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UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT

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F-15 AVIONICS TEST STATION AND COMPONENT
SPECIALIST CAREER LADDER

AFSC 451X4

AFPT 90-451-848

FEBRUARY 1990

**OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-5000**

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| HQ TAC/TTGT | 1 | | 1 | |
| HQ USAF/LEYM | 1 | | 1 | |
| HQ USAF/DPPE | 1 | | | |
| HQ USAFE/DPAT | 3 | | 3 | |
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PREFACE

This report presents the results of an Air Force occupational survey of the F-15 Avionics Test Station and Component Specialist (AFSC 451X4) career ladder. Authority for conducting occupational surveys is contained in AFR 35-2. Computer products used in this report are available for use by operations and training officials.

Mr Don Cochran developed the survey instrument, MSgt Corrie J. Wharton provided computer programming support, and Ms Tamme Lambert provided administrative support. Captain Kevin D. Osten analyzed the data and wrote the final report. This report has been reviewed and approved for release by Lieutenant Colonel Charles D. Gorman, Chief, Airman Analysis Branch, Occupational Analysis Division, USAF Occupational Measurement Center.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies may be requested from the Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB, Texas 78150-5000.

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SUMMARY OF RESULTS

1. Survey Coverage: Survey results are based on responses from 832 F-15 Avionics Test Station and Component Specialist personnel. This represents 72 percent of the total assigned AFSC 451X4 population. Incumbents were surveyed across all major commands and included personnel from all DAFSC skill levels.
2. Career Ladder Structure: Four clusters (including 14 jobs) and two independent job types were identified in the career ladder structure analysis. One cluster (including four jobs and 32 percent of the total sample) spent varying amounts of time maintaining automatic test stations. Another cluster (including five jobs and 44 percent of the total sample) contained individuals who spent their time maintaining manual and electronic warfare test stations. Nine percent of the total sample were contained in the supervisory cluster containing three jobs. These members spent the majority of their time supervising, but performed technical tasks as well. The training cluster contained 5 percent of the total sample and consisted of two jobs, equipment instructors and classroom instructors. The Due-in-for-Maintenance (DIFM) Monitor IJT contained 11 junior members who spent the majority of their time performing supply functions dealing with DIFM materials. The smallest group was the Inspector IJT containing eight members. Personnel in this IJT performed quality control and quality assurance inspections in automatic, manual, and electronic warfare test station avionics shops.
3. Career Ladder Progression: The AFSC 451X4 career ladder shows a typical career progression pattern. At the 3- and 5-skill level the job is primarily technical. At the 7-skill level supervisory duties dominate over technical duties.
4. AFR 39-1 Specialty Descriptions: A comparison of survey data to AFR 39-1 indicates the AFR 39-1 Specialty Descriptions provide comprehensive depictions of the respective jobs. Only minor changes are recommended, primarily the addition of administrative, supply, and general shop duties in order to provide a more complete job description of career ladder functions.
5. Training Analysis: Survey data generally support the AFSC 451X4 STS and the 45134A and 45134B POIs. There were numerous tasks, performed by high percentages of first-term and first-enlistment personnel, not having an assigned proficiency code or being trained at technical school. These tasks should be evaluated for possible inclusion in future revisions of the courses.
6. Job Satisfaction: Overall, 451X4 personnel are satisfied with their jobs. Responses for all facets of job satisfaction were only slightly lower than those of a comparative sample of similar AFSC's surveyed in 1988. Comparisons with the previous OSRs show much improvement in all areas, especially reenlistment intentions. B-shred personnel find their job more satisfying and interesting than their A-shred counterparts, with both groups reporting high utilization of talents and training. There is an overall trend of increasing

job dissatisfaction as time goes on, but positive reenlistment intentions indicate the majority of 451X4 individuals are choosing reenlistment over separation. Job satisfaction is very good for all specialty groups, with the Training cluster and DIFM Monitor IJT reporting scores lower than the other specialty groups.

7. Implications: Survey data support the current structure of AFSC 451X4. The 326XX AFSCs have integrated well into the 451X4 structure, however, there is still a definite division of duties within the B-shred. Career ladder and training documents are adequate, but are in need of minor revisions to bring them up to speed.

OCCUPATIONAL SURVEY REPORT
F-15 AVIONICS TEST STATION AND COMPONENT SPECIALIST CAREER LADDER
(AFSC 451X4)

INTRODUCTION

This report presents the results of an occupational survey of the F-15 Avionics Test Station and Component Specialist career ladder completed by the USAF Occupational Measurement Center in November 1989. The present survey was requested by HQ ATC/TTOA, Randolph AFB TX.

Background

This is the first occupational survey of this AFSC since it was created in April 1987 under the Rivet Workforce concept. Essentially, the 451X4 career ladder was created by combining F-15 functions from previous AFSCs 326X3, 326X4, and 326X5. The survey was requested by HQ ATC/TTOA to gather data on the new AFSC which will be used to update career ladder documents and training.

As outlined in the AFR 39-1 Specialty Descriptions, AFSC 451X4 personnel inspect, troubleshoot, repair, modify, program, calibrate, and certify computerized, manual, and electronic warfare test stations, consoles, and system components at the intermediate level. These personnel also use avionics test stations, consoles, support equipment, and specialized precision measurement equipment to perform their duties.

Course training for the F-15 Avionics Test Station and Component Specialist follows a two-track course at Lowry AFB CO. The Apprentice F-15 Avionics Test Station and Component Specialist - Automatic Equipment Course (G3ABR45134A 000) is 34 weeks and 3 days long. The Apprentice F-15 Avionics Test Station and Component Specialist - Manual and Electronic Warfare (MEW) Equipment course (G3ABR45134B 000) lasts 36 weeks and 3 days. Both courses consist of two blocks. The first block covers electronic principles, circuit and logic diagrams, aircraft systems theory, operation and confidence testing of selected line replaceable units, computer principles, safety, security, handtool usage, and technical publications. The second block is equipment oriented and varies according to the shred to which airmen are assigned. The A-shred block II goes into F-15 category II avionics support equipment, avionics intermediate shop test stations, and common automatic test equipment (CATE), while the B-shred block II covers F-15 category II manual and electronic warfare avionics support equipment, communication, navigation, and identification, and indicators and controls test stations, and Tactical Electronic Warfare System (TEWS) Intermediate Test Equipment (TITE).

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SURVEY METHODOLOGY

Data for this survey were collected using USAF Job Inventory AFPT 90-451-848, dated January 1989. The Inventory Developer reviewed pertinent career ladder documents and the previous 326X3, 326X4, and 326X5 inventories and OSRs to prepare a tentative task list. This task list was then validated through personal interviews with 27 subject-matter experts from three Air Force bases.

| <u>UNIT</u> | <u>AIRCRAFT/REASON FOR VISIT</u> |
|---|----------------------------------|
| 3450 Technical Training Group, Lowry AFB CO | Technical Training Center |
| 49th Component Repair Squadron, Holloman AFB NM | F-15A, F-15B |
| 33rd Component Repair Squadron, Eglin AFB FL | F-15C, F-15D |

The resulting inventory listed 975 tasks grouped into 24 duty headings. There were also 23 background questions.

Survey Administration

From March through July 1989, Consolidated Base Personnel Offices at operational bases worldwide administered the inventory booklets to all eligible DAFSC 451X4 personnel at the 3-, 5-, and 7-skill levels. Participants were selected from a computer-generated mailing list provided by the Air Force Human Resources Laboratory, Brooks AFB TX. Personnel not receiving booklets included those in transition for a permanent change of station (PCS), members retiring at the time of survey, those hospitalized, and those who had not been in their current job for at least 6 weeks.

All individuals who filled out an inventory booklet first completed an identification and background information section. Next, they went through the booklet and checked each task performed in their current job. After checking all tasks performed, the respondents rated each of these tasks on a 9-point scale reflecting relative time spent on each task compared to all other tasks. Ratings ranged from 1 (indicating a very small amount of time spent) to 9 (indicating a very large amount of time spent). To determine relative time spent for each task checked by a respondent, the sum of a respondent's ratings was assumed to account for 100 percent of his or her time spent on the job. All of a respondent's ratings were added together and then each rating was divided by the sum of all responses. Then, this quotient was multiplied by 100 to obtain the relative time spent for each task. This procedure provided a basis for comparing tasks not only in terms of percent members performing, but also in terms of relative percent time spent on tasks and groups of tasks.

Survey Sample

Participants in the survey were carefully selected to ensure there was a proportional representation across major command (MAJCOM) and paygrade groups. Table 1 shows the percentage distribution, by MAJCOM, of assigned personnel in the career ladder as of January 1988. Also shown in this table is the percentage distribution by MAJCOM in the final survey sample. Table 2 shows the survey sample representation across paygrades. As these tables indicate, survey representation by MAJCOM and paygrade was very good. The 832 respondents in the final survey sample represent 72 percent of the total 1,153 DAFSC 451X4 personnel assigned.

Task Factor Administration

Once the survey data were processed and input into a UNISYS 1100 mainframe computer, Comprehensive Occupational Data Analysis Programs (CODAP) were used to analyze the data and create job descriptions for various groupings of respondents. But job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. While most participants in the survey process completed a USAF job inventory, selected senior 451X4 personnel were also asked to complete additional booklets rendering judgements on task training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the job inventories and the resulting data used in a number of different analyses discussed later in this report.

Task Difficulty (TD): Individuals completing TD booklets were asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time it takes an individual to learn to do the task. TD data were independently collected from 70 experienced 451X4 supervisors. Interrater reliability analysis reflected a satisfactory agreement among raters. Ratings were standardized so tasks had an average difficulty of 5.00, with a standard deviation of 1.00. The resulting data yield a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Training Emphasis (TE): Training emphasis is a rating of those tasks which require structured training for first-enlistment personnel. This training may be provided by resident technical schools, field training detachments (FTD), mobile training teams (MTT), or in-house formal OJT. Training emphasis data were collected from 68 experienced 451X4 supervisors, who were asked to rate inventory tasks on a 10-point scale (from no training required to extremely high training emphasis required). The interrater reliability analysis for these 68 raters indicated unacceptably low agreement on which tasks require some form of structured training for first-term personnel. Consequently, TE data are unavailable for this AFSC.

TABLE 1
 COMMAND REPRESENTATION OF AFSC 451X4 SURVEY SAMPLE

| <u>COMMAND</u> | <u>PERCENT OF ASSIGNED</u> | <u>PERCENT OF SAMPLE</u> |
|---------------------|--------------------------------|------------------------------|
| TAC | 64 | 62 |
| USAFE | 14 | 16 |
| PACAF | 9 | 10 |
| ATC | 7 | 7 |
| Alaskan Air Command | 4 | 5 |

TOTAL PERSONNEL ASSIGNED: 1,153
 TOTAL PERSONNEL ELIGIBLE FOR SURVEY: 1,065
 TOTAL PERSONNEL IN SAMPLE: 832
 PERCENT OF ASSIGNED IN SAMPLE: 72%
 PERCENT OF ELIGIBLE IN SAMPLE: 78%

Note: Columns may not add to 100 percent due to rounding

TABLE 2
 PAYGRADE REPRESENTATION OF AFSC 451X4 SURVEY SAMPLE

| <u>PAYGRADE</u> | <u>PERCENT OF ASSIGNED</u> | <u>PERCENT OF SAMPLE</u> |
|-----------------|--------------------------------|------------------------------|
| AIRMAN | 18 | 18 |
| E-4 | 24 | 28 |
| E-5 | 35 | 34 |
| E-6 | 16 | 13 |
| E-7 | 7 | 6 |

Note: Columns may not add to 100 percent due to rounding

When TD ratings are used with other information, such as percent members performing tasks, they can provide insight into first-term personnel training requirements and help validate the need for an increase or decrease in structured training for the career ladder.

SPECIALTY JOBS (Career Ladder Structure)

The structure of jobs within the F-15 Avionics Test Station and Component Specialist career ladder was examined on the basis of similarity of tasks performed and the percent of time spent by job incumbents, independent of background or other factors.

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program compares the job description for each individual in the sample to every other job description in terms of the tasks performed and the relative amount of time spent doing those tasks. The automated program is designed to find the two most similar job descriptions and merge them into a group. All other job descriptions are then compared to this group and those that are similar are also merged. In successive stages, new members are added to merge with groups already formed or to create new groups, until all job incumbents (and their respective job descriptions) are merged. The result is a pattern of jobs making up the 451X4 career ladder.

For this report, the career ladder structure is described in terms of clusters, job types, and independent job types. The basic identifying group is the Job Type. A job type is a group of individuals who perform many of the same tasks and spend similar amounts of time performing them. When different job types have a substantial degree of similarity between them, they are grouped together and labeled a Cluster. In many career ladders, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types (IJT).

Structure Overview

Based on the similarity of tasks performed and the amount of time spent performing each task, four clusters and two independent job types were identified in the examination of the F-15 Avionics Test Station and Component Specialist career ladder. The major jobs listed below are illustrated in Figure 1 and descriptions for each are given on the following pages. The stage (STG) or group (GRP) numbers printed beside each job title are the same numerical identifiers located on the CODAP-diagram. These identifiers are used during analysis of the groups to find specific information for each group. The letter N within parentheses refers to the number of personnel in the group.

