TABLE 6 (Cont.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	M&S CLUSTER (STG 48)	MANAGEMENT AND SUPERVISION CLUSTER			
		Expeditor Job (STG 819)	QA Job (STG 187)	Flightline NCOIC Job (STG 99)	Non-Flightline NCOIC Job (STG 89)
NUMBER IN CLUSTERS AND JOBS	58				
PERCENT OF SAMPLE	8%				
PERCENT ASSIGNED OVERSEAS	47%	38%	57%	52%	42%
<u>DAFSC DISTRIBUTION:</u>					
2A331A	0%	0%	0%	0%	0%
2A331B	0%	0%	0%	0%	0%
2A331C	0%	0%	0%	0%	0%
2A351A	7%	13%	14%	4%	0%
2A351B	5%	0%	0%	8%	8%
2A351C	12%	13%	0%	8%	25%
2A371	76%	75%	84%	80%	67%
<u>COMPONENT STATUS:</u>					
PERCENT IN AD	98%	100%	86%	100%	100%
PERCENT IN ANG	2%	0%	14%	0%	0%
<u>GRADE</u>					
E-1 to E-3	0%	0%	0%	0%	0%
E-4	0%	0%	0%	0%	0%
E-5	12%	0%	57%	12%	0%
E-6	67%	100%	14%	60%	83%
E-7	21%	0%	29%	28%	17%
Avg MONTHS TAFMS (AD)	199 months	199 months	162 months	199 months	209 months
PERCENT IN FIRST ENLISTMENT (AD)	0%	0%	0%	0%	0%
PERCENT SUPERVISING	88%	100%	29%	92%	100%
AVERAGE NUMBER OF TASKS PERFORMED	95	76	87	140	45
PREDOMINANT AD MAJCOM(S)	ACC = 40%	ACC = 38%	USAFE/PACAF 29% each	ACC = 48%	ACC/USAFE/ PACAF 25% each

Note: Columns may not add up to 100% due to rounding

TABLE 6 (Cont.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	SCHEDULE CONTROL IJ (STG 058)	EQUIP CONTROL IJ (STG 045)	DEP MGT IJ (STG 113)
NUMBER IN CLUSTERS AND JOBS	6	7	6
PERCENT IN SAMPLE	1%	1%	1%
PERCENT ASSIGNED OVERSEAS	83%	71%	83%
<u>DAFSC DISTRIBUTION:</u>			
2A331A	0%	29%	0%
2A331B	0%	0%	0%
2A331C	0%	14%	0%
2A351A	0%	0%	0%
2A351B	17%	14%	0%
2A351C	0%	43%	0%
2A371	83%	0%	100%
<u>COMPONENT STATUS:</u>			
PERCENT IN AD	100%	100%	100%
PERCENT IN ANG	0%	0%	0%
<u>GRADE</u>			
E-2 to E-3	0%	0%	0%
E-4	0%	86%	0%
E-5	33%	14%	17%
E-6	50%	0%	67%
E-7	17%	0%	17%
Avg MONTHS TAFMS (AD)	180 months	60 months	204 months
PERCENT IN FIRST ENLISTMENT (AD)	0%	71%	0%
PERCENT SUPERVISING	67%	0%	50%
AVERAGE NUMBER OF TASKS PERFORMED	32	27	39
PREDOMINANT AD MAJCOM(S)	USAFE = 67%	ACC = 57%	USAFE = 50%

Note: Columns may not add up to 100% due to rounding

SKILL AND EXPERIENCE ANALYSIS

An analysis of DAFSC groups in conjunction with the analysis of the career ladder structure is an important part of each OSR. This information may be used to evaluate how well career ladder documents, such as AFMAN 36-2108, *Enlisted Classification*, reflect what career ladder personnel are actually doing in the field.

TOTAL SAMPLE

Jobs

Table A15 describes how airmen in AFSC 2A3X1 move to different jobs and clusters of jobs as they become more skilled. Almost all 3-skill-level personnel work in the Flightline Cluster. As airmen in the career ladder progress to the 5-skill level, most continue to work in jobs in the Flightline Cluster; however, a few move into management and small, highly specialized jobs. At the 7-skill level, the percentage of members in the Flightline Cluster shrinks drastically but remains greater than 50%. The percentage of 7-skill-level airmen in jobs in the Management and Supervision Cluster increases sharply to 28%. Moreover, 7-skill-level personnel perform work within the Schedule Control IJ and the Deployment Management IJ.

Duties

A review of Table A16 illustrates the same evolution from a heavy concentration on hands-on maintenance activities at the 3-skill level to a much more diverse set of activities at the 7-skill level.

Active Duty

Duties

Since AD personnel comprise 89% of the total sample, Table A17, which provides the time spent on duties by AD members, mirrors the patterns seen in Table A16 for the total sample. As airmen move to higher skill levels, the fraction of their time devoted to hands-on maintenance activities falls, while the fraction of their time devoted to administrative, mobility, training, and management and supervisory activities increases.

Tasks

Tables A18, A19, and A20 display lists of the most commonly performed tasks of AFSC 2A3X1 3-, 5-, and 7-skill levels, respectively. Taken together, they suggest several salient points:

- As AD airmen in AFSC 2A3X1 move from the 3-skill level to the 5-skill level, their jobs broaden greatly. AD airmen at the 3-skill level perform an average of 139 tasks while AD airmen at the 5-skill level perform an average of 185 tasks. The **AFSC 2A3X1 SPECIALTY JOBS** section illustrated that young airmen in AFSC 2A3X1 career ladder were in narrow, shred-specific jobs, while mid-career airmen were in "generalist" jobs. The increase in the number of tasks performed is another aspect of the same underlying tendency.

- AD airmen at the 3- and 5-skill levels share small common cores of tasks that most airmen at their skill levels perform. However, these common cores are small when compared to the average number of tasks airmen at the skill levels perform. While most of the tasks in the common cores come under Duty A, these two common cores do not involve the same tasks.
- The tasks most widely shared by AD 7-skill-level personnel involve management and supervision activities (Duty K) and training activities (Duty J)

Air National Guard

Duties

Table A21 displays information on how ANG members at the 5- and the 7-skill levels spend their time on different duties. Seven-skill levels in the ANG use their time very differently than 7-skill levels on AD. Seven-skill levels in the ANG remain much more focused on hands-on maintenance activities, devoting a much smaller fraction of their time to management and supervisory activities (Duty K) and training activities (Duty J).

Tasks

Tables A22 and A23 display lists of the most commonly performed tasks by AFSC 2A351s and 2A371s in the ANG. They suggest two points:

- On average, ANG members perform many more tasks than AD members of the same skill level
- The size of the commonly performed core tasks at each skill level is much larger in the ANG than in the AD

Both points suggest that ANG members tend not to be as specialized as AD members.

TRAINING ANALYSIS

Occupational survey data are a source of information that can assist in the development or evaluation of training programs for both entry-level and advanced members. In particular, the factors used to evaluate entry-level training include the jobs that are being performed by first-enlistment personnel (1-48 months' TAFMS), the overall distribution of first-enlistment personnel across career ladder jobs, the percent of first-enlistment members who perform specific tasks, and ratings of relative training emphasis (TE) and task difficulty (TD). (TE and TD ratings are discussed in the Task Factor Administration section of this OSR.)

First-Enlistment Personnel (1-48 months' TAFMS)

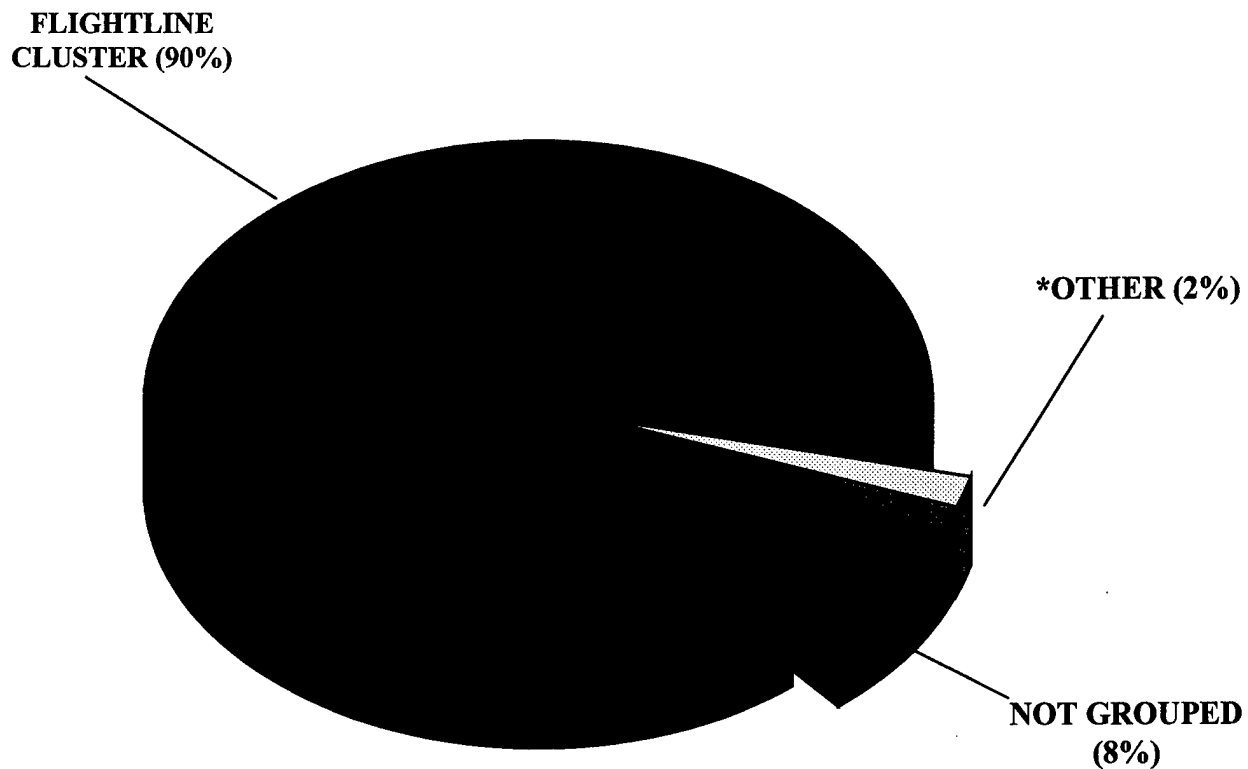
Jobs

Figure 2 displays the distribution of the 254 first-enlistment airmen across specialty clusters and jobs. It is clear from Figure 2 that the preponderance of first-enlistment airmen perform tasks as described in the Flightline Cluster.

Shreds

Initial skills training for AFSC 2A3X1 members is closely aligned with its three shreds. Figure 3 displays the percentages of first-enlistment personnel in the sample who hold each shred. It illustrates that each shred accounts for roughly one-third of the first-enlisted personnel in the sample.

**DISTRIBUTION OF AFSC 2A3X1 FIRST-ENLISTMENT
PERSONNEL ACROSS SPECIALTY JOBS
(N=254)**



***Other includes:**

- Debriefer IJ (<1%)
- Equipment Control IJ (2%)

FIGURE 2

**DISTRIBUTION OF AFSC 2A3X1 FIRST-ENLISTMENT
PERSONNEL ACROSS SHREDS (N=254)**

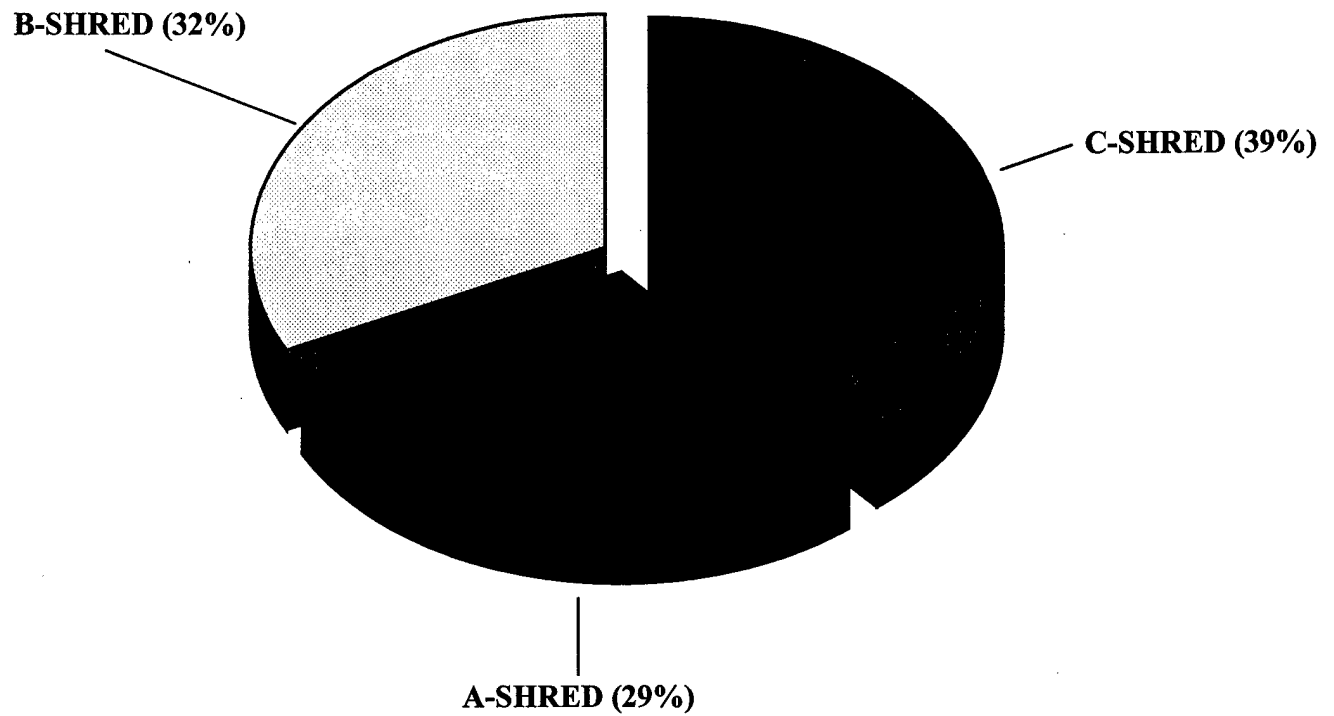


FIGURE 3

Task Factor Surveys

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 AFSC 2A3X1 members (generally E-6 or E-7 craftsmen) completed either a TE or TD survey. The training documents (STS and POIs) were reviewed by matching survey tasks to STS elements and POI objectives, and examining task performance, TE data, and TD data for the matched tasks.

Task Factor Administration

TE and TD data can help training development personnel decide which tasks to emphasize for entry-level, structured training (resident technical schools, field training detachments, mobile training teams, formal OJT, or any other organized training method). For example, tasks receiving high TE and TD ratings generally warrant resident training if they are also performed by a moderate-to-high percentage of first-enlistment members. Tasks receiving high TE and/or TD ratings but being performed by relatively low percentages of first-enlistment members may be more appropriately planned for structured OJT programs within the career ladder. Low TE and/or TD ratings may highlight tasks best omitted from training for new personnel. These task factors are, of course, not the only ones to weigh in making training decisions; the percentages of personnel performing the tasks, command concerns, the criticality of the tasks, and other important factors must also be carefully considered.

Training Emphasis (TE)

TE ratings reflect the degree of emphasis that should be placed on each task in the structured training of entry-level members:

- Thirty-four AFSC 2A3X1 senior noncommissioned officers (NCOs) rated tasks in the inventory on a scale from 0 (no training required) to 9 (extremely high training emphasis)
- Average TE rating was 2.96 with a standard deviation of 1.65. If a task has a TE rating greater than one standard deviation above the mean, that is, more than 4.61, strong consideration should be given to formal training on that task for new personnel.
- Table A24 displays the tasks with the highest TE ratings. Tasks from Duty A (Performing General Avionics Systems Maintenance Activities) represent the majority of tasks displayed in this table. This suggests that seniors NCOs in AFSC 2A3X1 place a heavy emphasis on teaching the fundamentals of wiring and troubleshooting cables and connectors.

Task Difficulty (TD)

TD ratings reflect the amount of time needed to learn to perform tasks satisfactorily:

- Fifty-three AFSC 2A3X1 senior NCOs rated the difficulty of tasks in the inventory using a scale from 1 (extremely low difficulty) to 9 (extremely high difficulty)

- TD ratings are normally adjusted so that tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00. Any task with a difficulty of 6.00 or greater is considered difficult to learn.
- Table A25 displays the tasks with the highest TD ratings. Tasks involving troubleshooting aircraft wiring, cables, and connectors from Duty A (Performing General Avionics Systems Maintenance Activities) and boresighting from Duty B (Maintaining Attack Control Systems) dominate the list.

Automated Training Indicators (ATIs)

To assist training development personnel, the AFOMS developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an automated training indicator (ATI) for each task. ATIs corresponding to training decisions are listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-3601. ATIs allow training developers to quickly focus attention on those basic tasks that are most likely to qualify for resident training.

For the analysis of training documents that follows, different sets of ATIs were calculated for each document. Each set of ATIs reflects the percentage of personnel performing tasks for the most germane part of the first-enlistment sample. For example, the analysis of the general section of the Specialty Training Standard uses a set of ATIs that reflects the percentage of all first-enlistment personnel performing tasks. In contrast, the analysis of the Plan of Instruction (POI) for the *F-15 Avionics Attack Control Systems Apprentice* course uses a different set of ATIs that reflects the percentages for AFSC 2A3X1A first-enlistment personnel who indicated that they maintained F-15 aircraft. The discussion of each training document will clearly identify what part of the first-enlistment sample was used to calculate the set of ATIs used.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate ATI information, are contained in the Training Extract package and should be 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.)

Analysis of Training Documents

This analysis deals with 10 separate documents or sections of documents. The STS for AFSC 2A3X1 has five separate parts. This analysis will deal separately with four of the five parts; they are the general section and the sections that apply to the A, B, and C shreds. It will not deal with the section of the STS that applies to the Electronic Principles course.

An airman entering AFSC 2A3X1 can obtain his/her 3-skill level by successfully completing any one of six apprentice courses. The following discussion deals separately with each of the six courses.

After discussing the general section of the STS, this analysis will turn to the section of the STS concerned with A-shred as well as the POIs for the two apprentice courses preparing airmen for AFSC 2A3X1A. Then, the analysis will turn successively to the training documents involving AFSC 2A3X1B and AFSC 2A3X1C.