AFSC 451X4 SPECIALTY JOBS (N= 832)

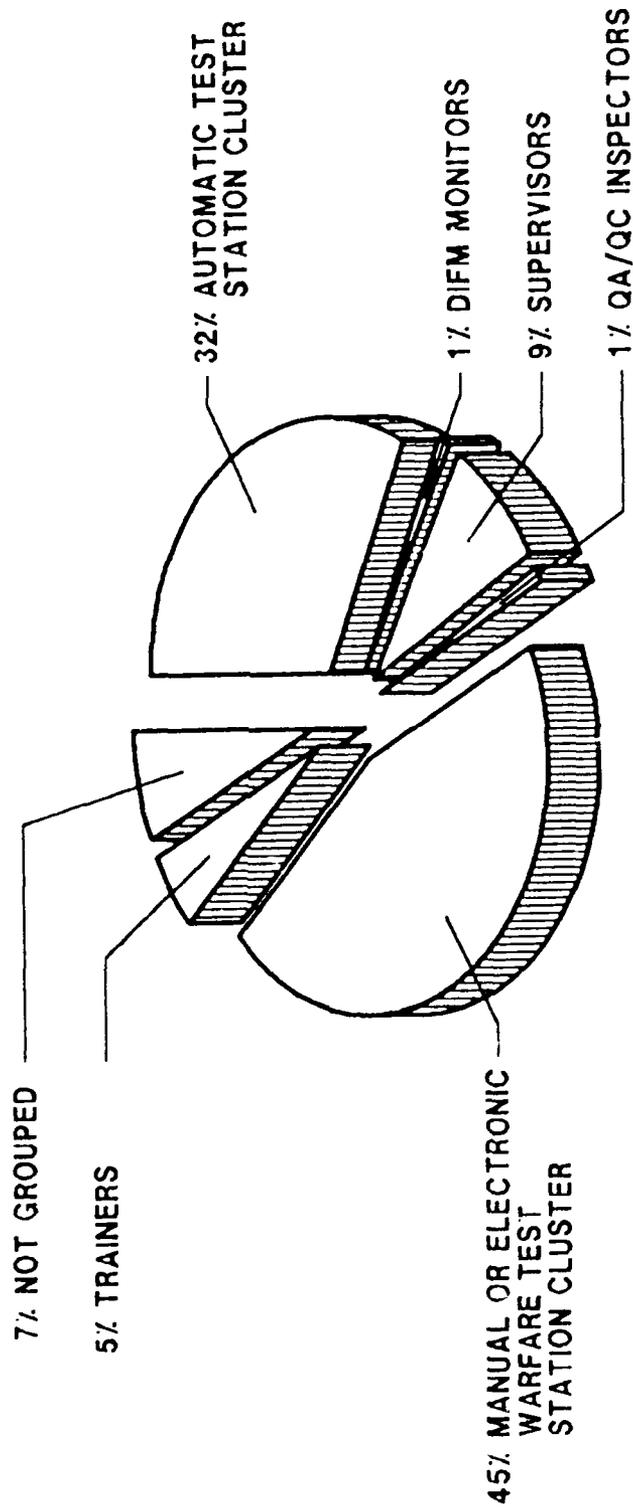


Figure 1

- I. AUTOMATIC TEST STATION CLUSTER (STG055, N=265)
 - A. Computer Test Station (LRU only) Technicians (STG095, N=25)
 - B. Computer Test Station Technicians (STG108, N=184)
 - C. Microwave Test Station Technicians (STG102, N=23)
 - D. Displays Test Station Technicians (STG131, N=32)

- II. MANUAL OR ELECTRONIC WARFARE (EW) TEST STATION CLUSTER (STG032, N=373)
 - A. Tactical Electronic Warfare System (TEWS) Intermediate Test Equipment (TITE) (TRU only) Technicians (STG246, N=5)
 - B. TITE Technicians (STG104, N=126)
 - C. Antenna A and B Test Station Technicians (STG135, N=12)
 - D. Avionics Technicians (STG074, N=204)
 - E. Team Leaders (STG064, N=12)

- III. SUPERVISORY CLUSTER (STG054, N=76)
 - A. Instructors or Supervisors (STG122, N=11)
 - B. Production Supervisors (GRP092, N=30)
 - C. Automatic Test Station (ATS) NCOICs (STG100, N=31)

- IV. TRAINING CLUSTER (STG020, N=40)
 - A. Classroom Instructors (STG037, N=33)
 - B. Equipment Instructors (STG047, N=7)

- V. DUE-IN-FOR-MAINTENANCE (DIFM) MONITOR IJT (STG091, N=11)

- VI. QUALITY ASSURANCE OR QUALITY CONTROL (QA/QC) INSPECTOR IJT (STG045, N=8)

The AFSC 451X4 personnel forming these clusters and independent job types account for 93 percent of the total survey sample. The other 7 percent, referred to as isolates, did not merge with any of these identified groups because they perform tasks or sets of tasks which differ from the tasks performed by the groups above.

Two tables in this section provide background information about the clusters and independent job types listed. Table 3 provides background information, such as DAFSC distribution across each group, predominant grades, total months in service, and average number of tasks performed. For example, Table 3 shows the Automatic Test Station Cluster has 265 members, mostly 5-skill level personnel in paygrades E-4 and E-5, averages 56 months in the career field, and perform an average of 294 tasks. Table 4 shows the average time specialty job groups spend on the duties listed in the job inventory.

TABLE 3

SELECTED BACKGROUND DATA FOR 451X4 CAREER LADDER JOBS

| | AUTOMATIC TEST STATION CLUSTER | MANUAL/EW TEST STATION CLUSTER | SUPERVISORY CLUSTER | TRAINING CLUSTER | INDEPENDENT JOB TYPES | |
|-------------------------|--------------------------------------|--------------------------------------|------------------------|---------------------|--------------------------|---------------------|
| | | | | | DIFM MONITORS | QA/QC INSPECTORS |
| NUMBER IN GROUP | 265 | 373 | 76 | 40 | 11 | 8 |
| PERCENT OF TOTAL SAMPLE | 32% | 45% | 9% | 5% | 1% | 1% |
| PERCENT IN CONUS | 67% | 62% | 64% | 100% | 45% | 37% |

DAFSC DISTRIBUTION (PERCENT RESPONDING):

| | | | | | | |
|--------|-----|-----|-----|-----|-----|-----|
| 45134A | 14% | 0 | 0 | 0 | 0 | 0 |
| 45154A | 57% | 1% | 7% | 49% | 9% | 0 |
| 45134B | 0 | 26% | 0 | 3% | 0 | 0 |
| 45154B | 10% | 53% | 3% | 33% | 82% | 12% |
| 45174 | 20% | 19% | 91% | 15% | 9% | 87% |

| PREDOMINANT GRADES | E-4/5 | E-3/4/5 | E-6 | E-5 | E-4 | E-5 |
|--------------------------------|-------|---------|-----|-----|-----|-----|
| | | | | | | |
| AVERAGE MONTHS IN CAREER FIELD | 56 | 49 | 104 | 91 | 51 | 64 |
| AVERAGE MONTHS IN SERVICE | 78 | 65 | 154 | 96 | 58 | 137 |
| PERCENT FIRST ENLISTMENT | 52% | 56% | 11% | 5% | 55% | 0 |
| PERCENT SUPERVISING | 46% | 41% | 91% | 8% | 36% | 43% |
| AVERAGE TASKS PERFORMED | 294 | 184 | 99 | 27 | 16 | 37 |

PREDOMINANT MAJCOM ASSIGNMENT

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| TAC | TAC | TAC | ATC | TAC | TAC |
|-----|-----|-----|-----|-----|-----|

Note: Some columns may not add to 100 percent due to rounding

TABLE 4 (CONTINUED)

AVERAGE TIME SPENT ON DUTIES BY SPECIALTY JOB GROUPS
(PERCENT MEMBERS PERFORMING)

| JOB GROUPS | AUTOMATIC TEST STATION CLUSTER | MANUAL/EW TEST STATION CLUSTER | SUPERVISORY CLUSTER | TRAINING CLUSTER | INDEPENDENT JOB TYPES | |
|--|--------------------------------------|--------------------------------------|------------------------|---------------------|--------------------------|---------------------|
| | | | | | DIFM MONITOR | QA/QC INSPECTORS |
| Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRU | 0 | 0 | 0 | 0 | 0 | 0 |
| R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUS | 0 | 2 | 0 | 1 | 0 | 0 |
| S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRU | 0 | 19 | 0 | 0 | 0 | 0 |
| T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUS | 0 | 2 | 0 | 0 | 0 | 0 |
| U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRU | 0 | 12 | 0 | 1 | 0 | 0 |
| V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUS | 0 | 8 | 0 | 5 | 0 | 0 |
| W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRU | 0 | 0 | 0 | 0 | 0 | 0 |
| X. MAINTAINING ELECTRONIC COUNTERMEASURES (ECM) POD TEST STATIONS AND ECM PODS | 0 | 0 | 0 | 0 | 0 | 0 |

Job Descriptions

I. AUTOMATIC TEST STATION CLUSTER (STG055, N=265). The 265 members of this A-shred cluster comprise 32 percent of the survey sample. Most (57 percent) are 5-skill level personnel who spend 69 percent of their time maintaining computer, displays, and microwave test stations and assigned line replaceable units (LRUs) and tester replaceable units (TRUs) (Duties G thru M). The remainder of their time is divided between maintaining common automatic test equipment (CATE) (13 percent), and performing general administrative, supply, and avionics shop tasks (12 percent). The tasks performed by these members typically include:

- inspect or clean test stations or LRUs
- clean shop facilities
- perform programmed test of IMU LRUs
- repair switching complexes
- perform programmed test of 039 LRUs
- perform confidence test of MTSs
- isolate malfunctions with 022 LRUs
- perform programmed test of ANMI LRUs
- level HUD tables using theodolites and alignment fixtures

Automatic Test Station personnel perform the highest average number of tasks (294) of any group identified, and average 78 months total active federal military service (TAFMS). Fifty-two percent are in their first enlistment and 46 percent indicate they supervise other avionics test station personnel.

The four job types within the Automatic Test Station cluster were based upon the type of equipment maintained. The Computer Test Station Technicians (STG108, N=184) are the largest group and spend 28 percent of their time maintaining computer test stations and 14 percent maintaining common automatic test equipment (CATE). Like the Computer Test Station Technicians, the Computer Test Station (LRU only) Technicians (STG095, N=25) spend most of their time (49 percent) maintaining computer test stations, but work primarily with assigned LRUs (45 percent). The Displays Test Station Technicians (STG131, N=32) spend 42 percent of their time maintaining displays test stations. The Microwave Test Station Technicians (STG102, N=23) spend 29 percent of their time maintaining microwave test stations, but also spend 20 percent of their time maintaining CATE.

II. MANUAL OR ELECTRONIC WARFARE (EW) TEST STATION CLUSTER (STG032, N=373). This large cluster of B-shred personnel constitutes 44 percent of the total sample. Fifty-three percent of these people are at the 5-skill level. They spend 61 percent of their time maintaining indicators and controls; antenna A and B; and communication, navigation, and identification test

stations and maintaining tactical electronic warfare systems (TEWS) intermediate test equipment (TITE) (Duties O through V). Typical tasks performed by personnel within this cluster include:

- remove or replace LRU minor hardware
- initiate or complete AFTO Forms 350
- repair radar system antennas
- clean and lubricate equipment components
- perform operational checkout of AN/ARC-164 or AN/ARC-164 (HQ) UHF R/T
- isolate malfunctions within ICCPs or ICCP(HQs)
- perform TITE basic OA/FIs
- align AN/ALQ-128 receiver/transmitters
- repair IFFs

Personnel in this cluster average 184 tasks performed, 65 months TAFMS, and 41 percent indicate they supervise other AFSC 451X4 personnel.

Five job types, based upon equipment maintained and previous AFSC, were identified in this cluster. The TITE Technicians (STG104, N=126) spend 55 percent of their time maintaining TITE and 29 percent performing general test station maintenance, administrative, supply, and general shop tasks. A smaller group of TITE (TRU only) Technicians (STG246, N=5) spend 46 percent of their time maintaining TITE, but the majority of that time (43 percent) is spent with assigned TRUs. Forty-eight percent of their time is spent performing general test station maintenance (28 percent) and administrative, supply, and shop duties (20 percent). Another job type is the Team Leaders (STG64, N=12) who spend 52 percent of their time performing general test station maintenance, and performing general administrative, supply, and avionics shop tasks. This group also performs the most supervisory tasks in this cluster (23 percent) and could be considered first-line supervisors. These three jobs associated with TITE correspond to the previous AFSC 326X3B. The Avionics Technicians (STG074, N=204) spend their time maintaining a variety of test stations to include indicators and controls (35 percent), communication, navigation, and identification (17 percent), and antenna A and B (12 percent). Additionally, 27 percent of their time is spent on general test station maintenance and shop maintenance. The Antenna A and B Test Station Technicians (STG135, N=12) maintain A and B test stations 29 percent of their time, but spend the majority of their time (46 percent) performing general test station maintenance as well as general administrative and supply tasks. Members in these last two job types perform tasks corresponding to the previous AFSC 326X5B.

III. SUPERVISORY CLUSTER (STG054, N=76). The 76 members of this cluster represent 9 percent of the survey sample. The majority of these people (91 percent) function at the 7-skill level and spend most of their time supervising, counseling, and evaluating subordinates, establishing work methods and priorities, and compiling data for reports. While they spend very little time

performing specific maintenance actions, 26 percent of their time is spent performing general test station maintenance, and performing administrative, supply, and avionics shop tasks. Tasks commonly performed by this cluster are:

- write APRs
- interpret policies, directives, or procedures for subordinates
- supervise avionics test station and component technicians
- establish performance standards for subordinates
- determine training requirements
- direct shop maintenance activities
- perform QA or QC inspections of LRUs
- compile data for reports

Personnel in this cluster perform an average of 99 tasks, average 154 months TAFMS, and 91 percent indicate they supervise other Avionics Test Station and Component Technicians.

There are three job types within this cluster. The Instructors or Supervisors (STG122, N=11) have a T prefix, are assigned to Lowry AFB, and spend 48 percent of their time performing training tasks. The Production Supervisors (GRP092, N=30) spend 55 percent of their time performing supervisory tasks, 30 percent of their time on general administrative and supply tasks, and the rest of their time split between general test station maintenance and avionics shop tasks. The Automatic Test Station NCOICs (STG100, N=31) spend 80 percent of their time performing supervisory tasks and are the most senior job type in the Supervisory cluster.

IV. TRAINING CLUSTER (STG020, N=40). This cluster represents 5 percent of the total sample and contains 40 members. The majority of this group functions at the 5-skill level (49 percent A-shred, 33 percent B-shred) and all are members of ATC and assigned to the 3450 TCHTG at Lowry AFB CO. These individuals conduct classroom and equipment training, administer and score tests, and annotate training records. By far, the majority of their time is spent training (56 percent), both in the classroom and on equipment. Typical tasks performed by this group are:

- conduct resident course classroom training
- administer tests
- write test questions
- interpret system diagrams or schematics
- perform TITE basic OA/FIs
- counsel personnel on personal or military-related matters
- evaluate personnel for compliance with performance standards or technical orders
- evaluate effectiveness of training programs

Training personnel average 27 tasks performed, 96 months TAFMS, and 8 percent indicate they supervise other AFSC 451X4 personnel.