Technical school personnel from the 365th Training Squadron (365 TRS), Sheppard AFB TX, matched JI tasks to STS items. Per AETCI 36-2601, dated 14 July 1999, STS elements that are performed by at least 20% of members in appropriate skill-level groups [particularly first-enlistment (1-48 months' TAFMS) members] should be included in the STS. Of course, these are not the only criteria for inclusion in the STS, and other rational considerations may argue against inclusion. Likewise, proficiency-coded elements matched to tasks with less than 20% performing first-enlistment or 3-skill-level groups should be closely reviewed by SMEs for possible deletion from the STS, unless other considerations (such as mission criticality or criticality to a particular MAJCOM) argue for inclusion of these "unsupported items." As stated above, tasks not referenced to the STS with at least 20% of first-enlistment or 3-skill-level members performing should be reviewed by training personnel for possible addition to the STS. Finally, some tasks with 20% or more members performing were matched to STS elements without proficiency codes. These STS elements should be reviewed for possible proficiency code revision.

In addition to the STS, the POIs for the six courses may also have unsupported objectives (included in the course but performed by few first-term airmen.) Personnel from the 365 TRS also matched JI tasks to related training objectives in the POI for the entry-level course. POI blocks, units of instruction, and learning objectives were then compared to the standard set forth in AETCI 36-2601. This document indicates that tasks trained in the course but not performed by at least 30% of first-enlistment members should be considered for elimination from the course, unless other rational considerations argue for inclusion.

Specialty Training Standard (STS): Common Section

Tables A26, A27, and A28 are germane to the common section of the STS. The data on relative time spent on duties, percent members performing, and the ATI reflect all 254 first-enlistment airmen in the sample. These tables demonstrate two important points:

- There is a small core of about 15 tasks that almost all first-enlistment airmen, regardless of their shred, perform. Almost all of these common tasks fall under Duty A (Performing

General Avionics Systems Maintenance Activities). Almost all involve aircraft wiring, cables, and connectors. (See Table A27.)

- One element in the common section of the STS warrants review - AF Form 2005. A relatively small fraction of first-enlistment and 3-skill-level personnel initiate requests for equipment, tools, parts, and supplies. (See Table A28.)

A-SHRED

Specialty Training Standard (STS) Analysis: A-Shred

Tables A29 to A33 are germane to the A-shred section of the STS. The data on first-enlistment personnel are for the 73 first-enlistment AFSC 2A3X1A airmen in sample; data on 3-skill-level personnel reflect the 53 AFSC 2A331A airmen in the sample. These tables demonstrate three important points:

- First-enlistment AFSC 2A3X1A airmen focus on a mix of tasks from Duty A (Performing General Avionics Systems Maintenance Activities) (see Table A30).
- One performance-coded element in the A-shred section of the STS should be reviewed. The task is not performed by enough first-enlistment AFSC 2A3X1A personnel (see Table A31).
- A number of tasks in Duty A (Performing General Avionics Systems Maintenance Activities) need to be considered for inclusion in the STS. If they are not already included in the electronics principles of the STS, which was not analyzed, they need to be included somewhere in the STS. See Table A32.
- Table A33 lists the support equipment used by the largest percentages of AFSC 2A3X1A first-enlistment personnel.

Plan of Instruction (POI) for the F-15 Avionics Attack Control Systems Apprentice Course

Tables A34 to A38 are relevant to the POI for the *F-15 Avionics Attack Control Systems Apprentice* course (J3ABR2A331A 003). The data on relative time spent on duties, percent members performing, and the ATI in these tables reflect the 63 first-enlistment AFSC 2A3X1A airmen who indicated that they worked on F-15 aircraft; data on 3-skill-level personnel reflect the 53 AFSC 2A331A airmen in the sample who indicated they worked on F-15 aircraft. These tables demonstrate four important points:

- A few learning objectives covering inspections and ordering LRUs should be considered for elimination from this course. They are not performed by many first-enlistment airmen in the relevant population (see Table A36).
- Most of the tasks that deserve consideration for addition to resident training are in Duty A (Performing General Avionics Systems Maintenance Activities). If they are not taught in the prerequisite electronic principles course, they should be considered for inclusion in this course (see Table A37).

- Two tasks involving operationally checking from Duty B (Maintaining Attack Control Systems) should be considered for addition to this course (see Table A37).
- Most first-enlistment AFSC 2A3X1A personnel working on F-15 aircraft use a common set of equipment. Care should be taken to ensure that J3ABR2A331A 003 includes training on all commonly used equipment (see Table A38).

Plan of Instruction (POI) for the A-10 (MRA) Avionics Attack Control Systems Apprentice Course

Tables A39 to A43 are germane to the POI for the *A-10 (MRA) Avionics Attack Control Systems Apprentice* course (J3ABR2A331A 004). The data on relative time spent on duties (see Table A39), percent members performing (see Table A40), and the ATI in these tables reflect the 9 first-enlistment AFSC 2A3X1A airmen who indicated that they worked on A-10 or U-2 aircraft; data on 3-skill-level personnel reflect the 2 AFSC 2A331A airmen in the sample who indicated they worked on A-10 or U-2 aircraft. These tables demonstrate two important points:

- The POI also contains a few elements involving safety practices and ordering LRUs that could be considered for deletion (see Table A41).
- A number of tasks from Duty B (Maintaining Attack Control Systems) were not matched to learning objectives in the POI. Many of these unmatched tasks from Duty Area B should be considered for inclusion in this course. See Table A42 for a few examples. First-enlistment AFSC 2A3X1A members who are working on A-10 and U-2 aircraft are doing a number of important and difficult tasks that are not being covered in this course.
- Most first-enlistment AFSC 2A3X1A personnel working on A-10 and U-2 aircraft use or operate a common set of equipment. Care should be taken to ensure that J3ABR2A331A 004 includes training on all commonly used equipment (see Table A43).

B-SHRED

Specialty Training Standard (STS) Analysis: B-Shred

Tables A44 to A48 are germane to the B-shred of the STS. The data on first-enlistment airmen reflect the 82 first-enlistment AFSC 2A3X1B personnel in the sample (see Table A44); data on 3-skill-level personnel reflect the 53 AFSC 2A331B airmen in the sample. These tables demonstrate four important points:

- First-enlistment AFSC 2A3X1B members share a core set of common tasks, most of which fall in Duty C (Maintaining Instrument and Flight Control Systems). (See Table A45.)
- The analysis did not identify a single performance-coded element in this section of the STS that warranted review. Table A46 displays two STS elements with less than 20% members performing; however, both tasks are dashed.
- A number of tasks in Duty A (Performing General Avionics Systems Maintenance Activities) need to be included in the STS, as indicated by their high ATI values. If they are

not already included in the electronics principles section of the STS, which was not analyzed, they need to be included. See Table A47.

- Most first-enlistment AFSC 2A3X1B personnel use or operate a common set of equipment. Care should be taken to ensure that the B-shred section of the STS calls for training on all commonly used equipment (see Table A48).

Plan of Instruction (POI) for the *F-15 Avionics Instrument and Flight Control Systems Apprentice Course*

Tables A49 to A53 in the Appendix of this report are germane to the POI for the *F-15 Avionics Instrument and Flight Control Systems Apprentice* course (J3ABR2A331B 003). The data on relative time spent on duties, percent members performing, and the ATI in these tables reflect the 69 first-enlistment AFSC 2A3X1B airmen who indicated that they worked on F-15 aircraft; data on 3-skill-level personnel reflect the 64 AFSC 2A331B airmen in the sample who indicated they worked on F-15 aircraft. These tables demonstrate several important points:

- First-enlistment AFSC 2A3X1B airmen who work on F-15 aircraft are highly focused on tasks in Duty C (Maintaining Instrument and Flight Control Systems); they devote half of their time to tasks in this duty. See Table A49.
- A high percentage of these airmen perform many of the same tasks within Duty C. See Table A50.
- Again, because of the low percent of members performing and the TE and TD ratings, several learning objectives involving inspection procedures and ordering LRUs could be considered for elimination from this course. Inspection procedures typically are done by more experienced members of the career ladder. Ordering LRUs might be done by members in the Equipment Control Job, who also tend to be more experienced. See Table A51.
- A number of tasks from Duty C (Maintaining Instrument and Flight Control Systems) were not matched to learning objectives in the POI. Many of these unmatched tasks from Duty C should be considered for inclusion in this course. First-enlistment AFSC 2A3X1B airmen who are working on F-15 aircraft are doing a number of important tasks that are not being covered in this course. See Table A52 for a few examples.
- Most first-enlistment AFSC 2A3X1B personnel working on F-15 aircraft use a common set of equipment. Care should be taken to ensure that J3ABR2A331B 003 includes training on all commonly used equipment (see Table A53).

Plan of Instruction (POI) for the A-10 (MRA) Avionics Instrument and Flight Control Systems
Apprentice Course

Tables A54 to A58 are germane to the POI for the A-10 (MRA) Avionics Instrument and Flight Control Systems Apprentice course (J3ABR2A331B 004). The data on relative time spent on duties, percent members performing, and the ATI in these tables reflect the 17 first-enlistment AFSC 2A3X1B airmen who indicated that they worked on A-10 and U-2 aircraft; data on 3-skill-level personnel reflect the 6 AFSC 2A331B airmen in the sample who indicated they worked on A-10 and U-2 aircraft. These tables demonstrate several important points:

- First-enlistment AFSC 2A3X1B airmen who work on A-10 and U-2 aircraft do many of the same tasks; however, in contrast to AFSC 2A3X1B airmen who work on F-15 aircraft, these common tasks are scattered among three different duty areas, suggesting that these jobs are less focused. See Tables A54 and A55.
- Again, several learning objectives involving inspection procedures and ordering LRUs should be reviewed. Inspection procedures are usually done by more experienced members of the career ladder. Ordering LRUs might be done by members in the Equipment Control Job, who also tend to be more experienced. See Table A56.
- A number of tasks from Duty C (Maintaining Instrument and Flight Control Systems) were not matched to learning objectives in the POI. Many of these unmatched tasks from Duty C should be considered for inclusion in this course. First-enlistment AFSC 2A3X1B airmen who are working on A-10 and U-2 aircraft are doing a number of important tasks that are not being covered in this course. See Table A57 for a few examples.
- Most first-enlistment AFSC 2A3X1B airmen working on A-10s and U-2s share the use of a small set of core equipment. This course should include instruction on the types of equipment used by most AFSC 2A3X1B airmen working on A-10s and U-2s. See Table A58.

C-SHRED

Specialty Training Standard (STS) Analysis: C-Shred

Tables A59 to A63 in the Appendix of this report are relevant to the C-shred section of the STS. The data on first-enlistment airmen reflect the 99 first-enlistment AFSC 2A3X1C personnel in the sample; data on 3-skill-level personnel reflect the 73 AFSC 2A331C airmen in the sample. These tables demonstrate two important points:

- First-enlistment AFSC 2A3X1C individuals share a core set of common tasks, most of which fall under Duty A (Performing General Avionics System Maintenance Activities) and Duty D (Maintaining Communications, Navigation, and Penetration Aids Systems). See Table A60 in the Appendix of this report.

- The analysis did not identify a single performance-coded element in this section of the STS that warranted consideration for deletion. It did, however, uncover two non-coded STS items that should be reviewed. See Table A61.
- A number of tasks in Duty A (Performing General Avionics Systems Maintenance Activities) need to be considered for inclusion the STS. If they are not already included in the electronics principles section of the STS, which was not analyzed, they need to be considered for inclusion elsewhere. See Table A62.
- Table A63 provides a list of the equipment used by the highest percentage of first-enlistment airmen in the C-shred.

Plan of Instruction (POI) for the *F-15 Avionics Communication, Navigation, and Penetration Aids Systems Apprentice Course*

Tables A64 to A68 are germane to the POI for the *F-15 Avionics Communication, Navigation, and Penetration Aids Systems Apprentice* course (J3ABR2A331C 003). The data on relative time spent on duties, percent members performing, and the ATI in these tables reflect the 68 first-enlistment AFSC 2A3X1C airmen who indicated that they worked on F-15 aircraft; data on 3-skill-level personnel reflect the 64 AFSC 2A331C airmen in the sample who indicated they worked on F-15 aircraft.

- Most first-enlistment AFSC 2A3X1C airmen who work on F-15s perform a set of common tasks drawn from Duty A (Performing General Avionics System Maintenance Activities) and Duty D (Maintaining Communications, Navigation, and Penetration Aids Systems). See Table A65 for those tasks.
- A number of tasks from Duty D (Maintaining Communications, Navigation, and Penetration Aids Systems) were not matched to learning objectives in the POI. Many of these unmatched tasks from Duty D should be considered for inclusion in this course (see Table A66). First-enlistment AFSC 2A3X1C members who are working on F-15 aircraft are performing several important tasks that are not being covered in this course. See Table A67 for a few examples.
- Most first-enlistment AFSC 2A3X1C personnel working on F-15 aircraft use a common set of equipment, which includes crypto devices. Care should be taken to ensure that J3ABR2A331C 003 includes training on all commonly used equipment. See Table A68.

Plan of Instruction (POI) for the *A-10 (MRA) Avionics Communication, Navigation, and Penetration Aids Systems Apprentice Course*

Tables A69 to A73 are germane to the POI for the *A-10 (MRA) Avionics Communications, Navigation, and Penetration Aids Systems Apprentice* course (J3ABR2A331C 004). The data on relative time spent on duties (see Table A69), percent members performing, and the ATI in these tables reflect the 32 first-enlistment AFSC 2A3X1C airmen who indicated that they worked on A-

10 and U-2 aircraft; data on 3-skill-level personnel reflect the 15 AFSC 2A331C airmen in the sample who indicated they worked on A-10 and U-2 aircraft.

- Most first-enlistment AFSC 2A3X1C personnel who work on A-10 and U-2 aircraft rely on a common set of tasks drawn from Duty A (Performing General Avionics Systems Maintenance Activities). This suggests that they are more dependent on the fundamental skills that underlie the career field. See Table A70.
- The analysis identified only two learning objectives that deserve consideration for deletion from the course. Both involved safety practices, which might be considered too important to be left out of training for first-enlistment personnel. See Table A71.
- A number of tasks from Duty D (Maintaining Communications, Navigation, and Penetration Aids Systems) were not matched to learning objectives in the POI. Many of these unmatched tasks from Duty C should be considered for inclusion in this course. *First-enlistment AFSC 2A3X1C members who are working on A-10 and U-2 aircraft are performing several important tasks that are not being covered in this course. See Table A72 for examples.*
- Most first-enlistment AFSC 2A3X1C personnel working on A-10 and U-2 aircraft use a common set of equipment, which includes crypto devices. Care should be taken to ensure that J3ABR2A331C 004 includes training on all commonly used equipment. See Table A73.

ANALYSIS OF MAJCOMS

Tasks and background data for personnel in the various MAJCOMs containing AFSC 2A3X1 members were compared to determine whether job content varied as a function of command assignment. For the most part, work performed across all commands was similar. The percentage of time devoted to duty areas varies little among the five MAJCOMs. The first four duty areas include hands-on maintenance tasks; depending on the command, they account for 55 to 68% of time spent on tasks by members of the career ladder. Duty E (Performing General Aircraft or Cross Utilization Training) includes in-unit training; it comprises 7 to 8% of duty time across the MAJCOMs, while Duty K (Performing Management and Supervisory Activities) takes 7 to 9%. (See Table A74.)

Two exceptions to the general uniformity among MAJCOMs appear in Table A74.

- The three MAJCOMs with combat missions (ACC, PACAF, and USAFE) devote small percentages of time to Duty I (Performing Mobility and Contingency Activities), while AETC and AFMC devote almost no time to Duty I.
- Airmen in AETC devote a much larger fraction of their time to Duty J (Performing Training Activities)

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. The survey included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions.

Job Satisfaction

Overall = Good

Table A75 displays job satisfaction data for the AFSC 2A3X1 specialty clusters and IJs identified previously. The data supports two conclusions.

- Members in most clusters of jobs and IJs find their jobs interesting; moreover, they give most members a sense of accomplishment. However, many members do not feel their jobs use their talents and training fully.
- The seven members in the Equipment Control IJ strongly dislike their jobs. They find their jobs dull and dissatisfying. Moreover, they see their work as a poor use of their talents and training.

Table A76 displays comparative job satisfaction data between the current AFSC 2A3X1 OSR data and members from similar AFSCs surveyed in the previous 24 months. Large differences are not apparent. With regards to job satisfaction, members of AFSC 2A3X1 are very similar to members of other 2AXXX career ladders surveyed in the last 2 years. The pattern of much higher ratings or job interest and sense of accomplishment than for use of talents and training is also apparent in this table.

Table A77 compares job satisfaction data for the AD and ANG members. In every dimension of job satisfaction, ANG members express greater job satisfaction.

Table 78 compares job satisfaction data for the current AFSC 2A3X1 survey with data from the survey completed in 1996 before the merger and restructuring. The comparison supports at least one conclusion:

- During the 7-year period, job interest and sense of accomplishment have fallen for first- and second-enlistment personnel

Write-in Comments

More than a hundred survey respondents provided write-in comments. Of the write-in comments addressing job satisfaction, 9 out of 10 were negative. Common themes ran through most of the negative comments:

- Units do not have the manning and resources to do the work required by the higher operations tempo. Airmen in the career ladder have had to work very long hours and have had to cut corners.
- Airmen do not have enough time to work on their career development courses (CDCs), and units do not have enough time to do on-the-job training.
- The long hours are cutting into family time and time for outside education.
- A number of airmen want to leave the career field either by cross-training into a less demanding career ladder or by separating from the Air Force.

RETENTION DIMENSIONS

Job inventory surveys routinely collect information about factors that affect reenlistment and separation decisions. That is, respondents who say that they are likely to reenlist at the end of their present term (and those not eligible for retirement) are asked to indicate whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to reenlist. Respondents who indicate that they are likely to separate at the end of their present term (and those not eligible for retirement) are asked to indicate whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to separate. The degree is indicated on a 3-point scale ranging from "slight influence" to "strong influence."

Reenlistment

Table A79 displays the 31 factors in the order they appeared in the survey. This table gives the percent selecting each factor; it also gives the average rating for each factor for those in the TAFMS group selecting it. The top five reasons that members choose to reenlist (based on the highest percentages selecting each factor) are listed below Table A79. Members of AFSC 2A3X1 appear to reenlist because they like the job security, the pay, and the retirement, medical, and educational benefits the Air Force offers.

Separation

Table A80 displays the 31 factors in the order they appeared in the survey. This table gives the percent selecting each factor; it also gives the average rating for each factor for those in the TAFMS group selecting it. The top five reasons that members choose to separate (based on the highest percentages selecting each factor) are listed below Table A80. They are consistent with the discussion of write-in comments above. Members of the AFSC 2A3X1 are separating because the pay and allowances are not worth the long work hours resulting from low unit manning.