There were two job types within the Training cluster. The Classroom Instructors (STG037, N=33) spend their time instructing students in theory and other concepts in the classroom environment and spend very little time performing hands-on training. The Equipment Instructors (STG047, N=7), on the other hand, perform the majority of the hands-on equipment instruction in the shop environment, consequently spending more time maintaining and working on test stations and other shop hardware.

V. DUE-IN-FOR-MAINTENANCE (DIFM) MONITOR IJT (STG091, N=11). This highly specialized group of 11 members represents 1 percent of the total sample. Five-level, B-shred airmen make up the majority of this group (82 percent), and they spend 81 percent of their time performing general administrative and supply tasks (Duty E) dealing with DIFM items. What little time they spend on maintenance duties (5 percent) is general in nature. Tasks commonly performed by this IJT include:

- maintain DIFM transaction rosters
- process DIFM items
- maintain AF Forms 2000 suspense files
- complete DD Forms 1348-1
- calibrate torque wrenches
- coordinate maintenance work with appropriate personnel or agencies
- prepare equipment for turn-in
- maintain deficiency, service, or status reports

DIFM personnel perform an average of 16 tasks, are the most junior group with an average of 58 months TAFMS, and 36 percent indicate they supervise other AFSC 451X4 personnel.

VI. QUALITY ASSURANCE OR QUALITY CONTROL INSPECTOR IJT (STG045, N=8). These eight inspectors represent 1 percent of the total sample and all but one are 7-skill level personnel. These personnel spend 28 percent of their time inspecting and evaluating equipment and programs, but the majority of their time is spent performing general maintenance on test stations and performing general administrative and supply tasks. Some tasks commonly performed by this IJT include:

- perform QA or QC inspection of test stations
- perform QA or QC inspection of LRUs
- evaluate personnel for compliance with performance standards or technical orders
- review AFTO Forms 244 and 245

- evaluate safety and security problems
- develop inspection procedures
- perform QA or QC inspection of LRU test packages
- report material deficiencies

The average number of tasks performed by this group is 37, and 43 percent indicate they supervise other AFSC 451X4 personnel. This fairly senior group averages 137 months TAFMS, second only to the Supervisory cluster.

Comparison of Specialty Jobs

Four clusters and two IJTs were identified in the AFSC 451X4A/B structural analysis. All members are responsible for performing varying amounts of general administrative, supply, and avionics shop tasks, and for performing general maintenance on specific test stations and assigned LRUs. The differences in the amount of time spent on the other duties dictate to which cluster or IJT they are assigned.

The Automatic Test Station cluster contained four jobs and accounted for 32 percent of the total 451X4 sample. Each job was responsible for maintaining a specific type(s) of automatic test station (computer, displays, or microwave) and assigned LRUs and TRUs. Personnel in this cluster also spent varying amounts of time maintaining F-15 common automatic test equipment (CATE). The Manual or Electronic Warfare cluster contains five jobs and accounts for 44 percent of the total sample of 451X4s. Each job was involved with the maintenance of either TITE and assigned LRUs and TRUs or with the maintenance of manual test stations (antenna A and B, communication, navigation, and identification, and indicators and controls) and assigned LRUs and TRUs. Personnel in the Supervisory cluster accounted for 9 percent of the total sample and were broken down into three jobs based upon time spent on supervisory duties. The Training cluster accounted for 5 percent of the total sample and included two jobs. The Classroom Instructors taught theories in the classroom, and the Equipment Instructors taught hands-on training in the shop. The DIFM Monitor IJT accounted for 1 percent of the total sample. These junior personnel spend the majority of their time performing administrative and supply tasks. The Inspector IJT represented 1 percent of the total sample. Individuals in this IJT inspected various programs and test stations.

Comparison of Current Survey to Previous Surveys

The results of the specialty job analysis for this survey were compared to those of the previous OSRs for AFSC 326X3B, AFPT 90-326-428B, dated December 1981; AFSC 326X4B, AFPT 90-326-428C, dated June 1982; and AFSC 326X5B, AFPT 90-326-428E, dated November 1981. Rivet Workforce initiatives converted AFSC 326X4B directly to 451X4A, AFSC 326X3B to the TITE portion of 451X4B, and AFSC 326X5B to the manual test station portion of 451X4B. The A-shred portions of those 326XX OSRs dealt with F/FB-111 aircraft. Table 5 shows comparisons of the jobs identified in the OSRs. The 326X4B OSR identified three clusters and two IJTs, showing only minor differences from the

TABLE 5

JOB COMPARISONS BETWEEN CURRENT AND PREVIOUS SURVEYS *

| CURRENT SURVEY (N=832) | PREVIOUS SURVEYS |
|---|---|
| AUTOMATIC TEST STATION CLUSTER (N=267) | TEST STATION PERSONNEL CLUSTER (N=197) (326X4B) |
| A. Computer Test Station Technicians (N=184) | Multiple Test Station Operator/Maintainer (N=91) Computer and Displays Test Station Personnel (N=13) |
| B. Computer Test Station (LRU only) Technicians (N=25) | Computer Test Station Personnel (N=30) Computer Test Station and General Maintenance (N=6) Junior Computer Test Station Personnel (N=5) |
| C. Displays Test Station Technicians (N=32) | Displays Test Station Personnel (N=25) |
| D. Microwave Test Station Technicians (N=23) | Microwave Test Station Personnel (N=17) |
| MANUAL/EW TEST STATION CLUSTER (N=373) | TEWS MAINTENANCE CLUSTER (N=98) (326X3B) |
| A. TITE Maintenance Technicians (N=126) TITE (TRU only) Technicians (N=5) Team Leaders (N=12) | |
| B. Avionics Technicians (N=204) Antenna A and B Test Station Technicians (N=12) | F-15 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (N=122) (326X5B) |
| SUPERVISORY CLUSTER (N=76) | |
| A. Production Supervisors (N=30) | F-15 Supervisors (N=10) (326X3B) Shift Supervisors (N=5) (326X4B) F-15 Shop Shift Supervisors (N=5) (326X5B) |
| B. Instructors or Supervisors (N=11) | Supervisors/Administrators (N=21) (326X3B) |
| C. Automatic Test Station NCOICs (N=31) | Shop NCOICs (N=10) (326X4B) Manual Test Station Shop Chiefs (N=8) (326X5B) |

TABLE 5 (CONTINUED)

JOB COMPARISONS BETWEEN CURRENT AND PREVIOUS SURVEYS *

| CURRENT SURVEY (N=832) | PREVIOUS SURVEYS |
|---|---|
| TRAINING CLUSTER (N=40) | TECHNICAL TRAINING INSTRUCTORS (N=12) (326X3B) TRAINING PERSONNEL (N=18) (326X5B) |
| A. Classroom Instructors (N=33) B. Equipment Instructors (N=7) | Classroom Instructors (N=6) (326X4B) Equipment Training Instructors (N=8) (326X4B) |
| DIFM MONITORS (N=11) | ADMINISTRATIVE RECORDS IJT (N=11) (326X3B) DIFM MONITORS (N=6) (326X4B) |
| QA/QC INSPECTORS (N=8) | NOT IDENTIFIED |

* AFSC 326X3B, dated December 1981
 AFSC 326X4B, dated June 1982
 AFSC 326X5B, dated November 1981

current data. However, the Staff Manager IJT was not found in the current data. The 326X3B OSR identified two clusters and two IJTs and the 326X5B OSR identified two clusters and one IJT, both of which matched the findings of current data.

There was one IJT (QA/QC Inspectors, N=8) identified in the current survey not found in any of the previous OSRs. The QA/QC Inspector job is not unique to AFSC 451X4 and was probably incorporated into one or several of the previous 326XX supervisory job groups.

In summary, the 451X4 career ladder has undergone major structural changes due to Rivet Workforce initiatives. The job of the 3-/5-skill level 451X4A group has remained essentially the same, while the job of the 451X4B 3-/5-skill level group has undergone significant changes. As 326X3 or 326X5 technicians, they were only responsible for the maintenance of either manual or electronic warfare test stations. Now, as 451X4Bs, they must be proficient in the maintenance of manual as well as electronic warfare test stations. At the 7-skill level, the job has changed even more drastically. Previously, 7-skill level personnel were maintaining only one type of test station and now they must know about maintaining all three types, potentially limiting their depth of knowledge for any one test station. Jobs of the previous AFSCs were found rather distinctively in the current data, but were beginning to show more intrashred integration. The OSR comparative match was accomplished with good results. Any apparent differences not mentioned can be attributed to differences and variations in the construction of the job inventory booklets for the surveys.

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis identifies similarities and differences in task and duty performance at the various skill levels. This information may be used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the STS, reflect what career ladder personnel are actually doing in the field.

Comparisons of the duties and tasks performed across DAFSCs 45134A and 45154A and DAFSCs 45134B and 45154B revealed minimal differences between the two same-shred skill levels. The 3-skill level A-shred members spend slightly more time performing general test station maintenance (Duty G), maintaining displays test stations and assigned LRUs (Duty J), and maintaining computer test stations and assigned LRUs (Duty H) and the 5-skill level A-shred members spend slightly more time performing training (Duty D), but the differences are insignificant, and the specialty jobs performed by the two DAFSC groups are essentially identical. The differences between the 3- and 5-skill level B-shred members are insignificant and their jobs are also considered identical. Data indicate 3-skill level members are spending slightly more time maintaining both antennas A and B (Duty O) and indicators and controls (Duty

S) test stations and assigned LRUs, and 5-skill level members are performing more training (Duty D). The differences between the two A-shred and the two B-shred groups are minimal and they are combined in this report.

Progressing from the 3- to the 7-skill level, a typical pattern of progression is noted. All skill levels spend 27 to 31 percent of their time performing general administrative, supply, and shop tasks, and performing general maintenance on test stations and assigned LRUs. At the 7-skill level, supervisory duties are increased over the 3-/5-skill level group, while the amount of time spent on technical duties is significantly reduced and dispersed over both automatic and manual/EW test station duties (Table 6).

Skill-Level Descriptions

DAFSC 45134A/45154A. The 225 members of this 3-/5-skill level A-shred group comprise 27 percent of the total survey sample. Their job is primarily technical in nature, spending 73 percent of their time maintaining automatic test stations (Duties G through N) and 14 percent of their time performing general shop, administrative, and supply tasks. The Automatic Test Station cluster employs 83 percent of these members and the Training cluster another 8 percent (Table 7). Group members perform an average of 239 tasks, with 146 tasks accounting for 50 percent of their job time. Table 8 displays the representative tasks performed by this group and Table 9 shows which tasks differentiate A-shred 3-/5-skill level people from 7-skill level members.

DAFSC 45134B/45154B. This group of 361 B-shred 3-/5-skill level members represents 43 percent of the total sample. Their job is technical, with 71 percent of their time spent maintaining manual test stations and TITE (Duties G, and O thru W) while general shop, administrative, and supply tasks consume another 18 percent. Their biggest employer is the Manual or Electronic Warfare Test Station cluster (82 percent) followed by the Automatic Test Station cluster (7 percent) (Table 7). Members in this group perform an average of 173 tasks, with 139 tasks accounting for 50 percent of their job time. Representative tasks can be seen in Table 10, and the tasks which best differentiate these B-shred 3-/5-skill level members from 7-skill level members are in Table 11.

DAFSC 45174. Thirty-two percent of the total sample is represented in this group of 239 7-skill level individuals. Supervisory duties consume the majority of this group's time (42 percent), followed by technical duties (38 percent) and general shop, administrative, and supply duties (18 percent). The Manual or Electronic Warfare Test Station cluster employs 29 percent of these 7-levels, closely followed by the Supervisory cluster (28 percent) and the Automatic Test Station cluster with 22 percent. There were two types of 7-levels differentiated by the type of tasks performed. One group performed supervisory as well as technical tasks, while the other group performed primarily supervisory tasks. Personnel in this group perform an average of 164 tasks, with 109 tasks accounting for 50 percent of their job time. Table 12 identifies representative tasks for these members, and Tables 9 and 11 show tasks that best differentiate these members from their 3-/5-skill level counterparts.