APPENDIX

TABLES A7 – A80 ARE REFERENCED WITHIN THE BODY OF THE OSR

TABLE A7

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE FLIGHTLINE CLUSTER (STG 027)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 204	PERCENT MEMBERS PERFORMING (N=562)
A0038	Troubleshoot aircraft wiring	98
A0035	Safety wire components	96
A0031	Repair aircraft wiring	96
A0037	Trace wiring, system, or interface diagrams	95
A0006	Inspect aircraft wiring	95
A0041	Troubleshoot multipin connectors	94
A0007	Inspect chafing problem areas	92
A0039	Troubleshoot coaxial cables and connectors	91
A0008	Inspect coaxial cables and connectors	91
A0011	Inspect multipin connectors	90
A0029	Remove, replace, or repair multipin connectors	90
A0032	Repair chafed areas	90
A0028	Remove, replace, or repair coaxial connectors	88
A0022	Remove or replace coaxial cables	88
F0468	Update and maintain CAMS data	84
A0036	Seal or reseal antennas	81
A0040	Troubleshoot electrical relays	79
A0034	Research technical orders	77
A0042	Troubleshoot triaxial cables and connectors	77
E0417	Position or remove aircraft chocks	76
A0014	Inspect triaxial cables and connectors	76
A0015	Inspect waveguides	76
E0416	Position AGE	75
D0339	Remove or replace UHF communication and audio signal system LRUs	73
D0310	Operationally or BIT check radar warning receivers (RWRs)	72
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	72
D0335	Remove or replace RWR LRUs	71
D0368	Troubleshoot RWRs	70
F0450	Analyze core automated maintenance system (CAMS) data	68
B0086	Operationally or BIT check radar systems	68

TABLE A7A

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
WIRING AND CABLE JOB (STG 220)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 32</i>	PERCENT MEMBERS PERFORMING (N=5)
A0001	Analyze avionics status panel (ASP) latch data	100
A0038	Troubleshoot aircraft wiring	100
A0040	Troubleshoot electrical relays	100
A0039	Troubleshoot coaxial cables and connectors	100
A0037	Trace wiring, system, or interface diagrams	100
A0031	Repair aircraft wiring	100
A0028	Remove, replace, or repair coaxial connectors	100
A0029	Remove, replace, or repair multipin connectors	100
A0032	Repair chafed areas	100
A0035	Safety wire components	100
A0027	Remove or replace waveguides	100
A0008	Inspect coaxial cables and connectors	80
A0042	Troubleshoot triaxial cables and connectors	80
A0026	Remove or replace triaxial cables	80
A0030	Remove, replace, or repair triaxial connectors	80
A0041	Troubleshoot multipin connectors	80
A0015	Inspect waveguides	80
A0036	Seal or reseal antennas	80
A0022	Remove or replace coaxial cables	80
A0025	Remove or replace quick disconnects	80
A0014	Inspect triaxial cables and connectors	60
A0011	Inspect multipin connectors	60
A0006	Inspect aircraft wiring	60
A0034	Research technical orders	60
A0013	Inspect quick disconnects	60
A0007	Inspect chafing problem areas	60
A0016	Install or maintain Velcro on control panels for night-vision goggle (NVG) activities	40
A0021	Remove or install electrostatic discharge devices	40
A0020	Remove or install electrical relays	40
A0012	Inspect pitot or static hoses	40
B0078	Operationally or BIT check HUD systems	40
F0468	Update and maintain CAMS data	20

TABLE A7B

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE U-2 ELECTRONIC WARFARE JOB (STG 112)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 78</i>	PERCENT MEMBERS PERFORMING (N=7)
D0321	Remove or replace data link system LRUs	100
D0290	Key IADL or IADL II systems	100
A0013	Inspect quick disconnects	100
A0011	Inspect multipin connectors	100
A0006	Inspect aircraft wiring	100
A0008	Inspect coaxial cables and connectors	100
A0007	Inspect chafing problem areas	100
D0346	Service data link systems	100
A0037	Trace wiring, system, or interface diagrams	100
A0032	Repair chafed areas	100
A0029	Remove, replace, or repair multipin connectors	100
A0028	Remove, replace, or repair coaxial connectors	100
A0038	Troubleshoot aircraft wiring	100
A0022	Remove or replace coaxial cables	100
A0039	Troubleshoot coaxial cables and connectors	100
A0041	Troubleshoot multipin connectors	100
D0354	Troubleshoot data link systems	86
E0428	Remove or install aircraft radomes	86
A0031	Repair aircraft wiring	86
A0025	Remove or replace quick disconnects	86
D0322	Remove or replace DRO components	86
D0304	Operationally or BIT check electronic warfare warning systems (EWWSs)	86
A0034	Research technical orders	71
D0302	Operationally or BIT check data link systems	71
D0356	Troubleshoot ECM systems	71
D0323	Remove or replace ECM system LRUs	71
D0357	Troubleshoot EWWSs	71
D0324	Remove or replace EWWS LRUs	71
D0347	Service EWWS	71
D0348	Test ECM transmission lines	71

TABLE A7C

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
F-15 ATTACK CONTROL SYSTEMS JOB (STG 090)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 114</i>	PERCENT MEMBERS PERFORMING (N=61)
A0042	Troubleshoot triaxial cables and connectors	100
A0035	Safety wire components	98
A0038	Troubleshoot aircraft wiring	98
B0100	Remove or replace HUD system LRUs	98
A0041	Troubleshoot multipin connectors	98
A0039	Troubleshoot coaxial cables and connectors	98
B0128	Troubleshoot HUD systems	97
A0006	Inspect aircraft wiring	97
A0015	Inspect waveguides	97
B0102	Remove or replace INS LRUs	95
A0031	Repair aircraft wiring	95
B0130	Troubleshoot INSs	93
A0014	Inspect triaxial cables and connectors	93
B0086	Operationally or BIT check radar systems	92
B0092	Remove or replace attack radar or navigation system LRUs	92
B0078	Operationally or BIT check HUD systems	92
B0080	Operationally or BIT check INSs	92
A0008	Inspect coaxial cables and connectors	92
A0037	Trace wiring, system, or interface diagrams	90
A0011	Inspect multipin connectors	89
B0075	Operationally check video recording systems	87
B0114	Remove or replace radar system LRUs	84
B0063	Operationally check attack radar or navigation radar systems	84
B0144	Troubleshoot video recording systems	84
B0120	Troubleshoot attack radar or navigation radar systems	80
B0117	Remove or replace video recording system LRUs	80
B0094	Remove or replace CC system LRUs	79
E0417	Position or remove aircraft chocks	74
F0468	Update and maintain CAMS data	72
E0416	Position AGE	69
E0393	Launch or recover aircraft	62

TABLE A7D

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE COMMUNICATIONS,
NAVIGATION, AND PENETRATION AIDS JOB (STG 102)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 124	PERCENT MEMBERS PERFORMING (N=88)
D0373	Troubleshoot UHF communication and audio signal systems	99
D0339	Remove or replace UHF communication and audio signal system LRUs	99
A0038	Troubleshoot aircraft wiring	98
D0370	Troubleshoot TACAN systems	98
D0337	Remove or replace TACAN system LRUs	98
A0039	Troubleshoot coaxial cables and connectors	98
D0330	Remove or replace IFF transponder system LRUs	98
D0368	Troubleshoot RWRs	97
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	97
D0308	Operationally or BIT check identification friend or foe (IFF) interrogator systems	97
D0335	Remove or replace RWR LRUs	95
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	95
A0037	Trace wiring, system, or interface diagrams	95
D0363	Troubleshoot IFF transponder systems	95
D0336	Remove or replace secure voice crypto equipment LRUs	95
D0310	Operationally or BIT check radar warning receivers (RWRs)	94
D0369	Troubleshoot secure voice crypto equipment	94
D0332	Remove or replace intercommunications system LRUs	94
D0331	Remove or replace ILS LRUs	94
A0035	Safety wire components	93
D0365	Troubleshoot intercommunication systems	93
A0008	Inspect coaxial cables and connectors	92
A0031	Repair aircraft wiring	92
D0345	Reprogram RWR system LRUs	92
A0036	Seal or reseal antennas	89
A0006	Inspect aircraft wiring	89
D0287	Code mode-4 crypto equipment	82
D0316	Perform end-of-runway mode-4 and RWR checks	81
F0468	Update and maintain CAMS data	80
D0288	Code secure voice crypto equipment	77

TABLE A7E

REPRESENTATIVE TASKS PERFORMED BY MEMBERS
IN THE F-15 FLIGHT CONTROL JOB (STG 155)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 131	PERCENT MEMBERS PERFORMING (N=45)
A0038	Troubleshoot aircraft wiring	100
C0267	Troubleshoot fuel quantity indicating systems	100
C0274	Troubleshoot pitot static, heater, or instrument systems	100
C0222	Remove or replace fuel quantity indicating system LRUs	100
C0229	Remove or replace pitot static, heater, or instrument system LRUs	100
C0248	Troubleshoot AOA systems	100
C0245	Troubleshoot AFCSs	98
C0176	Operationally check pitot static and standby instrument systems	98
C0192	Operationally or BIT check fuel quantity indicating systems	98
A0031	Repair aircraft wiring	98
C0187	Operationally or BIT check air data computer and primary instrument systems	98
C0160	Operationally check angle of attack (AOA) systems	98
A0037	Trace wiring, system, or interface diagrams	96
C0246	Troubleshoot air data computer and primary instrument systems	96
A0012	Inspect pitot or static hoses	96
C0203	Remove or replace air data computer or primary instrument system LRUs	96
C0270	Troubleshoot hydraulic pressure indicating systems	96
C0225	Remove or replace hydraulic pressure indicators	96
C0198	Pressurize and leak check pitot static and standby instrument systems	93
C0202	Remove or replace AFCS LRUs	91
C0174	Operationally check hydraulic pressure indicating systems	91
C0256	Troubleshoot engine air intake systems	89
C0155	Calibrate fuel quantity indicating systems	89
C0193	Operationally or BIT check horizontal situation indicating (HSI) systems	89
C0158	Operationally check AFCSs	87
A0041	Troubleshoot multipin connectors	87
C0189	Operationally or BIT check engine air intake systems	87
C0213	Remove or replace engine air intake systems LRUs	84
A0011	Inspect multipin connectors	82
A0006	Inspect aircraft wiring	82

TABLE A7F

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE U-2 FLIGHT CONTROL JOB (STG 215)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 129	PERCENT MEMBERS PERFORMING (N=6)
B0059	Load data into INSs	100
C0162	Operationally check autopilot air data systems (APADSs)	100
F0468	Update and maintain CAMS data	100
C0249	Troubleshoot APADSs	100
B0102	Remove or replace INS LRUs	100
A0038	Troubleshoot aircraft wiring	100
B0093	Remove or replace BDCUs	100
B0130	Troubleshoot INSs	100
C0176	Operationally check pitot static and standby instrument systems	100
C0269	Troubleshoot HSI systems	100
B0065	Operationally check bus control display units (BCDUs)	100
C0198	Pressurize and leak check pitot static and standby instrument systems	100
B0121	Troubleshoot BCDUs	100
C0193	Operationally or BIT check horizontal situation indicating (HSI) systems	100
C0224	Remove or replace HSI system LRUs	100
C0199	Rebuild cap stands	100
B0099	Remove or replace GPS LRUs	100
C0175	Operationally check MFDs	100
A0035	Safety wire components	100
B0069	Operationally check GPSs	100
B0090	Remove or replace 1553 data bus components	100
B0062	Operationally check 1553 data bus systems	100
C0165	Operationally check clocks, such as analog or digital	100
C0205	Remove or replace AOA LRUs	100
C0160	Operationally check angle or attack (AOA) systems	100
A0031	Repair aircraft wiring	100
C0206	Remove or replace APADS LRUs	83
B0080	Operationally or BIT check INSs	83
E0413	Perform preuse inspections or powered AGE	83
A0003	Debrief aircrews	83

TABLE A7G

REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF
THE F-15 MID-CAREER GENERALIST JOB (STG 171)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 282	PERCENT MEMBERS PERFORMING (N=274)
A0006	Inspect aircraft wiring	100
A0038	Troubleshoot aircraft wiring	99
A0037	Trace wiring, system, or interface diagrams	99
A0031	Repair aircraft wiring	99
A0039	Troubleshoot coaxial cables and connectors	99
A0035	Safety wire components	99
A0008	Inspect coaxial cables and connectors	99
A0007	Inspect chafing problem areas	98
D0310	Operationally or BIT check radar warning receivers (RWRs)	97
D0368	Troubleshoot RWRs	97
D0335	Remove or replace RWR LRUs	97
A0041	Troubleshoot multipin connectors	97
B0080	Operationally or BIT check INSs	97
B0100	Remove or replace HUD system LRUs	97
D0339	Remove or replace UHF communication and audio signal system LRUs	97
B0102	Remove or replace INS LRUs	97
B0130	Troubleshoot INSs	97
B0128	Troubleshoot HUD systems	97
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	96
B0078	Operationally or BIT check HUD systems	96
B0086	Operationally or BIT check radar systems	95
A0011	Inspect multipin connectors	95
B0075	Operationally check video recording systems	95
F0468	Update and maintain CAMS data	93
B0114	Remove or replace radar system LRUs	93
B0117	Remove or replace video recording system LRUs	92
D0287	Code mode-4 crypto equipment	90
B0094	Remove or replace CC system LRUs	89
C0158	Operationally check AFCs	87
C0245	Troubleshoot AFCs	85

TABLE A7H

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE U-2 COMMUNICATIONS JOB (STG 164)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 185</i>	PERCENT MEMBERS PERFORMING (N=12)
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	100
D0308	Operationally or BIT check identification friend-or-foe (IFF) interrogator systems	100
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	100
F0468	Update and maintain CAMS data	100
D0315	Operationally or BIT check very-high-frequency (VHF) communications and audio signal systems	100
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	100
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	100
D0300	Operationally or BIT check automatic direction finder (ADF) systems	100
A0038	Troubleshoot aircraft wiring	100
A0035	Safety wire components	100
E0401	Participate as aircraft tow team member or supervisor	100
D0364	Troubleshoot ILSs	100
D0373	Troubleshoot UHF communication and audio signal systems	100
D0363	Troubleshoot IFF transponder systems	100
D0369	Troubleshoot secure voice crypto equipment	100
E0424	Remove or install aircraft doors or panels	100
E0416	Position AGE	100
A0006	Inspect aircraft wiring	100
D0370	Troubleshoot TACAN systems	100
B0069	Operationally check GPSs	92
D0287	Code mode-4 crypto equipment	92
J0547	Conduct on-the-job training (OJT)	92
D0307	Operationally or BIT check high-frequency (HF) communications systems	92
J0559	Maintain training records or files	92
H0493	Evaluate serviceability of equipment, tools, parts, or supplies	92

TABLE A7I

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE A-10 MID-CAREER GENERALIST JOB (STG 145)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 197	PERCENT MEMBERS PERFORMING (N=25)
A0038	Troubleshoot aircraft wiring	100
B0135	Troubleshoot LASTE systems	100
A0037	Trace wiring, system, or interface diagrams	100
B0067	Operationally check embedded global positioning systems/internal navigation systems (EGIs)	100
C0176	Operationally check pitot static and standby instrument systems	100
B0100	Remove or replace HUD system LRUs	100
B0128	Troubleshoot HUD systems	100
A0031	Repair aircraft wiring	100
C0222	Remove or replace fuel quantity indicating system LRUs	100
C0229	Remove or replace pitot static, heater, or instrument system LRUs	100
A0006	Inspect aircraft wiring	100
A0011	Inspect multipin connectors	100
B0072	Operationally check low altitude safety and targeting enhancement (LASTE) systems	96
B0116	Remove or replace television monitor systems LRUs	96
B0078	Operationally or BIT check HUD systems	96
B0125	Troubleshoot EGIs	96
C0155	Calibrate fuel quantity indicating systems	96
A0035	Safety wire components	96
C0267	Troubleshoot fuel quantity indicating systems	96
A0041	Troubleshoot multipin connectors	96
B0106	Remove or replace LASTE system LRUs	92
B0143	Troubleshoot television monitor systems	92
C0274	Troubleshoot pitot static, heater, or instrument systems	92
B0087	Operationally or BIT check television monitor systems	92
F0468	Update and maintain CAMS data	88
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	80
B0147	Upload or download laser detecting pods	76
F0450	Analyze core automated maintenance system (CAMS) data	76

TABLE A8

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
TRAINING CLUSTER (STG 038)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 47</i>	PERCENT MEMBERS PERFORMING (N=21)
J0546	Conduct formal course classroom training	100
J0560	Personalize lesson plans	100
J0548	Counsel trainees on training progress	90
J0556	Evaluate progress of trainees	86
J0543	Administer or score tests	81
A0037	Trace wiring, system, or interface diagrams	76
J0559	Maintain training records or files	71
F0452	Conduct CAMS training	67
J0553	Develop or procure training materials or aids	62
K0598	Inspect personnel for compliance with military standards	57
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	57
G0484	Maintain TO libraries	52
J0545	Complete student entry or withdrawal forms	52
H0496	Inventory equipment, tools, parts, or supplies	48
F0453	Conduct CFRS training	48
J0555	Evaluate effectiveness of training programs, plans, or procedures	48
K0569	Conduct self-inspections or self-assessments	48
J0547	Conduct on-the-job training (OJT)	43
J0544	Brief personnel concerning training programs or matters	43
J0552	Develop written tests	43
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	43
B0078	Operationally or BIT check HUD systems	43
J0550	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STs)	38
J0558	Inspect training materials or aids for operation or suitability	38
A0034	Research technical orders	38
J0551	Develop training programs, plans, or procedures	38
E0416	Position AGE	38
G0488	Review TO changes	33
J0549	Determine training requirements	33
J0562	Write training reports	33

TABLE A8A

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE TECHNICAL SCHOOL INSTRUCTION JOB (STG 064)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 65	PERCENT MEMBERS PERFORMING (N=10)
J0546	Conduct formal course classroom training	100
J0556	Evaluate progress of trainees	100
J0548	Counsel trainees on training progress	100
J0560	Personalize lesson plans	100
A0037	Trace wiring, system, or interface diagrams	100
J0559	Maintain training records or files	90
J0543	Administer or score tests	90
F0452	Conduct CAMS training	90
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	80
B0078	Operationally or BIT check HUD systems	80
K0598	Inspect personnel for compliance with military standards	70
J0553	Develop or procure training materials or aids	70
J0555	Evaluate effectiveness of training programs, plans, or procedures	70
F0453	Conduct CFRS training	70
B0062	Operationally check 1553 data bus systems	70
J0545	Complete student entry or withdrawal forms	60
J0562	Write training reports	60
A0034	Research technical orders	60
B0114	Remove or replace radar system LRUs	60
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	60
G0488	Review TO changes	50
K0599	Interpret policies, directives, or procedures for subordinates	50
K0573	Counsel subordinates concerning personal matters	50
K0569	Conduct self-inspections or self-assessments	50
J0549	Determine training requirements	50
G0484	Maintain TO libraries	50
B0130	Troubleshoot INSS	50
J0551	Develop training programs, plans, or procedures	50
J0552	Develop written tests	50
E0416	Position AGE	50