TABLE 6

AVERAGE TIME SPENT ON DUTIES BY DAFSC GROUPS

| JOB GROUPS | DAFSC 45134A/ 45154A (N=225) | | DAFSC 45134B/ 45154B (N=361) | | DAFSC 45174 (N=239) | |
|---|---------------------------------------|----|---------------------------------------|--|---------------------------|--|
| | | | | | | |
| A. ORGANIZING AND PLANNING | 1 | 2 | 10 | | | |
| B. DIRECTING AND IMPLEMENTING | 1 | 2 | 10 | | | |
| C. EVALUATING AND INSPECTING | 1 | 1 | 11 | | | |
| D. TRAINING | 6 | 4 | 11 | | | |
| E. PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS | 9 | 11 | 14 | | | |
| F. PERFORMING GENERAL AVIONICS SHOP TASKS | 5 | 7 | 4 | | | |
| G. PERFORMING GENERAL MAINTENANCE ON TEST STATIONS ASSIGNED LINE REPLACEABLE UNITS (LRU) | 13 | 13 | 10 | | | |
| H. MAINTAINING COMPUTER TEST STATIONS ASSIGNED LRU | 16 | 2 | 10 | | | |
| I. MAINTAINING COMPUTER TEST STATIONS AND ASSIGNED TESTER REPLACEABLE UNITS (TRU) | 5 | 1 | 1 | | | |
| J. MAINTAINING DISPLAYS TEST STATIONS ASSIGNED LRU | 11 | 1 | 3 | | | |
| K. MAINTAINING DISPLAYS TEST STATIONS AND ASSIGNED TRUS | 5 | * | 1 | | | |
| L. MAINTAINING MICROWAVE TEST STATIONS ASSIGNED LRU | 6 | * | 1 | | | |
| M. MAINTAINING MICROWAVE TEST STATIONS AND ASSIGNED TRUS | 5 | * | 1 | | | |
| N. MAINTAINING F-15 COMMON AUTOMATIC TEST EQUIPMENT (CATE) | 12 | 1 | 3 | | | |
| O. MAINTAINING ANTENNA A AND B TEST STATIONS ASSIGNED LRU | * | 5 | 1 | | | |
| P. MAINTAINING ANTENNA A AND B TEST STATIONS AND ASSIGNED TRUS | * | 4 | 1 | | | |
| Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRU | * | 8 | 2 | | | |
| R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUS | * | 2 | 1 | | | |
| S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRU | * | 17 | 4 | | | |
| T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUS | * | 2 | * | | | |
| U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRU | 1 | 11 | 3 | | | |
| V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUS | 1 | 8 | 2 | | | |
| W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRU | * | * | * | | | |
| X. MAINTAINING ELECTRONIC COUNTERMEASURES (ECM) POD TEST STATIONS AND ECM PODS | - | - | - | | | |

* Less than .5 percent

- Nonresponse

TABLE 7

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS

| SPECIALTY JOBS | DAFSC 45134/54A (N=225) | | DAFSC 45134/54B (N=361) | | DAFSC 45174 (N=239) | |
|------------------------------------|----------------------------|---------|----------------------------|---------|------------------------|---------|
| | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT |
| I. AUTOMATIC TEST STATION CLUSTER | 186 | 83% | 25 | 7% | 52 | 22% |
| II. MANUAL/EW TEST STATION CLUSTER | 5 | 2% | 295 | 82% | 70 | 29% |
| III. SUPERVISORY CLUSTER | 5 | 2% | 2 | 1% | 68 | 28% |
| IV. TRAINING CLUSTER | 19 | 8% | 14 | 4% | 6 | 3% |
| V. DIFM MONITORS | 1 | - | 9 | 2% | 1 | - |
| VI. QA/QC INSPECTOR CLUSTER | 0 | - | 1 | - | 7 | 3% |
| NOT GROUPED | 9 | 4% | 15 | 4% | 35 | 15% |

- Less than .5 percent

TABLE 8
 REPRESENTATIVE TASKS PERFORMED BY
 45134A/54A PERSONNEL
 (N=225)

| TASKS | MEMBERS PERFORMING |
|---|-----------------------|
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 91 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 86 |
| F185 CLEAN SHOP FACILITIES | 86 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 86 |
| G233 INVENTORY TEST STATIONS, CABINETS, ROLLAWAYS, SIMULATORS, OR MOCKUPS | 75 |
| H316 PERFORM PROGRAMMED TEST OF IMU LRUs | 73 |
| N618 PERFORM OA/FI OF SWITCHING COMPLEXES | 72 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 71 |
| H289 ISOLATE MALFUNCTIONS WITHIN INERTIAL MEASUREMENT UNIT (IMU) LRUs | 69 |
| H340 REPAIR IMUs | 69 |
| N643 REPAIR SWITCHING COMPLEXES | 69 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 68 |
| H291 ISOLATE MALFUNCTIONS WITHIN LEAD COMPUTING GYRO (LCG) LRUs | 66 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 65 |
| I376 PERFORM CONFIDENCE TEST OF CTsS | 65 |
| J429 PERFORM PROGRAMMED TEST OF HUD UNIT LRUs | 63 |
| L509 ADJUST RADAR RECEIVER (022) SRUs | 63 |
| L523 PERFORM PROGRAMMED TEST OF 039 LRUs | 63 |
| M546 PERFORM CONFIDENCE TEST OF MTsS | 61 |
| J441 REPAIR CONVERTER PROGRAMMERS | 61 |
| J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS | 59 |
| K483 PERFORM CONFIDENCE TEST OF DTsS | 59 |
| M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES | 56 |
| K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES | 54 |
| A8 DETERMINE WORK PRIORITIES | 39 |
| D101 MAINTAIN TRAINING RECORDS | 39 |
| D89 COUNSEL TRAINEES ON TRAINING PROGRESS | 33 |
| B49 SUPERVISE APPRENTICE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45134A) | 30 |
| C79 WRITE APRs | 28 |

Average number of tasks performed-239

TABLE 9

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 45134A/45154A and 45174 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | DAFSC 45134A/ 45154A (N=225) | DAFSC 45174 (N=239) | DIFFERENCE |
|---|---------------------------------------|---------------------------|------------|
| N605 PERFORM OA/FI OF DIAs | 75 | 22 | +53 |
| G230 INSPECT, CLEAN, OR ADJUST MAGNETIC TAPE TRANSPORT UNITS (MTTU) | 80 | 28 | +52 |
| N618 PERFORM OA/FI OF SWITCHING COMPLEXES | 72 | 21 | +51 |
| H316 PERFORM PROGRAMMED TEST OF IMU LRUS | 73 | 22 | +51 |
| L522 PERFORM PROGRAMMED TEST OF 022 LRUS | 67 | 19 | +48 |
| N603 PERFORM OA/FI OF CCDPs | 66 | 18 | +48 |
| I376 PERFORM CONFIDENCE TEST OF CTSS | 65 | 18 | +47 |
| H312 PERFORM PROGRAMMED TEST OF EAIC LRUS | 67 | 20 | +47 |
| N589 ISOLATE MALFUNCTIONS WITHIN DIAs | 68 | 22 | +46 |
| L517 ISOLATE MALFUNCTIONS WITHIN 022 LRUS | 64 | 18 | +46 |
| * * * * * | | | |
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 13 | 60 | -47 |
| B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS | 21 | 67 | -46 |
| C79 WRITE APRs | 28 | 74 | -46 |
| C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS | 12 | 52 | -40 |
| A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES | 16 | 55 | -39 |
| A21 PLAN OR SCHEDULE WORK PRIORITIES | 16 | 52 | -36 |
| D83 ANNOTATE TRAINING RECORDS | 39 | 73 | -34 |
| B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B) | 6 | 39 | -33 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 15 | 48 | -33 |
| A2 ASSIGN PERSONNEL TO DUTY POSITIONS | 11 | 44 | -33 |
| B35 DIRECT SHOP MAINTENANCE ACTIVITIES | 7 | 39 | -32 |
| B44 IMPLEMENT WORK METHODS | 11 | 41 | -30 |
| A17 ESTABLISH WORK METHODS OR CONTROLS | 8 | 37 | -29 |

TABLE 10
 REPRESENTATIVE TASKS PERFORMED BY
 45134B/54B PERSONNEL
 (N=361)

| TASKS | MEMBERS PERFORMING |
|---|-----------------------|
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 89 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 86 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 86 |
| F185 CLEAN SHOP FACILITIES | 85 |
| G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES | 76 |
| F195 PACK OR UNPACK LRUs FOR STORAGE, SHIPMENT, OR CLIMATIC CONDITIONS | 61 |
| O653 REPAIR RADAR SYSTEM ANTENNAS | 58 |
| O651 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM LVPSs | 57 |
| S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s | 55 |
| S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s | 55 |
| Q672 ALIGN AIR-TO-AIR IFF INTERROGATOR (AAI) LRUs | 53 |
| S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ) | 53 |
| S794 REPAIR ICCPs OR ICCP(HQ)s | 53 |
| Q690 PERFORM OPERATIONAL CHECKOUT OF IFFs | 49 |
| E167 PERFORM ROUTINE INSPECTION OF TOOLS | 48 |
| P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS | 47 |
| S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 47 |
| R703 PERFORM CONFIDENCE TEST OF COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS | 46 |
| T810 PERFORM CONFIDENCE TEST OF INDICATORS AND CONTROLS TEST STATIONS | 41 |
| V926 PERFORM TITE BASIC OA/FIs | 34 |
| F171 PROCESS DIFM ITEMS | 33 |
| D83 ANNOTATE TRAINING RECORDS | 32 |
| O858 PERFORM OPERATIONAL TEST OF AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 31 |
| U867 REPAIR AN/ALQ-135 CONTROL OSCILLATORS | 30 |
| U820 ALIGN AN/ALQ-128 RECEIVER/TRANSMITTERS (R/T) | 30 |
| V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT | 29 |

Average number of tasks performed-173

TABLE 11

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 45134B/45154B and 45174 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | DAFSC 45134B/ 45154B (N=361) | DAFSC 45174 (N=239) | DIFFERENCE |
|-------|---------------------------------------|---------------------------|------------|
| S762 | 55 | 16 | +39 |
| S730 | 55 | 17 | +38 |
| O651 | 57 | 19 | +38 |
| O655 | 55 | 18 | +37 |
| Q685 | 54 | 18 | +36 |
| S754 | 51 | 15 | +36 |
| O648 | 54 | 19 | +35 |
| Q674 | 53 | 19 | +34 |
| S757 | 49 | 15 | +34 |
| S792 | 49 | 15 | +34 |
| ***** | | | |
| C79 | 25 | 74 | -49 |
| B31 | 20 | 67 | -47 |
| B46 | 16 | 60 | -44 |
| C73 | 22 | 64 | -42 |
| D83 | 32 | 73 | -41 |
| A5 | 18 | 55 | -37 |
| A20 | 15 | 51 | -36 |
| D89 | 25 | 61 | -36 |
| A16 | 11 | 44 | -33 |
| G245 | 23 | 56 | -33 |
| E177 | 37 | 66 | -29 |

TABLE 12
 REPRESENTATIVE TASKS PERFORMED BY
 45174 PERSONNEL
 (N=239)

| TASKS | MEMBERS PERFORMING |
|--|-----------------------|
| C79 WRITE APRs | 74 |
| D83 ANNOTATE TRAINING RECORDS | 73 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 73 |
| A8 DETERMINE WORK PRIORITIES | 67 |
| E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD) | 64 |
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 60 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 60 |
| D86 CONDUCT OJT | 60 |
| E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT | 60 |
| G245 PERFORM QA OR QC INSPECTION OF LRUs | 56 |
| A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES | 55 |
| F196 PERFORM CORROSION CONTROL INSPECTIONS | 53 |
| A20 PLAN OR SCHEDULE WORK ASSIGNMENTS | 52 |
| C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS | 52 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 48 |
| G259 PLAN OR SCHEDULE WORK ASSIGNMENTS | 48 |
| C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS | 45 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 44 |
| G259 REMOVE OR REPLACE LRU TEST PACKAGE COMPONENTS | 44 |
| A2 ASSIGN PERSONNEL TO DUTY POSITIONS | 44 |
| E167 PERFORM ROUTINE INSPECTION OF TOOLS | 44 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 41 |
| G244 PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTION OF LRU TEST PACKAGES | 41 |
| E171 PROCESS DIFM ITEMS | 40 |
| G247 PERFORM QA OR QC INSPECTION OF TEST STATION MAINTENANCE TEST PACKAGES (MTP) | 38 |
| B50 SUPERVISE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45154A) | 37 |
| B51 EVALUATE INSPECTION REPORT FINDINGS | 28 |

Average number of tasks performed-164

Summary

As members in the 451X4 career ladder progress to the 7-skill level, their jobs increase in supervisory duties, but remains somewhat technical. At the 3-/5-skill level, technical tasks occupy 73 (A-shred) or 71 (B-shred) percent of their job time decreasing to 38 percent at the 7-skill level, where supervisory duties occupy another 42 percent.

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

The results of the specialty job structure and skill-level analyses were compared to the AFR 39-1 Specialty Descriptions (dated 1 February 1988) for the F-15 Avionics Test Station and Component Specialty. A review of each specialty description indicates all are supported by survey data. However, the overall impression of the AFR 39-1 job descriptions for this career field is somewhat misleading by presenting a predominantly technical picture, failing to take into consideration any of the daily administrative, supply, and general shop tasks (Duties E and F) performed by all skill levels. These duties encompass from 14 percent (45134A/45154A) to 18 percent (45134B/45154B, and 45174) of these members' time. Duties dealing with annotating, initiating, and completing forms, maintaining records and files, and performing general shop duties should be included in the specialty descriptions to present a more accurate job description of this AFSC.

TRAINING ANALYSIS

Occupational survey data provide one of several sources of information which can be used to make training programs more relevant and meaningful to first-term personnel. Factors useful for evaluating training include the description of the job being performed by first-enlistment members and their overall distribution across career ladder jobs, percentages of first-enlistment (1-48 months TAFMS) personnel performing specific tasks or using certain types of equipment, as well as TD ratings (previously explained in the SURVEY METHODOLOGY section). Additionally, a Training Requirements Analysis (TRA) is being done for this AFSC by the Training Development Services Division (OMT) of USAFOMC, and should be available to training personnel in April 1990. Although TE data is unavailable for this study, the TRA and TD data should provide technical school personnel with enough information to make training program decisions.

To assist in the evaluation of the STS and the POI, technical school personnel from Lowry Technical Training Center matched tasks from the AFSC 451X4 job inventory to appropriate sections of the STS and POIs for courses G3ABR45134A-000 and G3ABR45134B-000. This matching process allowed data comparisons to those documents to be made. Computer listings displaying STS

and POI matchings, percent members performing tasks, and TD ratings for each task, have been sent to the technical school for review. Some of this information is presented in the following pages.

First-Enlistment Personnel

There are 238 members in their first enlistment in this survey, representing 29 percent of the survey sample. Figure 2 shows the distribution of first-enlistment AFSC 451X4 personnel across career ladder jobs. Sixty-five percent are in the Manual or Electronic Warfare Test Station cluster, 29 percent are in the Automatic Test Station cluster, and small percentages are distributed throughout the rest of the other jobs shown. Automatic Test Station members spend the majority of their time maintaining computer test stations and assigned line replaceable units (LRUs) (19 percent) and performing general maintenance on test stations and assigned LRUs (16 percent). Manual or Electronic Warfare personnel spend the majority of their time maintaining indicators and controls test stations and assigned LRUs (17 percent), followed by maintaining TITE and assigned LRUs (14 percent) (see Table 13). Representative tasks performed by first-enlistment personnel are presented in Tables 14 and 15, and lists of equipment used by these personnel are presented in Tables 16 and 17.

Task Difficulty (TD)

While TE ratings were not available for this AFSC due to insufficient interrater agreement, TD data were collected and useable. Table 18 contains tasks that were rated most difficult by senior NCOs. More than half of those tasks dealt with isolating malfunctions in microwave and other test stations and in common automatic test equipment (CATE). Repairing, adjusting, and isolating malfunctions to heads-up display (HUD) units and managerial tasks were also considered very difficult.

Specialty Training Standard

A comprehensive review of STS 451X4, dated May 1987, compared STS items to survey data (with assistance from technical school personnel in matching job inventory tasks to STS elements). STS paragraphs containing general knowledge information, subject knowledge information, subject-matter-only knowledge requirements, or basic supervisory responsibilities were not examined. Task knowledge and performance elements of the STS were compared against the standards set forth in AFR 8-13 and in AFR 8-13/ATC Supplement 1.

Overall, the AFSC 451X4 STS is supported by survey data. STS elements having tasks matched to them that had less than 20 percent members performing are presented in Table 19.

AFSC 451X4 FIRST TERM JOBS (N= 238)

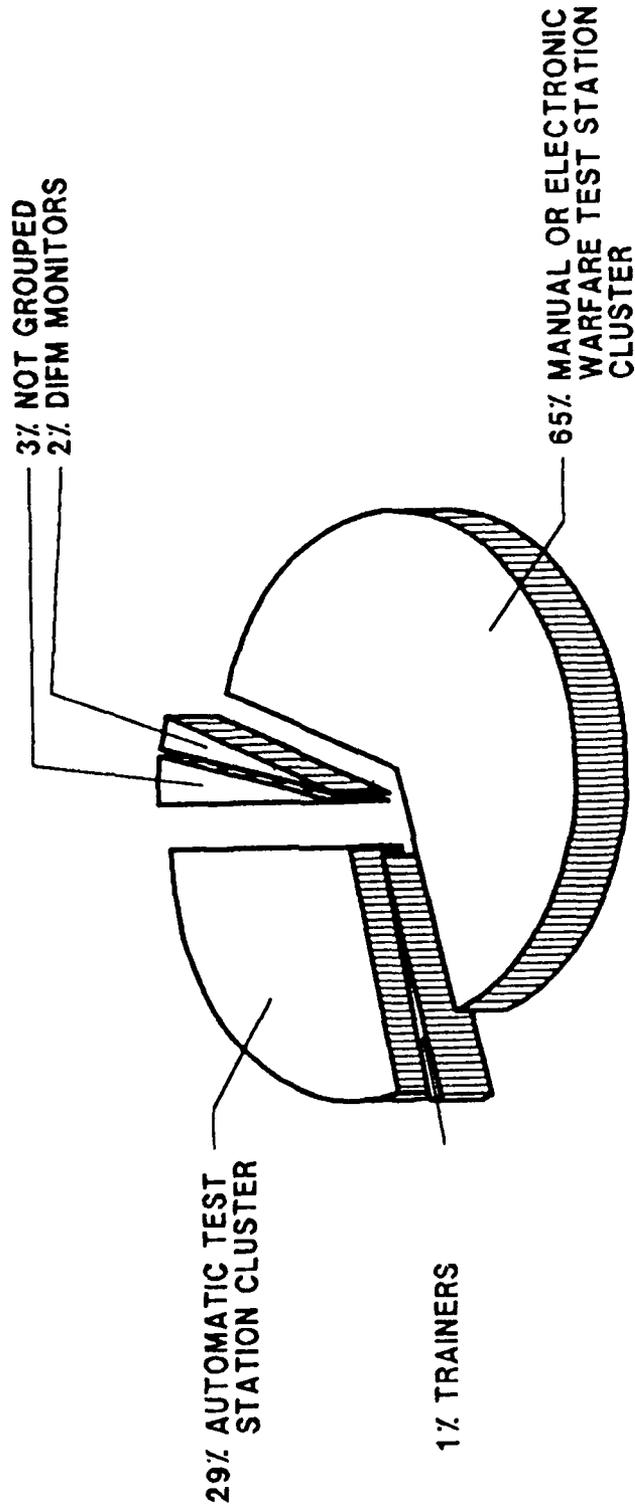


Figure 2

TABLE 13

AVERAGE TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL
(PERCENT RESPONDING)

| JOB GROUPS | A-SHRED (N=68) | B-SHRED (N=170) |
|---|-------------------|--------------------|
| A. ORGANIZING AND PLANNING | - | 1 |
| B. DIRECTING AND IMPLEMENTING | - | 1 |
| C. EVALUATING AND INSPECTING | - | * |
| D. TRAINING | - | 1 |
| E. PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS | 9 | 12 |
| F. PERFORMING GENERAL AVIONICS SHOP TASKS | 5 | 7 |
| G. PERFORMING GENERAL MAINTENANCE ON TEST STATIONS AND LINE REPLACEABLE UNITS (LRU) | 16 | 13 |
| H. MAINTAINING COMPUTER TEST STATIONS ASSIGNED LRUs | 19 | * |
| I. MAINTAINING COMPUTER TEST STATIONS AND ASSIGNED TESTER REPLACEABLE UNITS (TRU) | 4 | * |
| J. MAINTAINING DISPLAYS TEST STATIONS ASSIGNED LRUs | 14 | * |
| K. MAINTAINING DISPLAYS TEST STATIONS AND ASSIGNED TRUs | 5 | * |
| L. MAINTAINING MICROWAVE TEST STATIONS ASSIGNED LRUs | 8 | * |
| M. MAINTAINING MICROWAVE TEST STATIONS AND ASSIGNED TRUs | 6 | * |
| N. MAINTAINING F-15 COMMON AUTOMATIC TEST EQUIPMENT (CATE) | 11 | * |
| O. MAINTAINING ANTENNA A AND B TEST STATIONS ASSIGNED LRUs | * | 6 |
| P. MAINTAINING ANTENNA A AND B TEST STATIONS AND ASSIGNED TRUs | * | 4 |
| Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRUs | * | 9 |
| R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUs | * | 2 |
| S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRUs | * | 17 |
| T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUs | * | 2 |
| U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRUs | 1 | 14 |
| V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUs | * | 10 |
| W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRUs | * | * |
| X. MAINTAINING ELECTRONIC COUNTERMEASURES (ECM) POD TEST STATIONS AND ECM PODS | - | - |

* Less than .5 percent

- Nonresponse

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY
451X4A FIRST-ENLISTMENT PERSONNEL
(N=68)

| TASKS | PERCENT MEMBERS PERFORMING |
|--|----------------------------------|
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 99 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 97 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 94 |
| G262 REMOVE OR REPLACE TEST PACKAGE PINS OR CONNECTORS | 93 |
| F185 CLEAN SHOP FACILITIES | 90 |
| G236 ISOLATE MALFUNCTIONS WITHIN PRINTERS | 82 |
| F220 SOLDER COMPONENTS SUCH AS RELAYS, RESISTORS, OR PLUGS | 79 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 76 |
| H316 PERFORM PROGRAMMED TEST OF INERTIAL MEASUREMENT UNIT (IMU) LRUs | 74 |
| H289 ISOLATE MALFUNCTIONS WITHIN IMU LRUs | 69 |
| F184 CLEAN OPTICAL SURFACES OR CONTACTS | 67 |
| H318 PERFORM PROGRAMMED TEST OF LCG LRUs | 66 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 66 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 66 |
| N643 REPAIR SWITCHING COMPLEXES | 65 |
| L522 PERFORM PROGRAMMED TEST OF 022 LRUs | 60 |
| M546 PERFORM CONFIDENCE TEST OF MTSs | 59 |
| L523 PERFORM PROGRAMMED TEST OF 039 LRUs | 57 |
| J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS | 57 |
| J445 REPAIR HUD UNITS | 56 |
| J428 PERFORM PROGRAMMED TEST OF HUD SDP UNIT LRUs | 54 |
| N572 ADJUST DIGITAL INTERFACE ADAPTER (DIA) SRUs | 53 |
| M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES | 59 |
| K488 PERFORM OA/FI OF DTS PULSGEN1 | 47 |
| K489 PERFORM OA/FI OF DTS PULSGEN2 | 47 |
| E166 PERFORM PERIODIC INSPECTION OF TOOLS | 47 |
| M557 PERFORM OA/FI OF NOISEANs | 40 |
| G245 PERFORM QA OR QC INSPECTION OF LRUs | 38 |

Average number of tasks performed-207

TABLE 15
 REPRESENTATIVE TASKS PERFORMED BY
 451X4B FIRST-ENLISTMENT PERSONNEL
 (N=170)

| TASKS | PERCENT MEMBERS PERFORMING |
|--|----------------------------------|
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 93 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 87 |
| F185 CLEAN SHOP FACILITIES | 86 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 68 |
| G227 INSPECT EQUIPMENT FOR CALIBRATION DATES | 66 |
| F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE | 61 |
| O653 REPAIR RADAR SYSTEM ANTENNAS | 59 |
| O650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS | 58 |
| Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T) | 58 |
| S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s | 58 |
| F203 PERFORM SAFETY WIRING | 58 |
| S754 PERFORM OPERATIONAL CHECKOUT OF CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 51 |
| V727 ISOLATE MALFUNCTIONS WITHIN CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 50 |
| S735 ISOLATE MALFUNCTIONS WITHIN MAIN COMMUNICATIONS CONTROL PANELS (MCCP) | 49 |
| P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS | 46 |
| R707 PERFORM OA/FI OF UHF CONTROL PANELS | 45 |
| P656 CALIBRATE ANTENNA A TEST STATIONS | 43 |
| S746 PERFORM OPERATIONAL CHECKOUT OF ALTITUDE INDICATORS | 43 |
| P657 CALIBRATE ANTENNA B TEST STATIONS | 42 |
| R704 PERFORM IDENTIFICATION FRIEND OR FOE (IFF) RADIO FREQUENCY (RF) LOSS CORRECTION CHART PROCEDURES | 42 |
| V926 PERFORM TITE BASIC OA/FIs | 40 |
| R708 PERFORM OA/FI OF TEST STATION CONTROL PANELS, OTHER THAN IFF, ILS, AND UHF CONTROL PANELS | 40 |
| S771 PERFORM OPERATIONAL CHECKOUT OF NOZZLE POSITION INDICATORS | 38 |
| U858 PERFORM OPERATIONAL TEST OF AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 37 |
| V928 PERFORM TITE DAILY CONFIDENCE TESTS (DCT) | 36 |
| U849 PERFORM OPERATIONAL TEST OF AN/ALQ-135 CONTROL OSCILLATORS | 36 |
| T818 REPAIR RELAY ASSEMBLY GROUPS | 36 |
| V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT | 35 |

Average number of tasks performed-147

TABLE 16

TEST EQUIPMENT USED OR MAINTAINED BY
AFSC 451X4A FIRST-ENLISTMENT PERSONNEL
(MORE THAN 20 PERCENT MEMBERS RESPONDING)

| <u>EQUIPMENT</u> | 1-48 TAFMS (N=68) |
|---------------------|-------------------------|
| FREQUENCY COUNTER | 96 |
| DIGITAL MULTIMETER | 96 |
| OSCILLOSCOPE | 93 |
| PULSE GENERATOR | 90 |
| TORQUE WRENCH | 85 |
| DIGITAL VOLTMETER | 84 |
| THEODOLITE | 78 |
| SPECTRUM ANALYZER | 76 |
| SIGNAL GENERATOR | 75 |
| PHASEMETER | 74 |
| PHOTOMETER | 65 |
| POWER METER | 62 |
| ANALOG MULTIMETER | 52 |
| PRESSURE TESTER | 28 |
| DIGITAL LOGIC PROBE | 22 |
| REFLECTOMETER | 21 |

TABLE 17

TEST EQUIPMENT USED OR MAINTAINED BY
AFSC 451X4B FIRST-ENLISTMENT PERSONNEL
(MORE THAN 20 PERCENT MEMBERS RESPONDING)

| <u>EQUIPMENT</u> | <u>1-48 TAFMS (N=170)</u> |
|-------------------------|-----------------------------------|
| FREQUENCY COUNTER | 95 |
| DIGITAL MULTIMETER | 94 |
| OSCILLOSCOPE | 94 |
| POWER METER | 89 |
| TORQUE WRENCH | 88 |
| DIGITAL VOLTMETER | 86 |
| SPECTRUM ANALYZER | 85 |
| PULSE GENERATOR | 80 |
| SIGNAL GENERATOR | 80 |
| ANALOG MULTIMETER | 69 |
| SWEEP OSCILLOSCOPE | 54 |
| PRESSURE TESTER | 30 |
| CURRENT PROBE AMPLIFIER | 29 |
| DISC CLEANER | 25 |