TABLE A8B

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE CONTINUATION TRAINING INSTRUCTION JOB (STG 069)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 20	PERCENT MEMBERS PERFORMING (N=6)
J0546	Conduct formal course classroom training	100
J0560	Personalize lesson plans	100
J0548	Counsel trainees on training progress	83
J0543	Administer or score tests	83
J0556	Evaluate progress of trainees	83
J0553	Develop or procure training materials or aids	67
J0559	Maintain training records or files	67
J0545	Complete student entry or withdrawal forms	67
G0484	Maintain TO libraries	50
J0547	Conduct on-the-job training (OJT)	50
J0544	Brief personnel concerning training programs or matters	50
J0555	Evaluate effectiveness of training programs, plans, or procedures	50
J0552	Develop written tests	50
G0475	Identify and report suspected security compromises	50
G0472	Destroy classified materials or documents	50
A0037	Trace wiring, system, or interface diagrams	33
J0550	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STs)	33
G0480	Maintain administrative files	33
H0496	Inventory equipment, tools, parts, or supplies	33
J0558	Inspect training materials or aids for operation or suitability	33
K0598	Inspect personnel for compliance with military standards	33
J0554	Establish or maintain study reference files	33
G0487	Prepare administrative or classified materials or documents for mailing, transporting, or issue	33

TABLE A9

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE DEBRIEFER IJ (STG 133)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 21</i>	PERCENT MEMBERS PERFORMING (N=10)
A0003	Debrief aircrews	100
F0469	Update and maintain CFRS data	100
F0449	Analyze computerized fault reporting system (CFRS) data	100
F0450	Analyze core automated maintenance system (CAMS) data	100
F0468	Update and maintain CAMS data	90
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	90
G0470	Compile data for records, reports, logs, or trend analyses	80
F0453	Conduct CFRS training	80
F0463	Maintain aircraft analysis historical records	70
B0056	Input manual data into computer complexes	60
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	60
G0480	Maintain administrative files	60
F0452	Conduct CAMS training	60
F0455	Determine CFRS training requirements	60
F0454	Determine CAMS training requirements	50
G0485	Maintain or update status indicators, such as boards, graphs, or charts	40
J0556	Evaluate progress of trainees	40
J0559	Maintain training records or files	40
J0547	Conduct on-the-job training (OJT)	40
G0471	Complete accident or incident reports	40
A0001	Analyze avionics status panel (ASP) latch data	40
K0573	Counsel subordinates concerning personal matters	30
A0019	Record ASP latch data	30
F0461	Input supply data into CAMS	30
K0568	Conduct safety inspections of equipment or facilities	20
B0055	Input automatic data into computer complexes	20
K0581	Develop or establish work schedules	20
H0491	Coordinate maintenance of equipment with appropriate agencies	10

TABLE A10

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE MANAGEMENT AND SUPERVISION CLUSTER (STG 048)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 95	PERCENT MEMBERS PERFORMING (N=58)
K0593	Evaluate personnel for compliance with performance standards	93
J0547	Conduct on-the-job training (OJT)	90
K0573	Counsel subordinates concerning personal matters	86
K0598	Inspect personnel for compliance with military standards	84
K0572	Conduct supervisory performance feedback sessions	83
K0599	Interpret policies, directives, or procedures for subordinates	81
K0613	Write or indorse military performance reports	81
K0609	Write recommendations for awards or decorations	81
J0556	Evaluate progress of trainees	79
J0549	Determine training requirements	79
K0575	Determine or establish work assignments or priorities	78
J0559	Maintain training records or files	78
K0569	Conduct self-inspections or self-assessments	78
J0548	Counsel trainees on training progress	74
K0596	Initiate actions required due to substandard performance of personnel	74
K0586	Establish performance standards for subordinates	71
J0544	Brief personnel concerning training programs or matters	71
H0494	Identify and report equipment or supply problems	71
K0581	Develop or establish work schedules	69
H0493	Evaluate serviceability of equipment, tools, parts, or supplies	69
K0595	Implement safety or security programs	67
K0594	Evaluate personnel for promotion, demotion, reclassification, or special awards	67
G0470	Compile data for records, reports, logs, or trend analyses	67
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	66
K0590	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	66
G0485	Maintain or update status indicators, such as boards, graphs, or charts	66
K0571	Conduct supervisory orientations for newly assigned personnel	64
K0565	Assign personnel to work areas or duty positions	62
F0451	Clear Red-X conditions	59

TABLE A10A

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE EXPEDITOR JOB (STG 081)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 76</i>	PERCENT MEMBERS PERFORMING (N=8)
F0451	Clear Red-X conditions	100
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	100
A0008	Inspect coaxial cables and connectors	100
A0006	Inspect aircraft wiring	100
A0014	Inspect triaxial cables and connectors	100
A0007	Inspect chafing problem areas	100
A0015	Inspect waveguides	100
K0575	Determine or establish work assignments or priorities	88
K0563	Adjust daily maintenance plans to meet operational commitments	88
K0565	Assign personnel to work areas or duty positions	88
J0547	Conduct on-the-job training (OJT)	88
J0548	Counsel trainees on training progress	88
K0593	Evaluate personnel for compliance with performance standards	88
A0011	Inspect multipin connectors	88
K0572	Conduct supervisory performance feedback sessions	88
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	75
F0450	Analyze core automated maintenance system (CAMS) data	75
F0449	Analyze computerized fault reporting system (CFRS) data	75
K0586	Establish performance standards for subordinates	75
G0472	Destroy classified materials or documents	75
H0491	Coordinate maintenance of equipment with appropriate agencies	75
K0613	Write or indorse military performance reports	75
A0003	Debrief aircrews	75
G0481	Maintain aircraft maintenance historical log books	62
K0581	Develop or establish work schedules	62
D0287	Code mode-4 crypto equipment	62
G0479	Inventory classified materials or documents	62
J0556	Evaluate progress of trainees	62
K0598	Inspect personnel for compliance with military standards	62
K0599	Interpret policies, directives, or procedures for subordinates	62
J0559	Maintain training records or files	62

TABLE A10B

**REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE QUALITY ASSURANCE JOB (STG 187)**

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 87	PERCENT MEMBERS PERFORMING (N=7)
K0568	Conduct safety inspections of equipment or facilities	100
K0593	Evaluate personnel for compliance with performance standards	100
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	100
H0493	Evaluate serviceability of equipment, tools, parts, or supplies	100
G0488	Review TO changes	100
A0007	Inspect chafing problem areas	100
A0010	Inspect hydraulic lines	100
K0607	Write inspection reports	100
A0009	Inspect electrical relays	100
A0012	Inspect pitot or static hoses	100
A0006	Inspect aircraft wiring	100
A0008	Inspect coaxial cables and connectors	100
A0014	Inspect triaxial cables and connectors	100
E0389	Inspect airframes or airframe line replaceable units (LRUs)	100
A0013	Inspect quick disconnects	100
A0011	Inspect multipin connectors	100
G0486	Participate in TCTO meetings	100
A0015	Inspect waveguides	100
K0600	Investigate accidents or incidents	100
K0569	Conduct self-inspections or self-assessments	100
E0386	Inspect aircraft dehumidifiers or desiccants	100
K0590	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	86
K0603	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	86
K0595	Implement safety or security programs	86
F0465	Perform time compliance technical order (TCTO) inspections or installations	86
F0457	Identify problem areas, other than equipment or supply, using deficiency, service, or status reports, such as reports of deficiency (RODs)	86
E0387	Inspect aircraft egress systems	86

TABLE A10C

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE FLIGHTLINE NCOIC JOB (STG 099)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 140	PERCENT MEMBERS PERFORMING (N=25)
K0609	Write recommendations for awards or decorations	100
K0593	Evaluate personnel for compliance with performance standards	100
K0596	Initiate actions required due to substandard performance of personnel	100
K0613	Write or indorse military performance reports	96
J0556	Evaluate progress of trainees	96
K0599	Interpret policies, directives, or procedures for subordinates	96
G0480	Maintain administrative files	96
K0598	Inspect personnel for compliance with military standards	96
J0547	Conduct on-the-job training (OJT)	96
K0573	Counsel subordinates concerning personal matters	96
K0572	Conduct supervisory performance feedback sessions	96
K0575	Determine or establish work assignments or priorities	92
G0470	Compile data for records, reports, logs, or trend analyses	92
K0594	Evaluate personnel for promotion, demotion, reclassification, or special awards	92
J0549	Determine training requirements	92
J0548	Counsel trainees on training progress	92
K0581	Develop or establish work schedules	88
G0485	Maintain or update status indicators, such as boards, graphs, or charts	88
K0569	Conduct self-inspections or self-assessments	88
J0559	Maintain training records or files	84
K0586	Establish performance standards for subordinates	84
K0595	Implement safety or security programs	84
K0592	Evaluate maintenance or utilization of equipment, tools, parts, supplies or workspace	84
K0590	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	84
J0544	Brief personnel concerning training programs or matters	80
K0565	Assign personnel to work areas or duty positions	80
K0580	Develop or establish work methods or procedures	80
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	76
F0451	Clear Red-X conditions	76

TABLE A10D

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE NON-FLIGHTLINE NCOIC JOB (STG 089)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 45	PERCENT MEMBERS PERFORMING (N=12)
J0559	Maintain training records or files	100
K0598	Inspect personnel for compliance with military standards	100
K0573	Counsel subordinates concerning personal matters	100
K0575	Determine or establish work assignments or priorities	92
K0613	Write or indorse military performance reports	92
J0547	Conduct on-the-job training (OJT)	92
K0569	Conduct self-inspections or self-assessments	92
K0572	Conduct supervisory performance feedback sessions	92
K0581	Develop or establish work schedules	83
K0586	Establish performance standards for subordinates	83
J0556	Evaluate progress of trainees	83
K0571	Conduct supervisory orientations for newly assigned personnel	83
K0593	Evaluate personnel for compliance with performance standards	75
K0599	Interpret policies, directives, or procedures for subordinates	75
J0548	Counsel trainees on training progress	75
J0544	Brief personnel concerning training programs or matters	75
J0549	Determine training requirements	75
K0609	Write recommendations for awards or decorations	75
K0595	Implement safety or security programs	67
K0596	Initiate actions required due to substandard performance of personnel	67
K0594	Evaluate personnel for promotion, demotion, reclassification, or special awards	67
K0574	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	67
K0565	Assign personnel to work areas or duty positions	58
J0551	Develop training programs, plans, or procedures	58
K0606	Schedule personnel for TDY assignments, leaves, or passes	50
H0502	Perform security checks of tool cribs, hangars, or vehicles	50
J0555	Evaluate effectiveness of training programs, plans, or procedures	50
K0590	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	50
G0485	Maintain or update status indicators, such as boards, graphs, or charts	50
K0610	Write replies to inspection reports	50

TABLE A11

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
SCHEDULE CONTROL IJ (STG 058)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 32</i>	PERCENT MEMBERS PERFORMING (N=6)
G0485	Maintain or update status indicators, such as boards, graphs, or charts	100
K0575	Determine or establish work assignments or priorities	100
K0563	Adjust daily maintenance plans to meet operational commitments	100
G0471	Complete accident or incident reports	100
F0467	Review preventive maintenance schedules	83
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	83
H0491	Coordinate maintenance of equipment with appropriate agencies	83
H0502	Perform security checks of tool cribs, hangars, or vehicles	83
K0565	Assign personnel to work areas or duty positions	67
K0574	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	67
G0470	Compile data for records, reports, logs, or trend analyses	67
G0481	Maintain aircraft maintenance historical log books	67
H0494	Identify and report equipment or supply problems	67
I0518	Don or doff chemical warfare personal protective clothing	67
H0503	Pick up, deliver, or store equipment, tools, parts, or supplies	50
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	50
K0599	Interpret policies, directives, or procedures for subordinates	50
G0480	Maintain administrative files	50
F0468	Update and maintain CAMS data	50
K0573	Counsel subordinates concerning personal matters	50
K0613	Write or indorse military performance reports	50
J0549	Determine training requirements	50
K0572	Conduct supervisory performance feedback sessions	50
K0600	Investigate accidents or incidents	50

TABLE A12

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE EQUIPMENTCONTROL IJ (STG 045)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 27</i>	PERCENT MEMBERS PERFORMING (N=7)
H0497	Issue or log turn-ins of equipment, tools, parts, or supplies	100
H0496	Inventory equipment, tools, parts, or supplies	100
H0493	Evaluate serviceability of equipment, tools, parts, or supplies	86
H0503	Pick up, deliver, or store equipment, tools, parts, or supplies	86
H0494	Identify and report equipment or supply problems	71
H0498	Maintain documentation on items requiring periodic inspections or calibrations	71
H0495	Initiate requisitions for equipment, tools, parts, or supplies	71
I0537	Prepare equipment for deployments	57
I0526	Pack or palletize mobility or contingency equipment for shipment or movement	57
I0518	Don or doff chemical warfare personal protective clothing	57
G0484	Maintain TO libraries	43
H0499	Maintain organizational equipment or supply records	43
H0502	Perform security checks of tool cribs, hangars, or vehicles	43
K0587	Establish procedures for accountability of equipment, tools, parts, or supplies	43
I0533	Perform pallet buildup activities	43
I0522	Inspect packed or palletized mobility or contingency equipment prior to transport	43
A0041	Troubleshoot multipin connectors	43
A0029	Remove, replace, or repair multipin connectors	43
H0492	Develop equipment checklists	43
A0028	Remove, replace, or repair coaxial connectors	43
A0039	Troubleshoot coaxial cables and connectors	43
G0488	Review TO changes	29
G0474	Establish or maintain automated technical order management system (ATOMS) accounts	29
H0491	Coordinate maintenance of equipment with appropriate agencies	29
A0017	Perform corrosion control procedures on electrical components	29

TABLE A13

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN
THE DEPLOYMENT MANAGEMENT IJ (STG 113)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 39</i>	PERCENT MEMBERS PERFORMING (N=6)
G0480	Maintain administrative files	100
I0511	Coordinate mobility or contingency requirements with appropriate agencies	100
I0541	Request or distribute mobility requirements documents	100
I0504	Assign personnel to mobility or contingency positions	100
I0505	Brief deploying personnel	100
I0508	Conduct contingency operation/mobility planning and execution systems (COMPES) programs	100
I0512	Coordinate specific source of personnel requirements with appropriate agencies	100
K0604	Review mobility, contingency, disaster preparedness, or unit emergency or alert plans	100
I0516	Develop mobility inspection checklists	100
I0524	Maintain accountability of personnel selected to fill OPLAN requirements	83
G0477	Initiate requests for temporary duty (TDY) orders	83
I0521	Inspect mobility bags or kits	83
G0485	Maintain or update status indicators, such as boards, graphs, or charts	67
I0534	Perform plans file and mobility file matches	67
I0514	Determine specific source of personnel requirements for deployment manning documents	67
K0576	Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans	67
I0540	Provide OPLAN requirements status listings to unit commanders	67
K0598	Inspect personnel for compliance with military standards	67
I0518	Don or doff chemical warfare personal protective clothing	67
I0510	Coordinate deployment of personnel with other MAJCOMs or joint service commands	67
G0478	Initiate or maintain standby rosters or workcenter pyramid recall rosters	50
G0476	Initiate classified reports, messages, or documents	50
K0574	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	50

TABLE A14**SPECIALTY JOB COMPARISON BETWEEN CURRENT AND 1996 SURVEYS**

CURRENT SURVEY (N=724)		1996 SURVEY (N=1,185)	
FLIGHTLINE CLUSTER	78%	FLIGHTLINE MAINTENANCE CLUSTER	77%
MANAGEMENT AND SUPERVISION CLUSTER	8%	MANAGEMENT CLUSTER	8%
		QUALITY ASSURANCE JOB	1%
TRAINING CLUSTER	3%	FIELD TRAINING DETACHMENT (FTD) INSTRUCTOR JOB	1%
DEFRIEFER IJ	1%	DEFRIEFER JOB	1%
SCHEDULE CONTROL IJ	1%	MAINTENANCE OPERATIONS CONTROL CENTER COORDINATOR JOB	1%
EQUIPMENT CONTROL IJ	1%	TOOLS AND EQUIPMENT JOB	2%
DEPLOYMENT MANAGEMENT IJ	1%	**	

** Indicates job not found in study

TABLE A15

**DISTRIBUTION OF AFSC 2A3X1 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (PERCENT IN EACH JOB)**

<u>Specialty Jobs</u>	<u>2A331 (N=198)</u>	<u>2A351 (N=367)</u>	<u>2A371 (N=159)</u>
FLIGHTLINE CLUSTER	90	82	52
TRAINING CLUSTER	0	5	1
DEBRIEFER IJ	*	2	2
MANAGEMENT AND SUPERVISION CLUSTER	0	4	28
SCHEDULE CONTROL IJ	0	*	3
EQUIPMENT CONTROL IJ	2	1	0
DEPLOYMENT MANAGEMENT IJ	0	0	4
NOT GROUPED	8	6	10

* Indicates less than 1%

TABLE A16

**TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A3X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)**

<u>DUTIES</u>	<u>2A331</u> <u>(N=198)</u>	<u>2A351</u> <u>(N=367)</u>	<u>2A371</u> <u>(N=159)</u>
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	20	16	11
B MAINTAINING ATTACK CONTROL SYSTEMS	18	16	9
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	23	18	13
D MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	18	17	10
E PERFORMING GENERAL AIRCRAFT OR CUT ACTIVITIES	10	7	5
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5	6	8
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2	4	8
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	3	4
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	*	2	5
J PERFORMING TRAINING ACTIVITIES	*	5	8
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	*	6	19

* Indicates less than 1%

Note: Columns might not add to 100% due to rounding

TABLE A17

**TIME SPENT ON DUTIES BY AD MEMBERS OF
AFSC 2A3X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)**

<u>DUTIES</u>	<u>AD 2A331 (N=198)</u>	<u>AD 2A351 (N=317)</u>	<u>AD 2A371 (N=126)</u>
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	20	16	11
B MAINTAINING ATTACK CONTROL SYSTEMS	18	16	7
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	23	17	10
D MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	18	17	8
E PERFORMING GENERAL AIRCRAFT OR CUT ACTIVITIES	10	7	5
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5	6	8
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2	4	9
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	3	5
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	*	2	5
J PERFORMING TRAINING ACTIVITIES	*	6	9
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	*	6	23

* Indicates less than 1%

Note: Columns might not add to 100% due to rounding

TABLE A18

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 2A331 PERSONNEL

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 139</i>	PERCENT MEMBERS PERFORMING (N=198)
A0038	Troubleshoot aircraft wiring	93
A0035	Safety wire components	88
A0037	Trace wiring, system, or interface diagrams	87
A0031	Repair aircraft wiring	85
A0006	Inspect aircraft wiring	83
A0041	Troubleshoot multipin connectors	82
A0007	Inspect chafing problem areas	82
A0001	Analyze avionics status panel (ASP) latch data	78
A0008	Inspect coaxial cables and connectors	77
A0029	Remove, replace, or repair multipin connectors	76
A0032	Repair chafed areas	76
A0011	Inspect multipin connectors	75
F0468	Update and maintain CAMS data	74
A0039	Troubleshoot coaxial cables and connectors	72
A0028	Remove, replace, or repair coaxial connectors	71
A0022	Remove or replace coaxial cables	71
A0036	Seal or reseal antennas	68
E0417	Position or remove aircraft chocks	66
A0015	Inspect waveguides	65
E0448	Wash aircraft	64
E0416	Position AGE	63
A0042	Troubleshoot triaxial cables and connectors	62
E0393	Launch or recover aircraft	61
A0034	Research technical orders	61
A0014	Inspect triaxial cables and connectors	61
E0429	Remove or install aircraft safety pins or locks	56
F0450	Analyze core automated maintenance system (CAMS) data	55
D0310	Operationally or BIT check radar warning receivers (RWRs)	54
B0086	Operationally or BIT check radar systems	53
D0335	Remove or replace RWR LRUs	53
F0469	Update and maintain CFRS data	50
D0368	Troubleshoot RWRs	50

TABLE A19

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 2A351 PERSONNEL

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 185</i>	PERCENT MEMBERS PERFORMING (N=317)
A0037	Trace wiring, system, or interface diagrams	88
A0006	Inspect aircraft wiring	85
A0008	Inspect coaxial cables and connectors	84
A0038	Troubleshoot aircraft wiring	83
A0011	Inspect multipin connectors	83
A0041	Troubleshoot multipin connectors	83
A0035	Safety wire components	82
A0007	Inspect chafing problem areas	82
A0039	Troubleshoot coaxial cables and connectors	81
A0031	Repair aircraft wiring	81
A0029	Remove, replace, or repair multipin connectors	81
A0028	Remove, replace, or repair coaxial connectors	77
A0032	Repair chafed areas	77
F0468	Update and maintain CAMS data	76
A0034	Research technical orders	72
J0547	Conduct on-the-job training (OJT)	69
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	69
E0416	Position AGE	68
F0450	Analyze core automated maintenance system (CAMS) data	65
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	64
H0496	Inventory equipment, tools, parts, or supplies	63
J0548	Counsel trainees on training progress	59
F0452	Conduct CAMS training	55
J0556	Evaluate progress of trainees	54
J0559	Maintain training records or files	54
H0493	Evaluate serviceability of equipment, tools, parts, or supplies	52

TABLE A20

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 2A371 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 137	PERCENT MEMBERS PERFORMING (N=126)
K0598	Inspect personnel for compliance with military standards	71
J0547	Conduct on-the-job training (OJT)	70
K0593	Evaluate personnel for compliance with performance standards	69
K0573	Counsel subordinates concerning personal matters	69
K0613	Write or indorse military performance reports	68
K0609	Write recommendations for awards or decorations	67
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	65
K0572	Conduct supervisory performance feedback sessions	64
K0575	Determine or establish work assignments or priorities	63
J0559	Maintain training records or files	63
J0556	Evaluate progress of trainees	63
J0549	Determine training requirements	63
J0548	Counsel trainees on training progress	62
F0468	Update and maintain CAMS data	60
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	60
K0599	Interpret policies, directives, or procedures for subordinates	59
K0586	Establish performance standards for subordinates	59
J0544	Brief personnel concerning training programs or matters	58
F0451	Clear Red-X conditions	58
K0569	Conduct self-inspections or self-assessments	56
F0450	Analyze core automated maintenance system (CAMS) data	56
I0518	Don or doff chemical warfare personal protective clothing	56
K0594	Evaluate personnel for promotion, demotion, reclassification, or special awards	55
G0485	Maintain or update status indicators, such as boards, graphs, or charts	52
K0581	Develop or establish work schedules	52
H0491	Coordinate maintenance of equipment with appropriate agencies	50
K0571	Conduct supervisory orientations for newly assigned personnel	50

TABLE A21

**TIME SPENT ON DUTIES BY ANG MEMBERS OF
AFSC 2A3X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)**

<u>DUTIES</u>		ANG 2A351 (N=50)	ANG 2A371 (N=33)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	17	13
B	MAINTAINING ATTACK CONTROL SYSTEMS	17	14
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	25	26
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	22	18
E	PERFORMING GENERAL AIRCRAFT OR CUT ACTIVITIES	7	5
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4	7
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3	5
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	3
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	2
J	PERFORMING TRAINING ACTIVITIES	*	3
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1	4

* Indicates less than 1%

Note: Columns might not add to 100% due to rounding

TABLE A22

REPRESENTATIVE TASKS PERFORMED BY ANG DAFSC 2A351 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 229	PERCENT MEMBERS PERFORMING (N=50)
A0037	Trace wiring, system, or interface diagrams	96
A0038	Troubleshoot aircraft wiring	96
A0006	Inspect aircraft wiring	96
A0031	Repair aircraft wiring	96
A0008	Inspect coaxial cables and connectors	96
A0015	Inspect waveguides	96
A0007	Inspect chafing problem areas	94
B0100	Remove or replace HUD system LRUs	94
A0039	Troubleshoot coaxial cables and connectors	94
D0308	Operationally or BIT check identification friend or foe (IFF) interrogator systems	94
A0001	Analyze avionics status panel (ASP) latch data	94
B0078	Operationally or BIT check HUD systems	94
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	94
A0035	Safety wire components	94
B0086	Operationally or BIT check radar systems	92
B0080	Operationally or BIT check INSs	92
D0310	Operationally or BIT check radar warning receivers (RWRs)	92
B0102	Remove or replace INS LRUs	92
A0012	Inspect pitot or static hoses	92
A0022	Remove or replace coaxial cables	92
A0014	Inspect triaxial cables and connectors	92
B0128	Troubleshoot HUD systems	90
D0287	Code mode-4 crypto equipment	88
D0288	Code secure voice crypto equipment	88
D0335	Remove or replace RWR LRUs	88
A0011	Inspect multipin connectors	86
B0114	Remove or replace radar system LRUs	84
F0468	Update and maintain CAMS data	84
B0092	Remove or replace attack radar or navigation system LRUs	82
B0063	Operationally check attack radar or navigation radar systems	80
A0020	Remove or install electrical relays	74
D0295	Operationally check intercommunications systems	66
E0447	Transport test equipment or units to or from flightline	58

TABLE A23

REPRESENTATIVE TASKS PERFORMED BY ANG DAFSC 2A371 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 267	PERCENT MEMBERS PERFORMING (N=33)
A0001	Analyze avionics status panel (ASP) latch data	97
A0006	Inspect aircraft wiring	94
A0007	Inspect chafing problem areas	94
A0012	Inspect pitot or static hoses	94
A0015	Inspect waveguides	94
F0468	Update and maintain CAMS data	91
B0114	Remove or replace radar system LRUs	91
A0038	Troubleshoot aircraft wiring	91
A0039	Troubleshoot coaxial cables and connectors	91
B0075	Operationally check video recording systems	91
A0011	Inspect multipin connectors	91
F0466	Review aircraft flight or maintenance records, such as AFTO Forms 781-series	88
F0461	Input supply data into CAMS	88
A0037	Trace wiring, system, or interface diagrams	88
B0094	Remove or replace CC system LRUs	88
D0310	Operationally or BIT check radar warning receivers (RWRs)	88
D0335	Remove or replace RWR LRUs	88
D0368	Troubleshoot RWRs	88
B0086	Operationally or BIT check radar systems	88
C0224	Remove or replace HSI system LRUs	88
A0003	Debrief aircrews	85
F0469	Update and maintain CFRS data	85
A0034	Research technical orders	85
D0298	Operationally check secure voice crypto equipment	85
D0288	Code secure voice crypto equipment	82
J0547	Conduct on-the-job training (OJT)	82
D0287	Code mode-4 crypto equipment	79
F0459	Initiate or annotate aircraft flight or maintenance records, such as AFTO Forms 781-series	73
G0485	Maintain or update status indicators, such as boards, graphs, or charts	70
F0467	Review preventive maintenance schedules	67
F0450	Analyze core automated maintenance system (CAMS) data	64
F0449	Analyze computerized fault reporting system (CFRS) data	64

TABLE A24

AFSC 2A3X1 TASKS WITH HIGHEST TRAINING EMPHASIS (TE) RATINGS

TASKS	TNG EMP*	TSK DIF**	ATI***	PERCENT MEMBERS PERFORMING	
				1st ENL	3- LVL
A0037 Trace wiring, system, and interface diagrams	7.14	6.23	18	87	87
A0031 Repair aircraft wiring	6.44	6.80	18	86	85
A0038 Troubleshoot aircraft wiring	6.08	7.25	18	92	93
C0158 Assist users in resolving computer software malfunctions or problems	6.08	5.77	12	37	41
B0086 Operationally or BIT check radar systems	6.06	5.28	18	50	53
B0063 Operationally check attack radar or navigation radar systems	5.86	5.46	12	38	37
A0006 Inspect aircraft wiring	5.86	5.34	18	86	83
A0041 Troubleshoot multipin connector	5.81	7.07	18	84	82
C0187 Operationally or BIT check air data computer and primary instrument systems	5.78	4.98	12	41	42
C0192 Operationally or BIT check fuel quantity indicating system	5.72	4.81	12	42	42
A0039 Troubleshoot coaxial cables and connectors	5.72	6.98	18	61	72
A0042 Troubleshoot triaxial cables and connectors	5.72	7.27	18	61	62
A0030 Remove, replace, or repair triaxial connectors	5.72	7.91	18	56	58
D0310 Operationally or BIT check radar warning receivers (RWRs)	5.72	4.90	18	52	54
B0120 Troubleshoot attack radar or navigation radar systems	5.69	6.32	12	37	39
A0029 Remove, replace, or repair multipin connectors	5.67	6.71	18	79	76

*Mean TE Rating = 2.96; Standard Deviation = 1.65; High TE > 4.61

**Mean TD Rating = 5.00; Standard Deviation = 1.0; High TD > 6.00

***ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH; 1 = LOW)

TABLE A25

AFSC 2A3X1 TASKS WITH HIGHEST TASK DIFFICULTY (TD) RATINGS

TASKS	TSK DIF*	TNG EMP**	ATI***	PERCENT MEMBERS PERFORMING			
				1ST ENL	3A- LVL	3B- LVL	3C- LVL
A0030 Remove, replace, or repair triaxial connectors	7.91	5.72	18	56	84	32	62
B0046 Boresight navigation systems mounts	7.85	2.08	2	14	28	12	10
B0044 Boresight heads-up-display (HUD) mounts	7.72	1.94	2	20	47	13	10
B0048 Boresight radar antenna mounts	7.72	1.64	2	10	25	6	10
B0047 Boresight optical sight systems	7.71	1.94	2	8	18	6	4
B0049 Boresight radar antennas	7.64	1.64	2	10	30	6	7
B0043 Boresight forward looking infrared (FLIR) systems	7.58	2.08	2	11	26	10	4
B0045 Boresight laser targeting systems	7.74	2.47	2	11	19	10	5
A0042 Troubleshoot triaxial cables and connectors	7.27	5.72	18	61	88	34	67
A0038 Troubleshoot aircraft wiring	7.25	6.08	18	92	89	97	92
B0138 Troubleshoot MUX BUSs	7.22	3.97	7	25	39	18	23
C0275 Troubleshoot primary flight control systems	7.19	4.67	12	31	28	71	10
A0004 Fabricate crossover, plug, or test cables	7.11	2.25	2	29	19	40	23
C0267 Troubleshoot fuel quantity indicating systems	7.07	5.44	12	41	33	87	11
A0041 Troubleshoot multipin connectors	7.07	5.81	18	84	93	76	79
A0040 Troubleshoot electrical relays	7.03	5.06	18	60	49	62	63
A0028 Remove, replace, or repair coaxial connectors	7.02	5.31	18	73	88	44	86
C0256 Troubleshoot engine air intake systems	6.99	5.11	11	27	11	76	5

*Mean TD Rating = 5.00; Standard Deviation = 1.0; High TD > 6.00

**Mean TE Rating = 2.96; Standard Deviation = 1.65; High TE > 4.61

***ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH; 1 = LOW)

TABLE A26

**RELATIVE PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)**

<u>DUTIES</u>		PERCENT MEMBERS PERFORMING (N=254)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	20
B	MAINTAINING ATTACK CONTROL SYSTEMS	18
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	22
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	19
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A27

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A3X1
FIRST-ENLISTMENT PERSONNEL (1-48 MONTHS' TAFMS)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 139	PERCENT MEMBERS PERFORMING (N=254)
A0038	Troubleshoot aircraft wiring	92
A0035	Safety wire components	89
A0037	Trace wiring, system, or interface diagrams	87
A0006	Inspect aircraft wiring	86
A0031	Repair aircraft wiring	86
A0041	Troubleshoot multipin connectors	84
A0007	Inspect chafing problem areas	82
A0008	Inspect coaxial cables and connectors	80
A0029	Remove, replace, or repair multipin connectors	79
A0011	Inspect multipin connectors	78
A0032	Repair chafed areas	77
A0039	Troubleshoot coaxial cables and connectors	76
F0468	Update and maintain CAMS data	75
A0028	Remove, replace, or repair coaxial connectors	73
A0022	Remove or replace coaxial cables	72
A0001	Analyze avionics status panel (ASP) latch data	70
A0036	Seal or reseal antennas	68
E0417	Position or remove aircraft chocks	67
A0034	Research technical orders	63
E0416	Position AGE	63
A0015	Inspect waveguides	61
A0042	Troubleshoot triaxial cables and connectors	61
E0448	Wash aircraft	60
A0040	Troubleshoot electrical relays	60
A0014	Inspect triaxial cables and connectors	59
F0450	Analyze core automated maintenance system (CAMS) data	57
E0393	Launch or recover aircraft	56
D0310	Operationally or BIT check radar warning receivers (RWRs)	52
D0335	Remove or replace RWR LRUs	51
B0086	Operationally or BIT check radar systems	50
E0424	Remove or install aircraft doors or panels	49
H0496	Inventory equipment, tools, parts, or supplies	48
D0368	Troubleshoot RWRs	48

TABLE A28

EXAMPLE OF STS ELEMENTS FROM THE GENERAL SECTION NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)

UNIT	STS ELEMENT	PERCENT MEMBERS PERFORMING					
		PROF CODE	1ST			TNG EMP*	TSK DIF**
			ENL (N=254)	LVL (N=198)	3- (N=198)		
A2.6.13.2	AF Form 2005 (A2.6: Supply Discipline)	2b	19	17	17	1.08	5.02
Task	H0495 Initiate requests for equipment, tools, parts, or supplies						2

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61
 ** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00
 *** ATI = Automatic Training Indicator is a training decision value for resident training
 (18 = HIGH, 1 = LOW)

TABLE A29

RELATIVE PERCENT TIME SPENT ON DUTIES BY
A-SHRED FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)

<u>DUTIES</u>		A-SHRED 1 st ENL (N=73)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	21
B	MAINTAINING ATTACK CONTROL SYSTEMS	35
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	13
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	9
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	6
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A30

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A3X1A
FIRST-ENLISTMENT PERSONNEL (1-48 MONTHS' TAFMS)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 130	PERCENT MEMBERS PERFORMING (N=73)
A0041	Troubleshoot multipin connectors	92
A0039	Troubleshoot coaxial cables and connectors	90
A0037	Trace wiring, system, or interface diagrams	89
A0038	Troubleshoot aircraft wiring	89
B0128	Troubleshoot HUD systems	89
A0029	Remove, replace, or repair multipin connectors	89
A0028	Remove, replace, or repair coaxial connectors	88
A0035	Safety wire components	86
B0100	Remove or replace HUD system LRUs	86
A0031	Repair aircraft wiring	86
A0006	Inspect aircraft wiring	85
A0008	Inspect coaxial cables and connectors	84
A0007	Inspect chafing problem areas	84
A0042	Troubleshoot triaxial cables and connectors	84
B0130	Troubleshoot INSs	82
A0014	Inspect triaxial cables and connectors	81
B0078	Operationally or BIT check HUD systems	81
B0102	Remove or replace INS LRUs	81
A0015	Inspect waveguides	81
B0075	Operationally check video recording systems	79
B0080	Operationally or BIT check INSs	79
A0011	Inspect multipin connectors	78
B0086	Operationally or BIT check radar systems	75
B0144	Troubleshoot video recording systems	75
B0117	Remove or replace video recording system LRUs	75
F0468	Update and maintain CAMS data	73
B0092	Remove or replace attack radar or navigation system LRUs	71
B0063	Operationally check attack radar or navigation radar systems	70
B0114	Remove or replace radar system LRUs	68
E0417	Position or remove aircraft chocks	68
B0094	Remove or replace CC system LRUs	68

TABLE A31

EXAMPLES OF STS ELEMENTS FROM THE A-SHRED SECTION OF THE STS
BUT NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)

UNIT	STS ELEMENT	PROF CODE	PERCENT MEMBERS PERFORMING					TNG EMP*	TSK DIF**	ATI***
			1ST	ENL	LVL	3-				
A3.20.4.1	LASTE Analysis (PATS) (3.20.4: Isolate Malfunctions)	2b								
Task	B0135 Troubleshoot LASTE systems		10	2	2	2.64	6.11	2		

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A32

EXAMPLES OF TASKS PERFORMED BY 20% OR MORE A-SHRED MEMBERS
BUT NOT REFERENCED TO ANY A-SHRED STS ELEMENT

TASKS	TNG EMP*	1ST ENL (N=73)	3- LVL (N=53)	TSK DIF**	ATI***
A0006 Inspect aircraft wiring	5.86	85	84	5.34	18
A0007 Inspect chafing problem areas	5.36	84	84	5.12	18
A0008 Inspect coaxial cables and connectors	5.47	84	82	5.02	18
A0011 Inspect multipin connectors	5.08	78	77	4.65	18
A0022 Remove and replace coaxial cables	5.56	84	86	5.97	18
A0028 Remove, replace, or repair coaxial connectors	5.31	88	88	7.02	18
A0029 Remove, replace, or repair multipin connectors	5.67	89	88	6.71	18
A0031 Repair aircraft wiring	6.44	86	84	6.80	18
A0032 Repair chafed areas	5.56	79	79	6.06	18
A0034 Research technical orders	5.64	63	67	5.39	18
A0038 Troubleshoot aircraft wiring	6.08	89	89	7.25	18
A0039 Troubleshoot coaxial cables and connectors	5.72	90	89	6.98	18
A0040 Troubleshoot electrical relays	5.06	52	49	7.03	18

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator, which is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A33

EXAMPLES OF SUPPORT EQUIPMENT USED OR OPERATED
BY FIRST-ENLISTMENT AFSC 2A3X1 A-SHRED PERSONNEL
(PERCENT USING OR OPERATING)