TABLE 18

TASKS RATED HIGHEST IN TASK DIFFICULTY (TD)

| TASKS | TASK DIFF* | PERCENT MEMBERS PERFORMING | | | |
|---|------------|----------------------------|---------------------|---------------------|----------------------|
| | | 1ST JOB A (N=32) | 1ST ENL A (N=68) | 1ST JOB B (N=66) | 1ST ENL B (N=170) |
| A14 DRAFT BUDGET REQUIREMENTS | 8.25 | 0 | 1 | 3 | 2 |
| M539 ISOLATE MALFUNCTIONS WITHIN MSSUS | 7.75 | 25 | 44 | 0 | 1 |
| V924 ISOLATE TITE SOFTWARE MALFUNCTIONS | 7.65 | 0 | 1 | 11 | 19 |
| N589 ISOLATE MALFUNCTIONS WITHIN DIAS | 7.54 | 59 | 65 | 0 | 1 |
| J445 REPAIR HUD UNITS | 7.52 | 41 | 56 | 0 | 1 |
| C81 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS | 7.52 | 0 | 1 | 3 | 2 |
| R702 ISOLATE MALFUNCTIONS WITHIN ILS TEST SET LRUs TO BITS AND PIECES | 7.49 | 0 | 0 | 29 | 30 |
| P660 ISOLATE MALFUNCTIONS WITHIN ANTENNA B TEST STATION TRANSMITTER MOUNTING FIXTURES (TMF) | 7.49 | 0 | 0 | 42 | 42 |
| M538 ISOLATE MALFUNCTIONS WITHIN INTERMEDIATE FREQUENCY SIGNAL SOURCES (IFSS) | 7.41 | 22 | 38 | 0 | 1 |
| D91 DEVELOP CAREER DEVELOPMENT COURSE (CDC) MATERIALS | 7.41 | 0 | 1 | 0 | 1 |
| N588 ISOLATE MALFUNCTIONS WITHIN DATA COUPLERS | 7.40 | 19 | 28 | 0 | 1 |
| C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS | 7.36 | 0 | 1 | 2 | 1 |
| M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES | 7.33 | 38 | 50 | 0 | 1 |
| D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS | 7.32 | 0 | 1 | 0 | 0 |
| D92 DEVELOP NEW EQUIPMENT TRAINING PROGRAMS | 7.30 | 0 | 1 | 0 | 1 |
| N587 ISOLATE MALFUNCTIONS WITHIN COMPUTER CONTROL AND DISPLAY PANELS (CCDP) | 7.26 | 56 | 63 | 0 | 1 |
| G234 ISOLATE MALFUNCTIONS WITHIN COMPUTER TERMINALS | 7.15 | 31 | 41 | 14 | 19 |
| J401 ADJUST HEADS UP DISPLAY (HUD) UNIT SRUS | 7.10 | 41 | 56 | 0 | 1 |
| N590 ISOLATE MALFUNCTIONS WITHIN DIA AUX DRAWERS | 7.06 | 38 | 51 | 0 | 1 |
| N599 ISOLATE MALFUNCTIONS WITHIN SWITCHING COMPLEXES | 7.05 | 47 | 60 | 0 | 1 |
| V890 ALIGN SPECTRUM ANALYZER SYSTEMS | 7.04 | 0 | 1 | 8 | 15 |
| V882 ALIGN TITE DIGITAL PROCESSING OSCILLOSCOPES (DPO) | 7.03 | 0 | 1 | 12 | 18 |
| O647 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM ANTENNAS | 7.01 | 0 | 1 | 68 | 55 |
| J413 ISOLATE MALFUNCTIONS WITHIN HUD UNIT LRUS | 7.01 | 41 | 53 | 0 | 1 |
| M544 ISOLATE MALFUNCTIONS WITHIN NOISE ANALYZERS (NOISEAN) | 7.00 | 13 | 28 | 0 | 1 |
| M545 ISOLATE MALFUNCTIONS WITHIN X-BAND SIGNAL SOURCES (XBSS) | 6.99 | 22 | 34 | 0 | 1 |

* Task Difficulty (TD) has an average of 5.0 and a Standard Deviation of 1.0

TABLE 19

UNSUPPORTED AFSC 451X4 STS ELEMENTS

| ELEMENT AND MATCHED TASKS | PERCENT RESPONDING | | | | | | | TASK DIFF |
|--|------------------------------------|-------------------------|-------------------|------------------------------------|--------------------------|-------------------|------------------|-----------|
| | A-SHRED 1-24 TAFMS (N=32) | I-48 TAFMS (N=68) | 451X4A (N=185) | B-SHRED 1-24 TAFMS (N=66) | I-48 TAFMS (N=170) | 451X4B (N=257) | 45174 (N=239) | |
| 4B. USE TECHNICAL ORDER (TO) INDEXES | 3 | 12 | 18 | 3 | 8 | 14 | 13 | 5.46 |
| E159 MAINTAIN TECHNICAL ORDER FILES | | | | | | | | |
| 4F. COMPUTER PROGRAM IDENTIFICATION NUMBER (CPIN) | | | | | | | | |
| E155 MAINTAIN PULICATION FILES, OTHER THAN TECHNICAL ORDER FILES | 0 | 4 | 5 | 0 | 2 | 4 | 7 | 4.63 |
| 111. IDENTIFY TEST EQUIPMENT CATEGORIES | | | | | | | | |
| F188 IDENTIFY TEST EQUIPMENT CATEGORIES | 13 | 16 | 14 | 17 | 18 | 14 | 11 | 4.03 |

While there was good support for the STS elements, there are a number of tasks performed by high percentages of first-enlistment 451X4 airmen that are not matched to any STS elements (a sample is provided in Table 20). The tasks deal primarily with the technical aspects of the job, with Duty G, performing general maintenance on test stations and assigned LRUs, the predominant non-referenced task area. School personnel need to review all the unmatched tasks listed at the end of the STS product in the Training Extract to determine if they suggest topics that need to be included in the STS.

The final step of this STS analysis was to review the 3-skill level training codes assigned to the supported elements. Following guidelines set forth in AFR 8-13 and ATCR 55-22, performance training codes for supported elements are appropriate if matched tasks are performed by 30 percent or more of first-enlistment airmen. Elements matched to tasks performed by less than 30 percent are normally dashed (-), unless there is good justification for them to be taught to the performance level.

Given this guidance, five STS elements had 3-level course codes which were not supported by survey data. Each of the following STS elements had tasks matched to them with less than 30 percent members performing, which suggests the code should be changed to a dash (-).

| <u>STS ELEMENT</u> | <u>3-Skill Level Code</u> | <u>PERCENT PERFORMING</u> | | | | <u>TASK DIFF</u> |
|-------------------------------------|-------------------------------|---------------------------|-------------|------------------|-------------|----------------------|
| | | <u>TAFMS (A)</u> | | <u>TAFMS (B)</u> | | |
| | | <u>1-24</u> | <u>1-48</u> | <u>1-24</u> | <u>1-48</u> | |
| 4d. Report TO Deficiencies | 2b | 6 | 16 | 23 | 23 | 4.82 |
| 10b. Inspection Systems | B | 16 | 21 | 11 | 22 | 4.04 |
| 30d(1) Isolate Malfunctions: VU/DM | b | 16 | 25 | 0 | 0 | 6.96 |
| 31c(5) Perform Test Procedures: 041 | 2b | 22 | 25 | 0 | 6 | 5.15 |
| 31d(5) Isolate Malfunctions: 041 | b | 22 | 25 | 0 | 1 | 5.10 |

The following elements are coded at the (b) level, but are performed by 50 percent or more first-term personnel, suggesting the code should be increased to the 1a or 2b level.

TABLE 20

SAMPLE OF TASKS NOT MATCHED TO 451X4 STS

| TASKS | PERCENT PERFORMING | | | | | | | | TASK DIFF |
|-------|-------------------------|-------------------------|-------------------|-------------------------|--------------------------|-------------------|------------------|------|--------------|
| | A-SHRED | | 451X4A | | B-SHRED | | 451X4B | | |
| | 1-24 TAFMS (N=32) | 1-48 TAFMS (N=68) | 451X4A (N=185) | 1-24 TAFMS (N=66) | 1-48 TAFMS (N=170) | 451X4B (N=257) | 45174 (N=239) | | |
| G228 | 100 | 99 | 89 | 88 | 87 | 86 | 59 | 2.64 | |
| G258 | 91 | 94 | 83 | 80 | 84 | 82 | 52 | 5.07 | |
| G259 | 81 | 90 | 79 | 59 | 71 | 71 | 48 | 4.62 | |
| F214 | 78 | 71 | 57 | 64 | 61 | 63 | 34 | 5.01 | |
| G237 | 69 | 79 | 76 | 39 | 51 | 57 | 40 | 6.61 | |
| E113 | 69 | 74 | 70 | 52 | 60 | 70 | 61 | 3.09 | |
| F189 | 59 | 66 | 66 | 52 | 55 | 58 | 45 | 6.60 | |
| E116 | 34 | 35 | 60 | 26 | 40 | 62 | 64 | 3.69 | |
| N574 | 34 | 49 | 64 | 0 | 1 | 7 | 17 | 4.79 | |
| J436 | 28 | 40 | 39 | 0 | 0 | 5 | 10 | 4.74 | |
| M545 | 22 | 34 | 49 | 0 | 1 | 5 | 13 | 6.98 | |
| H342 | 13 | 34 | 51 | 0 | 1 | 7 | 14 | 5.19 | |
| Q683 | 0 | 0 | 3 | 50 | 46 | 48 | 16 | 5.72 | |
| P671 | 0 | 0 | 3 | 47 | 44 | 45 | 16 | 5.22 | |
| S716 | 0 | 1 | 2 | 41 | 38 | 40 | 14 | 3.79 | |
| S717 | 0 | 0 | 2 | 29 | 35 | 40 | 11 | 5.48 | |
| U860 | 0 | 3 | 2 | 18 | 30 | 27 | 8 | 4.03 | |
| V903 | 0 | 3 | 2 | 17 | 30 | 26 | 9 | 6.31 | |

| STS ELEMENTS | PERCENT PERFORMING | | | | TASK DIFF |
|--|--------------------|------|-----------|------|--------------|
| | TAFMS (A) | | TAFMS (B) | | |
| | 1-24 | 1-48 | 1-24 | 1-48 | |
| 14d(2). Isolate Malfunctions: AAI | 0 | 0 | 64 | 57 | 6.54 |
| 14d(7). Isolate Malfunctions: AN/ARN-118 | 0 | 0 | 56 | 53 | 5.56 |
| 15d(12). Isolate Malfunctions: Integrated Communications Control Panel (HQ) | 0 | 1 | 62 | 58 | 5.33 |
| 16d. Isolate Malfunctions of: | | | | | |
| (1). LVPS | 0 | 1 | 67 | 55 | 4.56 |
| (2). Radar Antenna | 0 | 1 | 68 | 55 | 7.02 |
| (3). Radar Transmitter | 0 | 1 | 65 | 55 | 6.68 |
| 27c. Isolate Malfunctions of: | | | | | |
| (1). CCDP | 56 | 63 | 0 | 1 | 7.26 |
| (12). DIAs | 59 | 65 | 0 | 8 | 7.54 |
| (15). Switching Complex | 47 | 60 | 0 | 1 | 7.05 |
| 29d(1). Isolate Malfunctions: 022 | 53 | 62 | 0 | 1 | 5.95 |
| 33d(4). Isolate Malfunctions: IMU | 53 | 69 | 0 | 2 | 5.73 |

The following elements are coded at the 2b level, but are performed by less than 50 percent of first-term personnel, suggesting they should be downgraded to the 1a or b level.

| STS ELEMENTS | PERCENT PERFORMING | | | | TASK DIFF |
|--|--------------------|------|-----------|------|--------------|
| | TAFMS (A) | | TAFMS (B) | | |
| | 1-24 | 1-48 | 1-24 | 1-48 | |
| 15c(10). Test: Caution Light Logic Unit | 0 | 0 | 39 | 39 | 3.92 |
| 21a(3)(a). Test: Low Band Receiver Processor | 0 | 3 | 21 | 37 | 6.53 |
| 21b(3)(a). Test: Receiver/Transmitter | 0 | 3 | 20 | 36 | 5.83 |
| 21c(3)(c). Test: Control Oscillators (additional matched task for above element) | 0 | 3 | 23 | 37 | 6.07 |
| 27b(4). Test: Printer | 0 | 3 | 24 | 36 | 5.49 |
| 27b(6). Test: PDP | 25 | 40 | 0 | 0 | 4.58 |
| 28c(9). Perform OA/FI: SPECAN | 22 | 40 | 0 | 1 | 4.33 |
| 30c(1). Perform OA/FI: VU/DM | 22 | 38 | 2 | 2 | 4.45 |
| 30c(3). Perform OA/FI: FMNA | 19 | 37 | 0 | 1 | 5.93 |
| 32c(10). Perform OA/FI: Rate Table | 16 | 40 | 0 | 1 | 5.03 |
| 32f(2). Use Clinometer to Level: Scorsby Table | 22 | 34 | 0 | 1 | 5.01 |
| | 25 | 38 | 0 | 1 | 6.13 |

There are approximately 180 STS elements that are dashed (-), but have tasks matched to them with more than 30 percent members performing from the criterion group. These tasks should have a proficiency code assigned and careful consideration should be made to determine if these elements should be taught at the technical school. There were additional dashed (-) elements having tasks matched with high percent members performing dealing with repair, but could not be taught at the technical school without the possibility of

equipment damage. In addition to the STS elements mentioned, subject-matter experts should review all STS elements to determine appropriateness of the codes for 3-level training.

Plans of Instructions

Based on the previously mentioned assistance from technical school personnel in matching inventory tasks to both 45134 POIs, computer products were generated displaying the results of that matching process. These products were analyzed to identify objectives matched to tasks performed by 30 percent or more of respondents from either TAFMS group. Information furnished for consideration includes percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel, as well as task difficulty (TD) ratings for individual tasks. Each POI will be discussed separately below.

3ABR45134A Plan of Instruction. There was a very good match of tasks to this POI. Every objective that had tasks matched to it had 30 percent or more of first-term or first-enlistment personnel performing, with two exceptions (see Table 21). These two objectives should be reviewed to ensure they are necessary training items.

There are a number of tasks performed by more than 30 percent of first-enlistment AFSC 45134A airmen that are not matched to any POI objective. Samples of these tasks are listed in Table 22. Most of these tasks deal with performing programmed tests, isolating malfunctions, repairing components, performing operational assurance/fault isolation (OA/FI), aligning, and adjusting. Technical school personnel should review these tasks to determine if they should be incorporated into the training program.

3ABR45134B Plan of Instruction. This match revealed several POI learning objectives having tasks matched that had less than 30 percent first-term or first-enlistment members performing. Additional information is provided in Table 23. These objectives should be carefully reviewed by technical school personnel to ensure they are appropriate for training.

There are also a number of tasks performed by 30 percent or more of first-term and first-enlistment personnel not matched to POI objectives. Examples of these tasks are provided in Table 24. The majority of these tasks deal with repairing, removing, replacing, isolating malfunctions, adjusting, performing operational checkout, and aligning. As with the A-shred course, many of these functions cannot be taught without damaging the training equipment and therefore may be inappropriate for adding to the course.