<u>SUPPORT EQUIPMENT</u>	<u>(N=73)</u>
Wire Repair Kits	82
Heat Guns	79
Multimeters, Digital	79
Video Tape Recorders (VTRs), 8mm	78
Maintenance Stands	73
Antenna Cradles	70
Boxes, Weigh-Off-Wheels (WOW) Proximity	68
Programmer Load Verifiers (PLVs)	66
Testers, Waveguide Pressure	66
Portable Lighting Equipment	64
Pitot Static Adapter Kits	63
Maintenance Cranes	63
Ground Heaters and Blowers	59
Portable Hydraulic Test Stands (-6 Carts)	59
Mission Data Loaders/Data Transfer Modules	58
Soldering Equipment	58
Hydraulic Test Stands	56
Laptop Computers	52
Hydraulic Servicing Carts	51

TABLE A34

PERCENT TIME SPENT ON DUTIES BY A-SHRED FIRST-ENLISTMENT PERSONNEL
WORKING ON F-15 AIRCRAFT (1-48 MONTHS' TAFMS)

<u>DUTIES</u>		A-SHRED F-15 1 st ENL (N=63)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	21
B	MAINTAINING ATTACK CONTROL SYSTEMS	36
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	12
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	9
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	10
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	6
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A35

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A3X1A FIRST-ENLISTMENT
PERSONNEL WORKING ON F-15 AIRCRAFT (1-48 MONTHS' TAFMS)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 136	PERCENT MEMBERS PERFORMING (N=63)
B0128	Troubleshoot HUD systems	92
A0041	Troubleshoot multipin connectors	92
B0100	Remove or replace HUD system LRUs	90
A0038	Troubleshoot aircraft wiring	90
A0015	Inspect waveguides	90
A0035	Safety wire components	89
A0014	Inspect triaxial cables and connectors	89
A0037	Trace wiring, system, or interface diagrams	89
A0039	Troubleshoot coaxial cables and connectors	89
A0042	Troubleshoot triaxial cables and connectors	89
B0102	Remove or replace INS LRUs	87
B0130	Troubleshoot INSs	87
B0086	Operationally or BIT check radar systems	86
B0080	Operationally or BIT check INSs	86
A0006	Inspect aircraft wiring	86
B0078	Operationally or BIT check HUD systems	84
A0007	Inspect chafing problem areas	84
B0075	Operationally check video recording systems	83
B0144	Troubleshoot video recording systems	81
B0076	Operationally or built-in-tester (BIT) check central computer (CC) systems	81
B0088	Pressurize or leak check radar systems	79
B0114	Remove or replace radar system LRUs	78
B0092	Remove or replace attack radar or navigation system LRUs	78
B0094	Remove or replace CC system LRUs	78
B0117	Remove or replace video recording system LRUs	78
F0468	Update and maintain CAMS data	76
B0063	Operationally check attack radar or navigation radar systems	75
B0120	Troubleshoot attack radar or navigation radar systems	71
E0417	Position or remove aircraft chocks	70
E0416	Position AGE	63
E0393	Launch or recover aircraft	59

TABLE A36

EXAMPLES OF POI OBJECTIVES FOR THE F-15 AVIONICS ATTACK CONTROL SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING				TNG EMP*	TSK DIF**	ATI***
			1ST	ENL (N=63)	3- LVL (N=54)				
I.3.b	Identify facts pertaining to inspection systems with at least 80% accuracy (I3: Maintenance Complex)	PC/W							
Tasks	E0403 Perform end-of-runway inspections, other than mode-4 and RWR checks		11		13		1.44	4.17	2
	E0410 Perform postflight inspections		5		4		0.42	4.61	2
	E0411 Perform preflight inspections		2		2		0.42	4.67	2
	E0411 Perform supplemental inspections, such as acceptance, calendar, or time replacement items		14		15		0.78	4.64	2
	E0415 Perform thruflight inspections		2		2		0.42	4.44	2
I.5.e	Given work unit code manual and a scenario, complete an AF Form 2005 for ordering a line replaceable unit (LRU) with no more than one instructor assist (I.5: Supply Discipline)	PC							
Task	H0495 Initiate requisitions for equipment, tools, parts, or supplies		13		9		1.08	5.02	2
IV.5.a	Using applicable TOs, support equipment, and an F-15 MISP aircraft, perform an aircraft safe for maintenance check with no more than two instructor assists (IV.5: Safe for Maintenance and Panels)	PC							
Tasks	E0385 Identify aircraft fuel leaks		16		15		2.28	3.59	1
	E0387 Inspect aircraft egress systems		6		6		2.69	3.99	1
	E0388 Inspect aircraft landing gear systems		3		2		1.03	4.72	2
	E0390 Inspect halon bottles		22		19		3.42	3.16	2
	E0408 Perform operational checks of aircraft seat adjustment systems		8		7		0.61	3.39	1

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A37

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE A-SHRED MEMBERS
WORKING ON F-15 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE F-15 AVIONICS ATTACK CONTROL SYSTEMS APPRENTICE COURSE

TASKS	PERCENT MEMBERS PERFORMING						TSK DIF**	ATI***
	3-			TNG EMP**	LVL (N=53)			
	1ST ENL (N=73)							
A0025	Remove or replace quick disconnects	4.50	75	73	4.79	17		
A0026	Remove or replace triaxial cables	5.28	84	85	6.87	18		
A0027	Remove or replace waveguides	4.72	89	89	4.90	18		
A0030	Remove, replace, or repair triaxial connectors	5.72	84	85	7.91	18		
A0034	Research technical orders	5.64	67	69	5.39	18		
A0040	Troubleshoot electrical relays	5.06	51	50	7.03	18		
A0042	Troubleshoot triaxial cables and connectors	5.72	89	89	7.27	18		
B0074	Operationally check overload warning systems (OWSs)	5.36	79	80	5.70	18		
B0075	Operationally check video recording systems	4.81	83	81	4.47	18		

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A38

**EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3X1A PERSONNEL
WORKING ON F-15 AIRCRAFT
(PERCENT USING OR OPERATING)**

SUPPORT EQUIPMENT	(N=63)
Wire Repair Kits	81
Video Tape Recorders (VTRs), 8mm	81
Heat Guns	78
Multimeters, Digital	78
Antenna Cradles	78
Boxes, Weight-Off-Wheels (WOW) Proximity	75
Maintenance Stands	73
Testers, Waveguide Pressure	73
Maintenance Cranes	70
Programmer Load Verifiers (PLVs)	68
Portable Lighting Equipment	63
Portable Hydraulic Test Stands (-6 Carts)	63
Pitot Static Adapter Kits	60
Mission Data Loaders/Data Transfer Modules	60
Ground Heaters and Blowers	59
Soldering Equipment	56
Hydraulic Test Stands	56
Hydraulic Servicing Carts	54
Overload Warning System (OWS) Adapter Cables	54
Gaseous Nitrogen Servicing Equipment	52

TABLE A39

**PERCENT TIME SPENT ON DUTIES BY
A-SHRED FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)**

<u>DUTIES</u>		A-SHRED A-10/U-2 1 st ENL (N=9)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	20
B	MAINTAINING ATTACK CONTROL SYSTEMS	28
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	21
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	14
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	8
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

TABLE A40

**REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1A FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)**

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 149	PERCENT MEMBERS PERFORMING (N=9)
A0037	Trace wiring, system, or interface diagrams	100
A0039	Troubleshoot coaxial cables and connectors	100
A0031	Repair aircraft wiring	100
A0007	Inspect chafing problem areas	100
A0029	Remove, replace, or repair multipin connectors	100
A0038	Troubleshoot aircraft wiring	89
A0041	Troubleshoot multipin connectors	89
A0035	Safety wire components	89
B0128	Troubleshoot HUD systems	89
A0028	Remove, replace, or repair coaxial connectors	89
A0008	Inspect coaxial cables and connectors	89
A0006	Inspect aircraft wiring	89
A0011	Inspect multipin connectors	89
F0468	Update and maintain CAMS data	78
B0075	Operationally check video recording systems	78
E0417	Position or remove aircraft chocks	78
B0116	Remove or replace television monitor systems LRUs	67
B0067	Operationally check embedded global positioning systems/internal navigation systems (EGIs)	67
B0125	Troubleshoot EGIs	67
B0147	Upload or download laser detecting pods	67
B0078	Operationally or BIT check HUD systems	67
B0087	Operationally or BIT check television monitor systems	67
B0124	Troubleshoot DTSs	67
B0066	Operationally check DTSs	67
A0040	Troubleshoot electrical relays	67
B0130	Troubleshoot INSs	67
B0135	Troubleshoot LASTE systems	56
D0377	Upload or download ECM pods	56
B0143	Troubleshoot television monitor systems	56

TABLE A41

EXAMPLES OF POI OBJECTIVES FOR
THE A-10 (MRA) AVIONICS ATTACK AND CONTROL SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING					TNG EMP*	TSK DIF**	ATI****
			1ST ENL (N=9)	3-SKL LVL (N=2)						
I.5.e	Given a work unit code manual and a scenario, complete an AF Form 2005 for ordering line replaceable unit (LRU) with no more than one instructor assist (I.5: Supply Discipline)	PC								
Task	H0495 Initiate requisition for equipment, tools, parts, or supplies		22	0		1.08	5.02		2	
II.1.d	Identify safety practices when working with or around portable fire extinguishers with at least 80% accuracy (II.1: Safety)	PC/W								
Task	E0390 Inspect halon bottles		11	0		3.42	3.16		3	
VIII.2.d	Given applicable TOs, and support equipment, and an aircraft, perform the ground and cockpit Safe for Maintenance checks with no instructor assistance (VIII.2: Pave Penny)	PC								
Tasks	E0385 Identify aircraft fuel leaks		11	0		2.28	3.59		1	
	E0387 Inspect aircraft egress systems		11	0		2.69	3.99		1	
	E0388 Inspect aircraft landing gear systems		11	0		1.03	4.72		2	
	E0390 Inspect halon bottles		11	0		3.42	3.16		3	
	E0444 Perform operational checks of aircraft seat adjustment systems		11	0		3.19	1.60		1	

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A42

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE A-SHRED MEMBERS
WORKING ON A-10 AND U-2 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE A-10 (MRA) AVIONICS ATTACK AND CONTROL SYSTEMS APPRENTICE COURSE

TASKS	PERCENT MEMBERS PERFORMING				
	TNG EMP*	1ST	3-	TSK DIF**	ATTI***
		ENL (N=9)	LVL (N=2)		
A0012	5.28	56	100	4.87	18
A0042	5.72	56	100	7.27	18
B0062	4.28	67	100	5.53	17
B0063	5.86	56	100	5.46	18
B0075	4.81	78	100	4.47	18
B0080	5.06	56	100	4.61	18
B0100	4.58	78	100	4.35	17
B0115	4.86	56	100	6.49	18
B0128	4.75	89	100	5.48	18
B0130	5.17	67	100	5.67	18
B0133	3.00	67	100	5.97	17
C0177	5.39	56	100	5.95	18
C0192	5.72	56	50	4.81	18
C0205	4.64	67	100	4.74	18

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A43

**EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3X1A PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(PERCENT USING OR OPERATING)**

SUPPORT EQUIPMENT	(N=9)
Multimeters, Digital	89
Pitot Static Adapter Kits	89
Soldering Equipment	89
Heat Guns	78
Video Tape Recorders (VTRs), 8mm	78
Maintenance Stands	78
Portable Lighting Equipment	78
Boxes, Breakout	67
Pod Cradles	67
Mission Data Loaders/Data Transfer Modules	67
Testers, Fuel Quantity	67
Time Domain Reflectometers, TDRs, not Optical	67
Test Sets, Fuel Quantity Gauging	67
Crypto Key Devices, KYK-13	56
Programmer Load Verifiers (PLVs)	56
Portable Hydraulic Test Stands (-6 Carts)	56
Ground Heaters and Blowers	56
Hydraulic Test Stands	56
Test Sets, TTU-205	56

TABLE A44

**PERCENT TIME SPENT ON DUTIES
BY B-SHRED FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)**

<u>DUTIES</u>		<u>B-SHRED 1st ENL (N=82)</u>
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	16
B	MAINTAINING ATTACK CONTROL SYSTEMS	12
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	48
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	6
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

TABLE A45

REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1B FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)

TASKS <i>AVERAGE NUMBER OF TASKS PERFORMED = 162</i>		PERCENT MEMBERS PERFORMING (N=82)
A0038	Troubleshoot aircraft wiring	95
A0012	Inspect pitot or static hoses	93
C0176	Operationally check pitot static and standby instrument systems	91
A0035	Safety wire components	90
C0229	Remove or replace pitot static, heater, or instrument system LRUs	89
A0031	Repair aircraft wiring	89
C0160	Operationally check angle of attack (AOA) systems	89
A0037	Trace wiring, system, or interface diagrams	88
A0006	Inspect aircraft wiring	88
C0181	Operationally check standby attitude indicators	88
A0007	Inspect chafing problem areas	88
C0222	Remove or replace fuel quantity indicating system LRUs	87
C0192	Operationally or BIT check fuel quantity indicating systems	87
C0205	Remove or replace AOA LRUs	87
C0267	Troubleshoot fuel quantity indicating systems	85
C0225	Remove or replace hydraulic pressure indicators	85
C0274	Troubleshoot pitot static, heater, or instrument systems	85
C0221	Remove or replace fuel flow indicators	84
C0203	Remove or replace air data computer or primary instrument system LRUs	83
C0246	Troubleshoot air data computer and primary instrument systems	83
C0269	Troubleshoot HSI systems	83
C0187	Operationally or BIT check air data computer and primary instrument systems	82
A0041	Troubleshoot multipin connectors	80
C0224	Remove or replace HSI system LRUs	80
C0245	Troubleshoot AFCSs	79
C0155	Calibrate fuel quantity indicating systems	79
C0270	Troubleshoot hydraulic pressure indicating systems	78
A0011	Inspect multipin connectors	77
C0158	Operationally check AFCSs	76
C0198	Pressurize and leak check pitot static and standby instrument systems	76

TABLE A46

EXAMPLES OF STS ELEMENTS FROM THE B-SHRED SECTION OF THE STS
BUT NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)

UNIT	STS ELEMENT	PERCENT MEMBERS PERFORMING							TSK DIF**	ATI***
		PROF CODE	3-SKL			TNG EMP* (N=68)	(N=82)			
			1ST	ENL	LVL					
A4.27.4	Isolate malfunctions (TEMS) (A4.27: A-10 Turbine Engine Monitoring System (TEMS))	-								
Task	C0284 Troubleshoot TEMS		10		4		2.22		5.98	2
A4.35.5.3	Autopilot Control Panel (APCP) (A4.35: U-2 Autopilot Air Data System (APADS))	-								
Task	C0206 Remove or replace APADS LRUs		16		10		2.14		4.56	2

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A47

EXAMPLES OF TASKS PERFORMED BY 20% OR MORE B-SHRED MEMBERS
BUT NOT REFERENCED TO ANY B-SHRED STS ELEMENT

TASKS	TNG EMP*	1ST ENL (N=73)	3-SKL LVL (N=53)	TSK	
				DIF**	ATI***
A0009 Inspect electrical relays	4.25	65	59	5.15	17
A0011 Inspect multipin connectors	5.08	77	75	4.65	18
A0013 Inspect quick disconnects	4.06	59	53	4.47	17
A0018 Purge pitot or static hoses	3.53	57	53	5.18	17
A0022 Remove or replace coaxial cables	5.56	54	50	5.97	18
A0031 Repair aircraft wiring	6.44	89	88	6.80	18
A0032 Repair chafed areas	5.06	77	75	6.06	18

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator, which is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A48

EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3X1B PERSONNEL
(PERCENT USING OR OPERATING)

SUPPORT EQUIPMENT	(N=82)
Pitot Static Adapter Kits	96
Test Sets, TTU-205	94
Multimeters, Digital	91
Heat Guns	85
Testers, Fuel Quantity	80
Test Sets, Fuel Quantity Gauging	78
Maintenance Stands	78
Boxes, Weight Off Wheels (WOW) Promimity	76
Hydraulic Test Stands	76
Wire Repair Kits	71
Air Inlet Controller (AIC) Crossover Cables	68
Test Sets, Automatic Flight Control Systems	67
Soldering Equipment	59
Portable Lighting Equipment	56
Test Sets, Angle-of-Attack (AOA) Probe	56
External Cooling Air Units	55
Ground Heaters and Blowers	54
Analog Meters	50

TABLE A49

**PERCENT TIME SPENT ON DUTIES BY
B-SHRED FIRST ENLISTMENT PERSONNEL WORKING ON F-15 AIRCRAFT
(1-48 MONTHS'TAFMS)**

<u>DUTIES</u>		<u>B-SHRED F-15 1st ENL (N=69)</u>
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	16
B	MAINTAINING ATTACK CONTROL SYSTEMS	9
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	50
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	7
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	*
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

* Indicates less than 1%

Note: Columns does not add to 100% due to rounding

TABLE A50

REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1B FIRST-ENLISTMENT PERSONNEL WORKING ON F-15 AIRCRAFT
(1-48 MONTHS' TAFMS)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 165	PERCENT MEMBERS PERFORMING (N=69)
A0038	Troubleshoot aircraft wiring	96
C0176	Operationally check pitot static and standby instrument systems	93
C0192	Operationally or BIT check fuel quantity indicating systems	91
C0229	Remove or replace pitot static, heater, or instrument system LRUs	91
C0225	Remove or replace hydraulic pressure indicators	91
A0012	Inspect pitot or static hoses	91
C0205	Remove or replace AOA LRUs	91
C0160	Operationally check angle-of-attack (AOA) systems	91
C0222	Remove or replace fuel quantity indicating system LRUs	90
C0181	Operationally check standby attitude indicators	90
A0035	Safety wire components	90
C0203	Remove or replace air data computer or primary instrument system LRUs	88
A0031	Repair aircraft wiring	88
C0274	Troubleshoot pitot static, heater, or instrument systems	88
A0007	Inspect chafing problem areas	88
A0037	Trace wiring, system, or interface diagrams	87
C0267	Troubleshoot fuel quantity indicating systems	87
A0024	Remove or replace pitot static hoses	87
C0245	Troubleshoot AFCSs	86
A0006	Inspect aircraft wiring	86
C0246	Troubleshoot air data computer and primary instrument systems	86
C0187	Operationally or BIT check air data computer and primary instrument systems	86
C0158	Operationally check AFCSs	84
C0270	Troubleshoot hydraulic pressure indicating systems	84
C0202	Remove or replace AFCS LRUs	83
C0155	Calibrate fuel quantity indicating systems	83
C0224	Remove or replace HSI system LRUs	81
C0189	Operationally or BIT check engine air intake systems	81
A0041	Troubleshoot multipin connectors	80
C0198	Pressurize and leak check pitot static and standby instrument systems	78

TABLE A51

EXAMPLES OF POI OBJECTIVES FOR
THE F-15 INSTRUMENT AND FLIGHT CONTROL SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING					TNG EMP*	TSK DIF**	ATI***
			1ST ENL (N=69)	3-SKL LVL (N=64)						
I.3.b	Identify facts pertaining to inspection systems with at least 80% accuracy (I.3: Maintenance Complex)	PC/ W								
Tasks	E0403 Perform end-of-runway inspections, other than mode-4 and RWR checks		14	16		1.44	4.17	2		
	E0410 Perform postflight inspections		4	3		0.42	4.61	2		
	E0411 Perform preflight inspections		4	2		0.42	4.67	2		
	E0411 Perform supplemental inspections, such as acceptance, calendar, or time replacement items		17	14		0.78	4.64	2		
	E0415 Perform thruflight inspections		9	6		0.42	4.44	2		
I.5.e	Given work unit code manual and a scenario, complete an AF Form 2005 for ordering a line replaceable unit (LRU) with no more than one instructor assist (I.5: Supply Discipline)	PC								
Task	H0495 Initiate requisitions for equipment, tools, parts, or supplies		12	13		1.08	5.02	2		
II.1.d	Identify safety practices when working with or around portable fire extinguishers with at least 80% accuracy (II.1: Safety)	PC/ W								
Task	E0390 Inspect halon bottles		25	22		3.42	3.16	3		

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A52

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE B-SHRED MEMBERS
WORKING ON F-15 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE F-15 INSTRUMENT AND FLIGHT CONTROL SYSTEMS APPRENTICE COURSE

TASKS	PERCENT MEMBERS PERFORMING						TSK DIF**	ATI***
	3-							
	1ST	ENL	LVL					
	TNG EMP*	(N=69)	(N=64)					
A0030	Remove, replace, or repair triaxial connectors	5.72	38	33	7.91	17		
C0177	Operationally check primary flight control systems	5.39	75	78	5.95	18		
C0190	Operationally or BIT check engine indicating systems	4.69	62	61	4.76	18		
C0205	Remove or replace AOA LRUs	4.64	91	92	4.74	18		
C0229	Remove or replace pitot static, heater, or instrument systems LRUs	5.03	91	91	4.93	18		
C0230	Remove or replace primary flight control LRUs	4.69	64	64	5.05	18		
C0254	Troubleshoot control stick grips	5.33	83	83	5.68	18		
C0262	Troubleshoot flight control trim systems	4.83	75	75	6.44	18		
C0273	Troubleshoot oil pressure indicating systems	4.64	81	80	5.54	18		
C0275	Troubleshoot primary flight control systems	4.67	70	70	7.19	18		
F0450	Analyze core automated maintenance system (CAMS) data	3.92	58	53	4.74	17		

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator, which is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A53

**EXAMPLES OF SUPPORT EQUIPMENT USED OR OPERATED BY
FIRST-ENLISTMENT AFSC 2A3X1B PERSONNEL WORKING ON F-15 AIRCRAFT
(PERCENT USING OR OPERATING)**

<u>SUPPORT EQUIPMENT</u>	<u>(N=69)</u>
Pitot Static Adapter Kits	96
Test Sets, TTU-205	94
Multimeters, Digital	91
Heat Guns	87
Boxes, Weight Off Wheels (WOW) Promimity	87
Testers, Fuel Quantity	83
Hydraulic Test Stands	83
Air Inlet Controller (AIC) Crossover Cables	81
Test Sets, Fuel Quantity Gauging	78
Maintenance Stands	78
Wire Repair Kits	71
Test Sets, Automatic Flight Control Systems	70
External Cooling Air Units	64
Portable Lighting Equipment	58
Soldering Equipment	57
Ground Heaters and Blowers	57
Hydrometers	57
Hydraulic Servicing Carts	55
Portable Hydraulic Test Stand (-6)	55
Analog Meters	52
Test Sets, Angle-of-Attack (AOA) Probe	52
Inflight Monitors	51

TABLE A54

**PERCENT TIME SPENT ON DUTIES BY
B-SHRED FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)**

<u>DUTIES</u>		B-SHRED A-10/U-2 1 st ENL (N=17)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	15
B	MAINTAINING ATTACK CONTROL SYSTEMS	23
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	37
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	4
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	8
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	2
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3

Note: Column does not add to 100% due to rounding

TABLE A55

REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1B FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)

TASKS <i>AVERAGE NUMBER OF TASKS PERFORMED = 141</i>		PERCENT MEMBERS PERFORMING (N=17)
A0006	Inspect aircraft wiring	100
A0012	Inspect pitot or static hoses	100
A0037	Trace wiring, system, or interface diagrams	94
A0035	Safety wire components	94
A0011	Inspect multipin connectors	94
A0031	Repair aircraft wiring	94
A0038	Troubleshoot aircraft wiring	88
B0130	Troubleshoot INSs	88
A0041	Troubleshoot multipin connectors	88
B0080	Operationally or BIT check INSs	88
B0102	Remove or replace INS LRUs	88
C0176	Operationally check pitot static and standby instrument systems	88
A0008	Inspect coaxial cables and connectors	88
A0007	Inspect chafing problem areas	88
C0221	Remove or replace fuel flow indicators	88
F0468	Update and maintain CAMS data	82
B0069	Operationally check GPSs	82
C0160	Operationally check angle-of-attack (AOA) systems	82
C0246	Troubleshoot air data computer and primary instrument systems	82
C0229	Remove or replace pitot static, heater, or instrument system LRUs	82
B0062	Operationally check 1553 data bus systems	76
B0067	Operationally check embedded global positioning systems/internal navigation systems (EGIs)	76
B0127	Troubleshoot GPSs	76
C0164	Operationally check BIT systems	76
C0269	Troubleshoot HSI systems	76
F0450	Analyze core automated maintenance system (CAMS) data	71
B0118	Troubleshoot 1553 data bus systems	71
C0165	Operationally check clocks, such as analog or digital	71
C0161	Operationally check attitude heading reference and instrument systems	71
C0198	Pressurize and leak check pitot static and standby instrument systems	71

TABLE A56

EXAMPLES OF POI OBJECTIVES FOR
THE A-10 (MRA) INSTRUMENT AND FLIGHT CONTROL SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING					TNG EMP*	TSK DIF**	ATI***
			1ST	ENL	3- LVL	(N=6)				
			(N=17)							
I.4.b	Identify facts pertaining to physical security with at least 80% accuracy (I.4: Security)	PC/W								
Task	G0475 Identify and report suspected security compromises		18		0		4.22	5.14		7
I.5.e	Given Work Unit Code Manual and a scenario, complete an AF Form 2005 for ordering a Line Replaceable Unit (LRU) with no more than one instructor assist (I.5: Supply Discipline)	PC								
Task	H0495 Initiate requisitions for equipment, tools, parts, or supplies		29		13		1.08	5.02		2
II.1.d	Identify safety practices when working with or around portable fire extinguishers with at least 80% accuracy (II.1 Safety)	PC/W								
Task	E0390 Inspect halon bottles		29		22		3.42	3.16		3

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training
(18 = HIGH, 1 = LOW)

TABLE A57

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE B-SHRED MEMBERS
WORKING ON A-10 AND U-2 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE A-10 (MRA) INSTRUMENT AND FLIGHT CONTROL SYSTEMS APPRENTICE COURSE

TASKS		PERCENT MEMBERS PERFORMING					TSK DIF**	ATI***
		3-			TNG EMP*	LVL (N=6)		
		1ST ENL (N=17)						
B0128	Troubleshoot HUD systems	71	50	5.48	18			
B0130	Troubleshoot INSS	80	50	5.67	18			
C0193	Operationally or BIT check horizontal situation indicating (HSI) systems	71	83	4.55	18			
C0203	Remove or replace air data computer or primary instrument systems LRUs	71	67	5.00	18			
C0229	Remove or replace pitot static, heater, or instrument systems LRUs	82	83	4.93	18			
C0245	Troubleshoot AFCSS	65	67	6.76	18			
C0248	Troubleshoot AOA systems	76	83	6.03	18			
C0262	Troubleshoot flight control trim systems	53	50	6.44	18			
C0267	Troubleshoot fuel quantity indicating systems	53	67	7.07	18			
C0275	Troubleshoot primary flight control systems	70	70	7.19	18			
F0450	Analyze core automated maintenance system (CAMS) data	71	33	4.74	17			

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A58

**EXAMPLES OF SUPPORT EQUIPMENT USED OR OPERATED BY
FIRST-ENLISTMENT AFSC 2A3X1B PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(PERCENT USING OR OPERATING)**

<u>SUPPORT EQUIPMENT</u>	<u>(N=17)</u>
Pitot Static Adapter Kits	100
Test Sets, TTU-205	94
Multimeters, Digital	94
Heat Guns	88
Soldering Equipment	82
Maintenance Stands	82
Test Sets, Fuel Quantity Gauging	78
Wire Repair Kits	71
Testers, Fuel Quantity	65
Test Sets, Angle-of-Attack (AOA) Probe	65
Hydraulic Test Stands	59
Test Sets, Automatic Flight Control Systems	59
Calibrators, Standby Compass	59
Calibrators, Compass	59
Oscilloscopes	53
Laptop Computers	53

TABLE A59

**PERCENT TIME SPENT ON DUTIES BY
C-SHRED FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)**

		C-SHRED 1 st ENL (N=99)
<u>DUTIES</u>		
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	21
B	MAINTAINING ATTACK CONTROL SYSTEMS	11
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	6
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	38
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A60

REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1C FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS' TAFMS)

TASKS <i>AVERAGE NUMBER OF TASKS PERFORMED = 127</i>		PERCENT MEMBERS PERFORMING (N=99)
A0038	Troubleshoot aircraft wiring	91
A0008	Inspect coaxial cables and connectors	91
A0035	Safety wire components	90
A0039	Troubleshoot coaxial cables and connectors	89
A0037	Trace wiring, system, or interface diagrams	86
A0006	Inspect aircraft wiring	85
A0028	Remove, replace, or repair coaxial connectors	84
A0031	Repair aircraft wiring	83
D0330	Remove or replace IFF transponder system LRUs	83
D0339	Remove or replace UHF communication and audio signal system LRUs	82
A0036	Seal or reseal antennas	82
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	82
D0337	Remove or replace TACAN system LRUs	82
A0041	Troubleshoot multipin connectors	82
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	81
D0373	Troubleshoot UHF communication and audio signal systems	81
A0029	Remove, replace, or repair multipin connectors	81
D0308	Operationally or BIT check identification friend or foe (IFF) interrogator systems	80
D0370	Troubleshoot TACAN systems	80
A0022	Remove or replace coaxial cables	80
D0335	Remove or replace RWR LRUs	79
D0363	Troubleshoot IFF transponder systems	79
D0310	Operationally or BIT check radar warning receivers (RWRs)	78
D0368	Troubleshoot RWRs	78
A0011	Inspect multipin connectors	78
D0332	Remove or replace intercommunications system LRUs	78
F0468	Update and maintain CAMS data	77
A0007	Inspect chafing problem areas	76
A0032	Repair chafed areas	76
D0287	Code mode-4 crypto equipment	72

TABLE A61

EXAMPLES OF STS ELEMENTS FROM THE C-SHRED SECTION OF THE STS
BUT NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING					TNG EMP*	TSK DIF**	ATI****
			1ST	ENL	LVL	(N=73)				
			3-	(N=99)						
A5.26.3	Perform operational checkout (LARs) (A5.26: A-10 Lightweight Airborne Recovery System)	-								
Task	D0367 Troubleshoot LARS		7	10	2.19	6.19	2			
A5.29.7	Upload/Download POD (ECM systems) (A5.29: A-10 Electronic Countermeasures Systems-PODs)	-								
Task	D0344 Reprogram external ECM pods		18	16	2.56	5.10	2			

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A62

EXAMPLES OF TASKS PERFORMED BY 20% OR MORE C-SHRED MEMBERS
BUT NOT REFERENCED TO ANY C-SHRED STS ELEMENT

TASKS	PERCENT MEMBERS PERFORMING					
	TNG		EMP*		DIF**	
	EMP*	(N=73)	ENL	(N=73)	LVL	(N=53)
A0006	Inspect aircraft wiring	5.86	85	82	5.34	18
A0011	Inspect multipin connectors	5.08	78	74	4.65	18
A0028	Remove, replace, or repair coaxial connectors	5.31	84	86	7.02	18
A0030	Remove, replace, or repair triaxial connectors	5.72	58	62	7.91	18
A0031	Repair aircraft wiring	6.44	76	75	6.80	18
A0032	Repair chafed areas	5.06	77	75	6.06	18
A0038	Troubleshoot aircraft wiring	6.08	91	92	7.25	18
A0041	Troubleshoot multipin connectors	5.81	82	79	7.07	18

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A63

**EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3X1C PERSONNEL
(PERCENT USING OR OPERATING)**

<u>SUPPORT EQUIPMENT</u>	<u>(N=99)</u>
Multimeters, Digital	89
Crypto Key Devices, KYK-13	84
Wire Repair Kits	79
Crypto Fill Devices, CYZ-10	75
Heat Guns	73
Test Sets, Instrument Landing System (ILS)	71
Maintenance Stands	68
Test Sets, IFF Transponder, AN/APM-424	67
Boxes, Weight-Off-Wheels (WOW) Promimity	63
Improved Radar Simulators, AN/APM-427	63
Laptop Computers	62
Programmer Load Verifiers (PLVs)	62
Soldering Equipment	60
Ground Heaters and Blowers	53
Testers, Waveguide Pressure	53
Testers, Countermeasures Sets	51

TABLE A64

PERCENT TIME SPENT ON DUTIES BY
C-SHRED FIRST-ENLISTMENT PERSONNEL WORKING ON F-15 AIRCRAFT
(1-48 MONTHS' TAFMS)

<u>DUTIES</u>		<u>C-SHRED F-15 1st ENL (N=68)</u>
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	21
B	MAINTAINING ATTACK CONTROL SYSTEMS	13
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	7
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	37
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	10
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A65

REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1C FIRST-ENLISTMENT PERSONNEL WORKING ON F-15 AIRCRAFT
(1-48 MONTHS' TAFMS)

TASKS	<i>AVERAGE NUMBER OF TASKS PERFORMED = 141</i>	PERCENT MEMBERS PERFORMING (N=68)
A0001	Analyze avionics status panel (ASP) latch data	93
D0335	Remove or replace RWR LRUs	91
A0038	Troubleshoot aircraft wiring	91
A0008	Inspect coaxial cables and connectors	91
D0310	Operationally or BIT check radar warning receivers (RWRs)	90
D0368	Troubleshoot RWRs	90
D0318	Remove or replace AAI interrogator system LRUs	90
A0035	Safety wire components	88
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	88
A0039	Troubleshoot coaxial cables and connectors	88
D0330	Remove or replace IFF transponder system LRUs	88
D0339	Remove or replace UHF communication and audio signal system LRUs	87
A0036	Seal or reseal antennas	87
D0337	Remove or replace TACAN system LRUs	87
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	87
A0006	Inspect aircraft wiring	85
D0373	Troubleshoot UHF communication and audio signal systems	85
A0028	Remove, replace, or repair coaxial connectors	85
D0308	Operationally or BIT check identification friend or foe (IFF) interrogator systems	85
D0351	Troubleshoot AAI interrogator systems	85
A0037	Trace wiring, system, or interface diagrams	84
D0332	Remove or replace intercommunications system LRUs	84
D0370	Troubleshoot TACAN systems	84
D0363	Troubleshoot IFF transponder systems	84
A0031	Repair aircraft wiring	82
D0301	Operationally or BIT check countermeasures dispenser systems (CMDSS)	82
A0015	Inspect waveguides	81
D0299	Operationally or BIT check air-to-air identification (AAI) interrogator systems	81

TABLE A66

**EXAMPLES OF POI OBJECTIVES FOR THE
F-15 AVIONICS COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)**

UNIT	LEARNING OBJECTIVE	PC/W	PERCENT MEMBERS PERFORMING					TSK DIF**	ATI***
			PROF CODE	3-SKL			TNG EMP*		
				1ST ENL (N=68)	LVL (N=60)				
I.3.b	Identify facts pertaining to inspection systems with at least 80% accuracy (I.3: Maintenance Complex)								
Tasks	E0403 Perform end-of-runway inspections, other than mode 4 and RWR checks		12		13		1.44	4.17	2
	E0411 Perform preflight inspections		3		3		0.42	4.67	2
	E0414 Perform supplemental inspections, such as acceptance, calendar, or time replacement items		10		13		0.78	4.64	2
	E0415 Perform thruflight inspections		5		5		0.42	4.44	2

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A67

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE C-SHRED MEMBERS
WORKING ON F-15 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE F-15 AVIONICS COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS APPRENTICE COURSE

TASKS	TNG EMP*	PERCENT MEMBERS PERFORMING				TSK DIF**	ATI***
		1ST	3-SKL	ENL (N=69)	LVL (N=64)		
A0030	Remove, replace, or repair triaxial connectors	5.72	69	65	7.91	18	
B0115	Remove or replace right-hand throttle grips	4.86	51	48	6.69	18	
D0288	Code secure voice crypto equipment	5.61	66	63	4.07	18	
D0289	Key fighter data links (FDLs)	5.61	53	58	4.87	18	
D0306	Operationally or BIT check FSLs	4.92	59	62	5.32	18	
D0345	Reprogram RWR system LRUs	4.97	76	75	5.31	18	
D0353	Troubleshoot CMDSS	4.86	75	77	5.52	18	
D0359	Troubleshoot FDLs	4.69	60	65	6.36	18	
D0365	Troubleshoot intercommunication systems	4.69	79	78	5.53	18	

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61
 ** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00
 *** ATI = Automatic Training Indicator is a training decision value for resident training
 (18 = HIGH, 1 = LOW)

TABLE A68

**EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3X1C PERSONNEL
WORKING ON F-15 AIRCRAFT
(PERCENT USING OR OPERATING)**

SUPPORT EQUIPMENT	(N=68)
Multimeters, Digital	88
Crypto Key Devices, KYK-13	84
Wire Repair Kits	81
Crypto Fill Devices, CYZ-10	78
Heat Guns	74
Testers, Waveguide Pressure	71
Test Sets, Instrument Landing System (ILS)	69
Improved Radar Simulators, AN/APM-427	69
Programmer Load Verifiers (PLVs)	68
Test Sets, IFF Transponder, AN/APM-424	67
Maintenance Stands	65
Test Sets, AAI, AN/APM-349	62
Laptop Computers	60
Fighter Data Links	60
Soldering Equipment	59
Crow Carts	59
Hydraulic Test Stands	56
PLV-New Technology (PLV-NT)	54
External Cooling Air Units	54
Ground Heaters and Blowers	51
Testers, Countermeasure Set	51

TABLE A69

PERCENT TIME SPENT ON DUTIES BY
C-SHRED FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)

<u>DUTIES</u>		C-SHRED A-10/U-2 1 st ENL (N=32)
A	PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	24
B	MAINTAINING ATTACK CONTROL SYSTEMS	7
C	MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	4
D	MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	40
E	PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	9
F	PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3
I	PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1