Summary

Overall there are good matches to each POI. The majority of tasks not matched having high percentages of first-term and first-enlistment personnel performing are difficult to teach at technical school due to equipment and

TABLE 21

UNSUPPORTED ABR45134A POI LEARNING OBJECTIVES

| | <u>PERCENT PERFORMING</u> | | <u>TASK</u> |
|--|---------------------------|---------------|-------------|
| | <u>1-24</u> | <u>1-48</u> | <u>DIFF</u> |
| | <u>TAFMS</u> | <u>TAFMS</u> | |
| | <u>(N=32)</u> | <u>(N=68)</u> | |
| <u>ABR45134A POI OBJECTIVES AND MATCHED TASKS</u> | | | |
| II 8B. GIVEN APPLICABLE INFORMATION AND SELECTED MAINTENANCE TASKS, MATCH EACH TASK TO ITS PROPER LEVEL OF MAINTENANCE | 13 | 16 | 4.03 |
| F188 IDENTIFY TEST EQUIPMENT CATEGORIES | | | |
| VII 2A. GIVEN TO 12P2-2APG63-48-1, PERFORM PROGRAMMED TEST PROCEDURES ON THE 041. | 22 | 25 | 5.15 |
| J437 PERFORMED PROGRAMMED TEST OF 041 LRUs | | | |

TABLE 22

SAMPLE TASKS NOT MATCHED TO ABR45134A POI

| TASKS | PERCENT PERFORMING | | TASK DIFE |
|--|-------------------------|-------------------------|--------------|
| | 1-24 TAFMS (N=32) | 1-48 TAFMS (N=68) | |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 100 | 99 | 2.64 |
| G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE | 97 | 96 | 1.92 |
| G262 REMOVE OR REPLACE TEST PACKAGE PINS OR CONNECTORS | 91 | 93 | 4.77 |
| G231 INSPECT, CLEAN, OR ADJUST TEST STATION LINE PRINTERS | 84 | 88 | 5.18 |
| G241 PERFORM PERIODIC MAINTENANCE ON MTTUS | 75 | 85 | 4.35 |
| E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA) | 69 | 74 | 3.09 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 66 | 74 | 2.62 |
| F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS | 78 | 71 | 3.26 |
| H340 REPAIR IMUs | 53 | 71 | 5.06 |
| F184 CLEAN OPTICAL SURFACES OR CONTACTS | 63 | 68 | 3.04 |
| H287 ISOLATE MALFUNCTIONS WITHIN ELECTRONIC AIR INLET CONTROLLER (EAIC) LRUs | 44 | 65 | 5.07 |
| N643 REPAIR SWITCHING COMPLEXES | 50 | 65 | 6.62 |
| H298 ISOLATE MALFUNCTIONS WITHIN SIGNAL DATA RECORDER (SDR) LRUs | 44 | 63 | 5.72 |
| H338 REPAIR EAICs | 44 | 63 | 4.74 |
| J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs | 47 | 62 | 4.96 |
| I376 PERFORM CONFIDENCE TEST OF CTSS | 44 | 60 | 3.72 |
| L515 ISOLATE MALFUNCTIONS WITHIN RADAR DATA PROCESSOR (081) LRUs | 50 | 60 | 5.76 |
| L530 REPAIR 039 | 50 | 60 | 4.93 |
| K483 PERFORM CONFIDENCE TEST OF DTSS | 44 | 59 | 4.09 |
| L521 PERFORM PROGRAMMED TEST OF RFO LRUs | 47 | 57 | 5.46 |

TABLE 23

UNSUPPORTED ABR45134B POI LEARNING OBJECTIVES

| | PERCENT PERFORMING | | TASK DIFF |
|---|-------------------------|--------------------------|--------------|
| | 1-24 TAFMS (N=66) | 1-48 TAFMS (N=177) | |
| <u>ABR45134B POI OBJECTIVES AND MATCHED TASKS</u> | | | |
| II 5A. GIVEN TO 00-5-1, DESCRIBE THE FUNCTION AND APPLICATION OF THE TECHNICAL ORDER SYSTEM | 23 | 23 | 4.82 |
| E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS | | | |
| II 5B. GIVEN TOs 0-1-01, 0-1-5-2, 0-1-12, 0-1-33-3 AND EXTRACTS FROM TO 00-5-2, LOCATE AND LIST THE TITLES OF SELECTED TOs | 23 | 23 | 4.82 |
| E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS | | | |
| II 5C. GIVEN TOs 00-5-1, 0-1-33-3, AND A HYPOTHETICAL TO DEFICIENCY, INITIATE A TECHNICAL ORDER SYSTEM IMPROVEMENT | 23 | 23 | 4.82 |
| E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS | | | |
| II 7B. GIVEN EXTRACTS FROM TO AFM 66-279, IDENTIFY THE PURPOSE AND GENERAL FUNCTION OF THE CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) | 9 | 10 | 3.67 |
| E118 ANNOTATE, INITIATE, OR COMPLETE AFTO FORMS 349-3 (MAINTENANCE DATA COLLECTION RECORD (AUTOMATED)) | | | |
| II 7F. GIVEN TO 00-35D-54, IDENTIFY THE BASIC TERMS AND FACTS OF THE USAF MATERIAL DEFICIENCY REPORTING (MDR) SYSTEM | 18 | 28 | 4.98 |
| E173 REPORT MATERIAL DEFICIENCIES | | | |
| E139 INITIATE OR COMPLETE DEFICIENCY, SERVICE, OR STATUS REPORTS | 14 | 22 | 4.32 |

TABLE 23 (CONTINUED)

UNSUPPORTED ABR45134B POI LEARNING OBJECTIVES

| | PERCENT PERFORMING | | TASK DIFF |
|---|-------------------------|--------------------------|--------------|
| | 1-24 TAFMS (N=66) | 1-48 TAFMS (N=177) | |
| <u>ABR45134B POI OBJECTIVES AND MATCHED TASKS</u> | | | |
| III 4. GENERATOR CONTROL UNIT (GCU) CONTROL PANEL, MANUAL SIGNAL GENERATOR AND MANUAL STIMULUS ASSEMBLY | | | |
| T806 | 18 | 29 | 6.45 |
| ISOLATE MALFUNCTIONS WITHIN GENERATOR CONTROL UNIT (GCU) CONTROL PANELS | | | |
| T807 | 17 | 28 | 5.93 |
| ISOLATE MALFUNCTIONS WITHIN MANUAL SIGNAL GENERATORS | | | |
| T808 | 18 | 29 | 5.96 |
| ISOLATE MALFUNCTIONS WITHIN MANUAL STIMULUS ASSEMBLIES | | | |
| XIII 2A. GIVEN TO 33D7-38-77-8-1-1, AND A LIST OF STEPS FOR DISC LOADING AND REVISION FROM PUNCHED TAPE, PLACE THE STEPS IN ORDER OF SEQUENCE TO PERFORM DISC LOADING AND REVISION FROM PUNCHED TAPE | | | |
| V930 | 11 | 21 | 5.06 |
| PERFORM TITE DISC REVISIONS FROM PUNCHED TAPES | | | |
| V897 | 6 | 14 | 5.92 |
| EDIT TITE DISC FILE FROM PUNCHED TAPE | | | |
| XIII 3A. GIVEN TO 12P3-2ALR56-18-1-2, IDENTIFY THE CHARACTERISTICS OF PROGRAM FLOWCHARTS. | | | |
| V924 | 11 | 19 | 7.66 |
| ISOLATE TITE SOFTWARE MALFUNCTIONS | | | |

TABLE 24

SAMPLE TASKS NOT MATCHED TO ABR45134B POI

| TASKS | PERCENT PERFORMING | | TASK DIFF |
|---|-------------------------|--------------------------|--------------|
| | 1-24 TAFMS (N=66) | 1-48 TAFMS (N=170) | |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 88 | 87 | 2.64 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 88 | 87 | 3.21 |
| F185 CLEAN SHOP FACILITIES | 86 | 86 | 1.88 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 85 | 84 | 4.14 |
| G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES | 68 | 74 | 6.49 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 68 | 68 | 2.99 |
| F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS | 65 | 65 | 3.26 |
| F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE | 64 | 61 | 5.01 |
| O653 REPAIR RADAR SYSTEM ANTENNAS | 71 | 59 | 6.76 |
| Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T) | 70 | 58 | 5.74 |
| F203 PERFORM SAFETY WIRING | 67 | 58 | 3.60 |
| Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts | 64 | 56 | 5.32 |
| Q694 REPAIR AAIs | 64 | 56 | 5.58 |
| S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ) | 58 | 55 | 4.80 |
| S794 REPAIR ICCPs OR ICCP(HQ)s | 56 | 55 | 4.71 |
| G226 FABRICATE OR REBUILD AVIONICS CABLES | 30 | 49 | 5.73 |
| Q677 ALIGN INSTRUMENT LANDING SYSTEM (ILS) RADIO RECEIVERS | 55 | 48 | 5.54 |
| Q683 ISOLATE MALFUNCTIONS WITHIN ILS RADIO RECEIVERS | 50 | 46 | 5.72 |
| P665 REPAIR ANTENNA A TEST STATIONS | 45 | 45 | 5.66 |
| S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 47 | 45 | 4.39 |

time limitations and risking damage to equipment. Even with these shortcomings, it is important that technical instructors and subject-matter experts take a careful look at all tasks to identify where training can be improved to better meet the needs of the operational Air Force. The data presented in both this OSR and the upcoming TRA should help accomplish this review.

Electronic Principles Inventory (EPI)

The Electronic Principles Inventory (EPI) (AFPT 90-EPI-825) contains 712 electronic principles, skills, and equipment questions covering 39 electronic principle subject areas. Between September 1987 and April 1988, the EPI was administered to fully-qualified 5-skill level 451X4 personnel who responded "Yes" or "No" to the 712 EPI items, indicating the electronic principles, skills, and equipment they use in their present job. Additionally, subject-matter experts matched the 712 EPI items to the 451X4 STS, Attachment 2, creating an EPI document to which the 451X4 criterion groups responses are added, and the final product analyzed.

Overall, there was good support for STS Atch 2; however, there were 19 areas that were not supported by the 451X4 criterion groups. That is, for these 19 line items listed below, less than 30 percent of either the 451X4A or 451X4B criterion groups responded "Yes" to the matched EPI items. These items should be considered for deletion from the 451X4 STS Atch 2, or the proficiency codes should be changed.

| <u>STS Atch 2 line item (paragraph)</u> | <u>STS PROFICIENCY CODE</u> |
|--|-----------------------------|
| 13b. Isolate faulty AC generators | 2b |
| 15c. Troubleshoot synchro/servos | 2b |
| 16a. Theory of chopper operation | B |
| 16b. Isolate faulty choppers | 2b |
| 19c. Solid state diode specifications | B |
| 20c. Bipolar junction transistor specifications | B |
| 27i. Use capacitor tester | 2b |
| 27n. Use logic pulser | 2b |
| 27o. Use logic analyzer | 2b |
| 27p. Use signature analyzer | 2b |
| 35c. Troubleshoot resistive/capacitive/inductive (RCL) circuits | 2b |
| 36b. Isolate faulty frequency sensitive filters | 2b |
| 36c. Troubleshoot frequency sensitive filter circuits | 2b |
| 37c. Troubleshoot wave generating circuits | 2b |
| 39b. Isolate faulty clampers | 2b |
| 42b. Boolean equation to diagram | B |
| 47b. Perform transmission line measurements | 2b |
| 50a. Theory of resonant cavity operation | B |
| 51a(4). Theory of pulse modulation operation | B |

In addition to those line items listed above, the following STS Atch 2 line items were not supported by the members of the 45154A criterion group.

| <u>STS Atch 2 line item (paragraph)</u> | <u>STS PROFICIENCY CODE</u> |
|---|-----------------------------|
| 23a. Theory of electron tube operation | B |
| 51a(1). Theory of Amplitude Modulation operation (Rx) | B |
| 51a(2). Theory of Frequency Modulation operation (Rx) | B |
| 52a(1). Theory of Amplitude Modulation operation (Tx) | B |
| 52b. Isolate faulty receivers | 2b |
| 54a. Theory of antenna operation | B |

Additionally, the following STS Atch 2 line items were not supported by members of the 45154B criterion group.

| <u>STS Atch 2 line item (paragraph)</u> | <u>STS PROFICIENCY CODE</u> |
|---|-----------------------------|
| 17a. Theory of transducer operation | B |
| 17b. Isolate faulty transducers | 2b |
| 27h. Use digital logic probe | 2b |
| 38b. Isolate faulty limiters | 2b |
| 39a. Theory of clamper circuit operation | B |
| 42a. Diagram to Boolean equation | B |
| 43e. Computer circuit troubleshooting | 2b |
| 44a. Theory of microprocessor controlled system operation | B |
| 44b. Isolate faulty microprocessors | 2b |
| 45a(3). Combinational Logic Circuits | B |

During the EPI analysis we also look at the STS Atch 2 line items that have no proficiency codes, but are performed by more than 30 percent of the 45154A/B criterion group. The following line items had more than 30 percent members performing from both the 45154A and 45154B criterion groups and should be carefully reviewed for possible inclusion in formal technical school curriculum.

| <u>STS Atch 2 line item (paragraph)</u> | <u>STS PROFICIENCY CODE</u> |
|---|-----------------------------|
| 5c. Solenoid theory of operation | - |
| 5d. Isolate faulty solenoids | - |
| 9b. Isolate faulty three phase transformers | - |
| 25d. Solder/resolder coaxial connectors | - |
| 30b. Isolate faulty Op Amps | - |
| 43h. Programming computer languages | - |

In addition to the above list, the following EPI objectives were performed by more than 30 percent of the 45154B criterion group.

| <u>STS Atch 2 line item (paragraph)</u> | <u>STS PROFICIENCY CODE</u> |
|--|-----------------------------|
| 23b. Isolate faulty electron tubes | - |
| 29a. Theory of electron tube amplifier operation | - |
| 51b. Isolate faulty transmitters | - |
| 54b. Perform antenna alignments | - |
| 54c. Isolate faulty antennas | - |

Summary

EPI data were well-supported by members of the 451X4 criterion groups. There were, however, some areas that should be reviewed for possible removal from, or inclusion in formal technical school curriculum.

JOB SATISFACTION ANALYSIS

An important part of the OSR process involves the analysis of job satisfaction data. These data can be used by career ladder managers to gain a better understanding of those factors affecting job performance of AFSC 451X4 personnel. This survey compared job satisfaction indicators on three levels. ~~Table 25~~ displays job satisfaction indicators for AFSC 451X4 TAFMS groups and a comparative sample of other mission equipment maintenance personnel career ladders surveyed in 1988. ~~Tables 26 and 27~~ compare the job satisfaction indicators and reenlistment intentions for the current survey and the previous AFSC 326XX surveys. ~~Table 28~~ compares the job satisfaction indicators and reenlistment intentions for the specialty job groups within the 451X4 career ladder.