Note: Column does not add to 100% due to rounding

TABLE A70

**REPRESENTATIVE TASKS PERFORMED BY
AFSC 2A3X1C FIRST-ENLISTMENT PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(1-48 MONTHS' TAFMS)**

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 103	PERCENT MEMBERS PERFORMING (N=32)
A0035	Safety wire components	100
A0038	Troubleshoot aircraft wiring	97
A0037	Trace wiring, system, or interface diagrams	94
A0039	Troubleshoot coaxial cables and connectors	94
A0031	Repair aircraft wiring	91
A0008	Inspect coaxial cables and connectors	91
A0032	Repair chafed areas	91
A0006	Inspect aircraft wiring	88
A0041	Troubleshoot multipin connectors	88
A0011	Inspect multipin connectors	84
A0028	Remove, replace, or repair coaxial connectors	84
A0022	Remove or replace coaxial cables	84
A0029	Remove, replace, or repair multipin connectors	81
A0007	Inspect chafing problem areas	78
A0036	Seal or reseal antennas	78
D0311	Operationally or BIT check tactical air navigation (TACAN) systems	75
D0339	Remove or replace UHF communication and audio signal system LRUs	75
D0337	Remove or replace TACAN system LRUs	75
F0468	Update and maintain CAMS data	72
D0308	Operationally or BIT check identification friend or foe (IFF) interrogator systems	72
D0373	Troubleshoot UHF communication and audio signal systems	72
D0323	Remove or replace ECM system LRUs	69
D0312	Operationally or BIT check ultra-high-frequency (UHF) communication and audio signal systems	69
D0288	Code secure voice crypto equipment	69
D0375	Troubleshoot VHF communications and audio signal systems	69
D0303	Operationally or BIT check electronic countermeasure (ECM) systems	66
A0034	Research technical orders	66
D0304	Operationally or BIT check electronic warfare warning systems (EWWs)	66
D0315	Operationally or BIT check very-high-frequency (VHF) communications and audio signal systems	66

TABLE A71

EXAMPLES OF POI OBJECTIVES
FOR THE A-10 (MRA) AVIONICS COMMUNICATIONS, NAVIGATION,
AND PENETRATION AIDS SYSTEMS APPRENTICE COURSE
NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING						TSK DIF**	ATI***
			1ST	3-	LVL (N=15)	TNG EMP*	TNG EMP*			
			ENL (N=32)							
II.1.d	Identify safety practices when working with or around portable Fire extinguishers with a least 80% accuracy (II.1: Aircraft Familiarization)	PC/W								
Task	Inspect halon bottles		3	0		3.42	3.16		3	
IV.5.a	Using applicable TOs, and an A-10 aircraft, perform the exterior and interior maintenance ground safety checks with no more than two instructor assists (IV.5: Aircraft Safe for Maintenance and Panels)	PC								
Tasks	E0385 Identify aircraft fuel leaks		0	0		2.28	3.59		-	
	E0387 Inspect aircraft egress systems		0	0		2.69	3.99		-	
	E0388 Inspect aircraft landing gear systems		3	7		1.03	4.72		2	
	E0390 Inspect halon bottles		3	0		3.42	3.16		3	
	E0408 Perform operational checks of aircraft seat adjustment systems		3	0		0.61	3.39		1	
	E0444 Static ground aircraft		16	0		3.19	1.60		3	
*	Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61									
**	Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00									
***	ATI = Automatic Training Indicator is a training decision value for resident training (18 = HIGH, 1 = LOW)									

TABLE A72

EXAMPLES OF TASKS PERFORMED BY 30% OR MORE C-SHRED MEMBERS
WORKING ON A-10 AND U-2 AIRCRAFT BUT NOT REFERENCED TO ANY POI OBJECTIVE FOR
THE A-10 (MRA) AVIONICS COMMUNICATIONS, NAVIGATION,
AND PENETRATION AIDS SYSTEMS APPRENTICE COURSE

TASKS	PERCENT MEMBERS PERFORMING					
	1ST 3			LVL (N=15)		
	TNG	ENL (N=32)	EMP*	DIF**	TSK	ATI***
A0040 Troubleshoot electrical relays	5.06	66	60	7.03	18	
D0295 Operationally check intercommunications systems	4.83	59	60	4.55	18	
D0303 Operationally or BIT check electronic countermeasure (ECM) systems	5.50	66	47	5.25	18	
D0304 Operationally of BIT check electronic warfare warning systems (EWWs)	5.19	66	53	5.01	18	
D0316 Perform end-of-runway mode-4 and RWR checks	4.69	53	53	4.38	18	
D0325 Troubleshoot EWWs	4.78	50	47	6.05	18	
D0365 Troubleshoot intercommunications systems	4.69	66	67	5.53	18	
D0369 Troubleshoot secure voice crypto equipment	4.94	72	60	5.80	18	

* Mean TE Rating = 2.96 Standard Deviation = 1.65 High TE > 4.61

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD > 6.00

*** ATI = Automatic Training Indicator, which is a training decision value for resident training (18 = HIGH, 1 = LOW)

TABLE A73

**EXAMPLES OF SUPPORT EQUIPMENT
USED OR OPERATED BY FIRST-ENLISTMENT AFSC 2A3XC PERSONNEL
WORKING ON A-10 AND U-2 AIRCRAFT
(PERCENT USING OR OPERATING)**

SUPPORT EQUIPMENT	(N=32)
Multimeters, Digital	91
Crypto Key Devices, KYK-13	91
Soldering Equipment	88
Maintenance Stands	78
Wire Repair Kits	75
Crypto Fill Devices, CYZ-10	75
Test Sets, Instrument Landing System (ILS)	72
Heat Guns	69
Laptop Computers	69
Test Sets, IFF Transponder, AN/APM-424	66
Oscilloscopes	63
Portable Lighting Equipment	59
Testers, Countermeasure Set	53
Improved Radar Simulators, AN/APM-427	50
Programmer Load Verifiers (PLVs)	50

TABLE A74

PERCENT TIME SPENT ON DUTIES
BY MEMBERS OF AFSC 2A3X1 MAJCOM GROUPS
(PERCENT RESPONDING)

DUTIES	ACC (N=295)	PACAF (N=145)	USAFE (N=86)	AETC (N=77)	AFMC (N=38)
A PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE ACTIVITIES	17	18	12	14	13
B MAINTAINING ATTACK CONTROL SYSTEMS ACTIVITIES	16	13	15	11	18
C MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS ACTIVITIES	17	18	16	18	21
D MAINTAINING COMMUNICATIONS, NAVIGATION, & PENETRATION AIDS SYSTEMS ACTIVITIES	16	16	15	12	16
E PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING (CUT) ACTIVITIES	8	8	7	7	8
F PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	6	6	7	6	6
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	4	6	5	3
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3	3	3	3	2
I PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	2	3	4	*	*
J PERFORMING TRAINING ACTIVITIES	3	3	4	17	3
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	7	8	9	8	9

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A75

JOB SATISFACTION INDICATORS FOR IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	FLIGHTLINE CLUSTER (N=562) (STG 027)	TRAINING CLUSTER (N=21) (STG 038)	DEFRIEFER IJ (N=10) (STG 133)	MGT & SUPER. CLUSTER (N=58) (STG 048)	SCHEDULE CONTROL IJ (N=6) (STG 058)	EQUIPMENT CONTROL IJ (N=7) (STG 045)	DEPLOYMENT MANAGEMENT IJ (N=6) (STG 113)
<u>EXPRESSED JOB INTEREST</u>							
INTERESTING	72	57	80	69	100	14	83
SO-SO	18	24	20	19	0	29	17
DULL	10	19	0	12	0	57	0
<u>PERCEIVED USE OF TALENTS</u>							
EXCELLENT TO PERFECT	15	24	10	21	33	14	33
FAIRLY WELL TO VERY WELL	70	62	90	60	67	14	33
NONE TO VERY LITTLE	15	14	0	19	0	71	33
<u>PERCEIVED USE OF TRAINING</u>							
EXCELLENT TO PERFECT	17	19	0	16	0	0	17
FAIRLY WELL TO VERY WELL	73	67	100	59	83	14	50
NONE TO VERY LITTLE	10	14	0	25	17	86	33
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>							
SATISFIED	68	67	90	53	100	29	67
NEUTRAL	12	14	0	19	0	0	17
DISSATISFIED	20	19	10	28	0	71	17
<u>REENLISTMENT INTENTIONS</u>							
YES OR PROBABLY YES	59	76	50	41	100	57	67
NO OR PROBABLY NO	35	5	10	10	0	43	0
WILL RETIRE	6	19	40	48	0	0	33

Note: Columns might not add to 100% due to rounding

TABLE A76

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A3X1
AND COMPARATIVE SAMPLE GROUPS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS	49-96 MONTHS' TAFMS	97+ MONTHS' TAFMS
	2002 2A3X1 (N=254)	COMP* SAMPLE (N=1,592)	2002 2A3X1 (N=245)
			COMP* SAMPLE (N=2,191)
<u>EXPRESSED JOB INTEREST</u>			
INTERESTING	65	67	75
SO-SO	19	19	16
DULL	17	14	9
			8
<u>PERCEIVED USE OF TALENTS</u>			
FAIRLY WELL TO PERFECT	79	79	87
NONE TO VERY LITTLE	22	22	13
			14
<u>PERCEIVED USE OF TRAINING</u>			
FAIRLY WELL TO PERFECT	86	90	83
NONE TO VERY LITTLE	14	10	18
			15
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>			
SATISFIED	63	69	66
NEUTRAL	16	15	11
DISSATISFIED	22	16	23
			74
			10
			16
<u>REENLISTMENT INTENTIONS</u>			
YES OR PROBABLY YES	42	51	65
NO OR PROBABLY NO	56	48	8
WILL RETIRE	2	1	27
			26

* Comparative sample of 2AXXX AFSCs surveyed in the last 24 months: Aerospace Maintenance (AFSC 2A5X1), Helicopter Maintenance (AFSC 2A5X2), Nondestructive Inspection (AFSC 2A7X2), and Survival Equipment (AFSC 2A7X4)
Note: Column might not add to 100% due to rounding

TABLE A77

JOB SATISFACTION INDICATORS FOR
AD AND ANG MEMBERS
(PERCENT MEMBERS RESPONDING)

	AD (N=644)	ANG (N=80)
<u>EXPRESSED JOB INTEREST</u>		
INTERESTING	69	89
SO-SO	19	8
DULL	12	2
<u>PERCEIVED USE OF TALENTS</u>		
FAIRLY WELL T TO PERFECT	82	99
NONE TO VERY LITTLE	17	1
<u>PERCEIVED USE OF TRAINING</u>		
FAIRLY WELL TO PERFECT	85	96
NONE TO VERY LITTLE	14	4
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>		
SATISFIED	64	93
NEUTRAL	13	4
DISSATISFIED	23	4

Note: Columns might not add to 100% due to rounding

TABLE A78

COMPARISON OF JOB SATISFACTION INDICATORS
BETWEEN CURRENT AND 1996 SURVEYS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS			49-96 MONTHS' TAFMS			97+ MONTHS' TAFMS		
	2002	1996		2002	1996		2002	1996	
	2A3X1	2A3X1		2A3X1	2A3X1		2A3X1	2A3X1	
	(N=254)	(N=455)		(N=140)	(N=227)		(N=245)	(N=503)	
<u>EXPRESSED JOB INTEREST</u>									
INTERESTING	65	83		66	75		75	72	
SO-SO	19	11		23	17		16	17	
DULL	17	6		11	8		9	11	
<u>PERCEIVED USE OF TALENTS</u>									
FAIRLY WELL TO PERFECT	79	83		82	82		87	83	
NONE TO VERY LITTLE	22	17		18	18		13	18	
<u>PERCEIVED USE OF TRAINING</u>									
FAIRLY WELL TO PERFECT	86	90		90	88		83	78	
NONE TO VERY LITTLE	14	10		10	11		18	22	
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>									
SATISFIED	63	75		64	72		66	69	
NEUTRAL	16	13		11	15		11	11	
DISSATISFIED	22	12		25	14		23	20	
<u>REENLISTMENT INTENTIONS</u>									
YES OR PROBABLY YES	42	56		61	71		65	73	
NO OR PROBABLY NO	56	43		37	27		8	12	
WILL RETIRE	2	0		2	0		27	14	

Note: Columns might not add to 100% due to rounding

TABLE A79

**COMPARISON OF REENLISTMENT FACTORS BY TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR**

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=106)		49-96 MONTHS' TAFMS (N=85)		97+ MONTHS' TAFMS (N=159)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	43	2.07	46	2.26	47	3.37
PAY AND ALLOWANCES	56	2.31	53	2.29	52	2.45
BONUS OR SPECIAL PAY	65	2.45	45	2.50	22	2.40
RETIREMENT BENEFITS	64	2.46	65	2.65	75	2.62
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	62	2.30	41	2.20	33	2.09
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	49	2.44	45	2.39	43	2.40
MEDICAL/ DENTAL CARE FOR AD MEMBER	62	2.52	47	2.42	46	2.45
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	50	2.57	49	2.43	46	2.54
BASE HOUSING	25	2.00	20	2.06	12	2.26
BASE SERVICES	32	1.94	15	1.92	14	2.00
CHILDCARE NEEDS	14	2.60	7	2.50	6	2.11
SPOUSE'S CAREER	8	2.67	11	2.56	10	2.62
CIVILIAN JOB OPPORTUNITIES	30	2.44	13	2.27	12	2.37
EQUAL EMPLOYMENT OPPORTUNITIES	15	2.12	6	2.40	6	2.26
NUMBER OF PCS MOVES	10	2.27	12	2.40	12	2.26
LOCATION OF PRESENT ASSIGNMENT	22	2.43	25	2.52	35	2.53
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	29	2.29	21	2.72	23	2.27
WORK SCHEDULE	14	2.47	19	2.19	19	2.31
ADDITIONAL DUTIES	3	2.67	4	1.33	11	1.94
JOB SECURITY	74	2.49	62	2.62	60	2.56
ENLISTED EVALUATION SYSTEM	9	2.40	0	---	7	2.00
PROMOTION OPPORTUNITIES	37	2.44	33	2.39	23	2.53
TRAINING/EXPERIENCE OF UNIT PERSONNEL	19	2.20	14	2.25	9	1.64
UNIT MANNING	4	3.00	12	2.80	9	2.14
UNIT RESOURCES	4	1.50	7	2.33	4	2.14
UNIT READINESS	3	2.00	2	3.00	1	3.00
RECOGNITION OF EFFORTS	21	2.32	18	2.33	18	2.03
ESPRIT DE CORPS/MORALE	23	2.46	22	2.21	16	2.28
LEADERSHIP OF IMMEDIATE SUPERVISOR	14	2.60	16	2.00	15	2.46
LEADERSHIP AT UNIT LEVEL	12	2.46	11	2.00	13	2.30
SENIOR AIR FORCE LEADERSHIP	11	2.42	2	2.50	8	2.25

TOP 5 REASONS FOR MEMBERS REENLISTING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=106)	49-96 MONTHS' TAFMS (N=85)	97+ MONTHS' TAFMS (N=159)
JOB SECURITY	RETIREMENT BENEFITS	RETIREMENT BENEFITS
BONUS OR SPECIAL PAY	JOB SECURITY	JOB SECURITY
RETIREMENT BENEFITS	PAY AND ALLOWANCES	PAY AND ALLOWANCES
MEDICAL OR DENTAL CARE FOR AD MEMBER	MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	MILITARY LIFESTYLE
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	MEDICAL/ DENTAL CARE FOR AD MEMBER	MEDICAL OR DENTAL CARE FOR FAMILY MEMBERS

TABLE A80

**COMPARISON OF SEPARATION FACTORS BY TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR**

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=143)		49-96 MONTHS' TAFMS (N=52)		97+ MONTHS' TAFMS (N=20)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	62	2.14	65	2.21	35	2.00
PAY AND ALLOWANCES	56	2.28	65	2.53	50	2.30
BONUS OR SPECIAL PAY	17	1.92	44	2.65	45	2.11
RETIREMENT BENEFITS	3	2.80	19	2.40	20	2.50
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	23	2.27	31	2.12	5	1.00
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	42	2.53	48	2.44	15	2.33
MEDICAL/ DENTAL CARE FOR AD MEMBER	13	2.06	19	2.30	10	1.50
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	13	2.06	15	2.62	30	2.50
BASE HOUSING	10	2.07	13	2.00	15	1.33
BASE SERVICES	15	2.14	10	2.60	5	3.00
CHILDCARE NEEDS	8	2.25	13	2.43	10	2.00
SPOUSE'S CAREER	11	2.25	8	2.50	15	2.00
CIVILIAN JOB OPPORTUNITIES	47	2.37	40	2.43	15	2.33
EQUAL EMPLOYMENT OPPORTUNITIES	7	2.40	2	1.00	15	1.00
NUMBER OF PCS MOVES	14	2.25	21	2.60	10	2.50
LOCATION OF PRESENT ASSIGNMENT	26	2.27	31	2.56	20	2.75
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	31	2.36	40	2.67	35	2.71
WORK SCHEDULE	50	2.63	71	2.59	70	2.64
ADDITIONAL DUTIES	24	2.09	31	2.56	40	2.38
JOB SECURITY	6	1.67	15	1.50	5	1.00
ENLISTED EVALUATION SYSTEM	11	2.50	25	2.54	30	2.67
PROMOTION OPPORTUNITIES	20	2.21	29	2.20	25	2.40
TRAINING/EXPERIENCE OF UNIT PERSONNEL	29	2.36	35	2.33	30	2.33
UNIT MANNING	52	2.47	65	2.50	65	2.54
UNIT RESOURCES	30	2.42	48	2.48	35	2.43
UNIT READINESS	9	2.31	13	2.29	5	2.00
RECOGNITION OF EFFORTS	50	2.25	54	2.54	45	2.56
ESPRIT DE CORPS/MORALE	38	2.56	58	2.33	35	2.43
LEADERSHIP OF IMMEDIATE SUPERVISOR	21	2.40	23	2.58	10	3.00
LEADERSHIP AT UNIT LEVEL	31	2.70	54	2.64	40	2.75
SENIOR AIR FORCE LEADERSHIP	18	2.46	31	2.56	10	2.00

TOP 5 REASONS FOR MEMBERS SEPARATING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=143)	49-96 MONTHS' TAFMS (N=52)	97+ MONTHS' TAFMS (N=20)
MILITARY LIFESTYLE	WORK SCHEDULE	WORK SCHEDULE
PAY AND ALLOWANCES	PAY AND ALLOWANCES	UNIT MANNING
UNIT MANNING	UNIT MANNING	PAY AND ALLOWANCES
WORK SCHEDULE	MILITARY LIFESTYLE	RECOGNITION OF EFFORTS
RECOGNITION OF EFFORTS	ESPRIT DE CORPS/MORALE	BONUS OR SPECIAL PAY