Job interest and job satisfaction for Automatic Test Station personnel were lower than Manual or Electronic Warfare personnel for both 1-48 and 49-96 TAFMS groups. The comparative sample of mission equipment support personnel fell in between the shred groups, and there was a trend of decreasing job interest and satisfaction as time increased in the 451X4 career ladder. Utilization of talents and training was higher than the comparative sample for all groups except the 97+ month TAFMS group and positive reenlistment intentions were slightly lower than the comparative sample for all groups across the board. Although the job becomes less interesting as time goes by, positive reenlistment intentions indicate that personnel are choosing reenlistment over separation.

TABLE 25

COMPARISON OF AFSC 451X4 JOB SATISFACTION INDICATORS BY TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)*

| | 1-48 MONTHS TAFMS | | 49-96 MONTHS TAFMS | | 97+ MONTHS TAFMS | |
|---|-------------------|-------------------|--------------------|-------------------|------------------|-----------------------------|
| | 451X4A (N=68) | 451X4B (N=170) | 451X4A (N=97) | 451X4B (N=123) | 45174 (N=107) | COMP SAMPLE (N=6,451) |
| <u>EXPRESSED JOB INTEREST:</u> | | | | | | |
| INTERESTING | 68 | 79 | 65 | 63 | 56 | 73 |
| SO-SO | 18 | 15 | 20 | 24 | 24 | 16 |
| DULL | 15 | 6 | 15 | 14 | 20 | 10 |
| | | | | | | |
| <u>PERCEIVED UTILIZATION OF TALENTS:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY | 82 | 82 | 76 | 80 | 74 | 79 |
| LITTLE OR NOT AT ALL | 18 | 18 | 24 | 20 | 26 | 20 |
| | | | | | | |
| <u>PERCEIVED UTILIZATION OF TRAINING:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY | 88 | 83 | 88 | 80 | 70 | 73 |
| LITTLE OR NOT AT ALL | 12 | 17 | 12 | 20 | 29 | 26 |
| | | | | | | |
| <u>SENSE OF ACCOMPLISHMENT:</u> | | | | | | |
| SATISFIED | 78 | 79 | 70 | 79 | 56 | 67 |
| NEUTRAL | 7 | 7 | 9 | 9 | 10 | 11 |
| DISSATISFIED | 15 | 14 | 21 | 23 | 33 | 22 |
| | | | | | | |
| <u>REENLISTMENT INTENTIONS:</u> | | | | | | |
| YES, OR PROBABLY YES | 57 | 52 | 68 | 59 | 64 | 74 |
| NO, OR PROBABLY NO | 43 | 48 | 32 | 41 | 34 | 11 |
| PLAN TO RETIRE | 0 | 0 | 0 | 0 | 1 | 14 |

* Columns may not add to 100 percent due to nonresponse or rounding

** Includes Mission Equipment Maintenance AFSCs 302X0, 304X0/X1, 306X0/X1, 306X0/X3, 321X0, 328X0/X1, 411X0B/C, 427X1, 431X1/X2/X3/X4, and 464X0 surveyed in 1988.

TABLE 26

COMPARISON OF JOB SATISFACTION INDICATORS FOR CURRENT AFSC 451X4 SURVEY
AND 1982 AFSC 326X4B SURVEY ACROSS TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)*

| | <u>1-48 MONTHS TAFMS</u> | | <u>49-96 MONTHS TAFMS</u> | | <u>97+ MONTHS TAFMS</u> | |
|--|--------------------------|--------------------------|---------------------------|-------------------------|-------------------------|-------------------------|
| | <u>451X4A</u> (N=68) | <u>326X4B</u> (N=151) | <u>451X4A</u> (N=97) | <u>326X4B</u> (N=48) | <u>45174</u> (N=107) | <u>326X4B</u> (N=64) |
| <u>EXPRESSED JOB INTEREST:</u> | | | | | | |
| INTERESTING | 68 | 73 | 65 | 60 | 56 | 72 |
| SO-SO | 18 | 17 | 20 | 19 | 24 | 11 |
| DULL | 15 | 10 | 15 | 19 | 20 | 15 |
| <u>PERCEIVED UTILIZATION OF TALENTS:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 82 18 | 75 25 | 76 24 | 69 29 | 74 26 | 68 22 |
| <u>PERCEIVED UTILIZATION OF TRAINING:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 88 12 | 79 21 | 88 12 | 67 33 | 70 29 | 72 28 |
| <u>SENSE OF ACCOMPLISHMENT:</u> | | | | | | |
| SATISFIED | 78 | 66 | 70 | 50 | 56 | 60 |
| NEUTRAL | 7 | 11 | 9 | 12 | 10 | 3 |
| DISSATISFIED | 15 | 23 | 21 | 37 | 33 | 35 |
| <u>REENLISTMENT INTENTIONS:</u> | | | | | | |
| YES, OR PROBABLY YES | 57 | 26 | 68 | 26 | 64 | 54 |
| NO, OR PROBABLY NO | 43 | 72 | 32 | 71 | 34 | 17 |
| PLAN TO RETIRE | 0 | 0 | 0 | 0 | 1 | 29 |

* Columns may not add to 100 percent due to nonresponse or rounding

TABLE 27

COMPARISON OF JOB SATISFACTION INDICATORS FOR CURRENT AFSC 451X4 SURVEY AND 1981 AFSC 326X3B AND AFSC 326X5B SURVEYS (PERCENT MEMBERS RESPONDING)*

| | 1-48 MONTHS TAFMS | | 49-96 MONTHS TAFMS | | 97+ MONTHS TAFMS | | |
|--|-------------------|---------------|--------------------|---------------|------------------|---------------|---------------|
| | 451X4B (N=170) | 326X3B (N=75) | 451X4B (N=123) | 326X3B (N=11) | 45174 (N=107) | 326X3B (N=10) | 326X5B (N=13) |
| <u>EXPRESSED JOB INTEREST:</u> | | | | | | | |
| INTERESTING | 79 | 71 | 63 | 55 | 56 | 50 | 62 |
| SO-SO | 15 | 16 | 24 | 18 | 24 | 30 | 31 |
| DULL | 6 | 13 | 14 | 27 | 20 | 20 | 8 |
| <u>PERCEIVED UTILIZATION OF TALENTS:</u> | | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 82 18 | 76 24 | 80 20 | 64 36 | 74 26 | 50 50 | 69 31 |
| <u>PERCEIVED UTILIZATION OF TRAINING:</u> | | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 83 17 | 59 40 | 80 20 | 64 36 | 70 29 | 70 30 | 62 38 |
| <u>SENSE OF ACCOMPLISHMENT:</u> | | | | | | | |
| SATISFIED | 79 | 63 | 79 | 45 | 56 | 30 | 69 |
| NEUTRAL | 7 | 12 | 9 | 0 | 10 | 20 | 0 |
| DISSATISFIED | 14 | 24 | 23 | 55 | 33 | 50 | 31 |
| <u>REENLISTMENT INTENTIONS:</u> | | | | | | | |
| YES, OR PROBABLY YES | 52 | 27 | 59 | 36 | 64 | 70 | 77 |
| NO, OR PROBABLY NO | 48 | 73 | 41 | 64 | 34 | 30 | 23 |
| PLAN TO RETIRE | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

* Columns may not add to 100 percent due to nonresponse or rounding

TABLE 28

COMPARISON OF JOB SATISFACTION INDICATORS FOR SPECIALTY JOB GROUPS
(PERCENT MEMBERS RESPONDING)*

| | INDEPENDENT JOB TYPES | | | | | |
|--|---|---|----------------------------------|-------------------------------|----------------------------|------------------------------|
| | AUTOMATIC TEST STATION CLUSTER (N=265) | MANUAL/EW TEST STATION CLUSTER (N=373) | SUPERVISORY CLUSTER (N=76) | TRAINING CLUSTER (N=40) | DIFM MONITORS (N=11) | QA/QC INSPECTORS (N=8) |
| <u>EXPRESSED JOB INTEREST:</u> | | | | | | |
| INTERESTING | 67 | 72 | 74 | 45 | 55 | 75 |
| SO-SO | 20 | 19 | 16 | 25 | 18 | 0 |
| DULL | 13 | 10 | 11 | 30 | 27 | 25 |
| <u>PERCEIVED UTILIZATION OF TALENTS:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 80 19 | 81 19 | 79 21 | 57 42 | 64 36 | 75 25 |
| <u>PERCEIVED UTILIZATION OF TRAINING:</u> | | | | | | |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL | 86 14 | 81 19 | 75 25 | 75 25 | 45 55 | 87 12 |
| <u>SENSE OF ACCOMPLISHMENT:</u> | | | | | | |
| SATISFIED | 71 | 72 | 57 | 42 | 55 | 62 |
| NEUTRAL | 9 | 8 | 7 | 20 | 18 | 12 |
| DISSATISFIED | 19 | 20 | 37 | 37 | 27 | 25 |
| <u>REENLISTMENT INTENTIONS:</u> | | | | | | |
| YES, OR PROBABLY YES | 63 | 61 | 75 | 60 | 73 | 100 |
| NO, OR PROBABLY NO | 35 | 39 | 11 | 40 | 27 | 0 |
| PLAN TO RETIRE | 1 | 0 | 14 | 0 | 0 | 0 |

* Columns may not add to 100 percent due to nonresponse or rounding

Comparisons between the current and previous surveys show a substantial improvement in all areas for first- and second-term personnel, with the exception of job interest. The most notable improvements, with one exception, are in reenlistment intentions, indicating an average increase of 27 percentage points. The only drop in reenlistment intentions was in the 97+ month 326X3/X5 comparison (6 and 13 percent, respectively). Current job interest took a middle-of-the-road stance compared to the previous survey and indicated no new trends.

Job satisfaction indicators for the specialty job groups were generally positive for all groups. With the exception of reenlistment intentions, responses for the Training cluster and DIFM IJT were lower than the other groups.

Total job satisfaction for the 451X4 career ladder is positive, with few exceptions. Changes in the career ladder as a result of Rivet Workforce initiatives are possibly the cause for low job interest and sense of accomplishment, especially for 7-level personnel who are now responsible for more types of equipment than before, require additional training, and have the feeling of not being experts on any one type of equipment. Nonetheless, most personnel are staying in the career field and reenlisting at a higher rate as TAFMS increases.

IMPLICATIONS

There have been major changes for the personnel in this career field since the completion of the last 326XX OSRs. The 451X4A job has remained primarily the same, but 451X4B personnel have had to learn another type of test station (manual or electronic warfare). Previous AFSC 326X3 and 326X5 infrastructure remains in the current 6-shred, but should begin to disappear as time passes. The biggest change has occurred for 7-level members who must now understand the maintenance of all three types of 451X4 avionics test stations and components. Career ladder progression is typical, remaining technical up to the 7-level where supervisory duties predominate. The AFR 39-1 Specialty Descriptions provide a fairly accurate picture of most of the duties of a 451X4, but could use some minor revision to include some of the nontechnical aspects of the job. Job satisfaction is lower than the comparative sample on all indicators, but has improved since the previous OSRs, especially in reenlistment intentions.

Analysis of the STS and the 45134A and 45134B POIs showed good support by the survey data. There were several areas of the POIs having high percentages of first-enlistment personnel performing, but not being trained and having no 3-level proficiency codes in the STS matched to them. There were several other 3-level proficiency codes within the STS that seem inappropriate when compared with survey data.

APPENDIX A

TABLE I

GROUP ID NUMBER AND TITLE: STG055, AUTOMATIC TEST STATION CLUSTER
 GROUP SIZE: 265 PERCENT OF SAMPLE: 32
 PREDOMINANT GRADE: E-4/-5 AVERAGE TICF: 56
 AVERAGE TAFMS: 78

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|---|-----------------------------------|
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 99 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 97 |
| F185 CLEAN SHOP FACILITIES | 93 |
| G236 ISOLATE MALFUNCTIONS WITHIN PRINTERS | 85 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 83 |
| H316 PERFORM PROGRAMMED TEST OF IMU LRUs | 82 |
| N643 REPAIR SWITCHING COMPLEXES | 82 |
| H302 PERFORM PROGRAMMED TEST OF ADC LRUs | 77 |
| J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs | 75 |
| I376 PERFORM CONFIDENCE TEST OF CTSs | 75 |
| E117 ANNOTATE, INITIATE, OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD) | 74 |
| L523 PERFORM PROGRAMMED TEST OF 039 LRUs | 74 |
| L530 REPAIR 039 | 74 |
| N603 PERFORM OA/FI OF CCDPs | 75 |
| H280 ISOLATE MALFUNCTIONS WITHIN CABIN/CIRCUIT AIR CONTROLLER (CCAC) LRUs | 71 |
| K483 PERFORM CONFIDENCE TEST OF DTSs | 71 |
| N621 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWERS AND BLOWER WHEEL BLADES | 71 |
| M546 PERFORM CONFIDENCE TEST OF MTSs | 70 |
| J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS | 69 |
| M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES | 64 |
| K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES | 63 |
| M551 PERFORM OA/FI OF IFSSs | 63 |
| M563 REPAIR MSSUs | 62 |
| A8 DETERMINE WORK PRIORITIES | 53 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 53 |

TABLE IB

GROUP ID NUMBER AND TITLE: STG108, COMPUTER TEST STATION TECHNICIANS
 GROUP SIZE: 184

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES | 99 |
| H340 REPAIR IMUs | 99 |
| G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE | 96 |
| H298 ISOLATE MALFUNCTIONS WITHIN SIGNAL DATA RECORDER (SDR) LRUs | 96 |
| G238 LOAD MTUs | 95 |
| I376 PERFORM CONFIDENCE TEST OF CTSs | 95 |
| H347 REPAIR PITCH FLCCs | 93 |
| N589 ISOLATE MALFUNCTIONS WITHIN DIAs | 92 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 92 |
| N643 REPAIR SWITCHING COMPLEXES | 91 |
| N625 PERFORM PERIODIC MAINTENANCE ON PRINTERS | 90 |
| J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs | 87 |
| J441 REPAIR CONVERTER PROGRAMMERS | 86 |
| M546 PERFORM CONFIDENCE TEST OF MTSs | 84 |
| J418 ISOLATE MALFUNCTIONS WITHIN RADAR TARGET DATA PROCESSOR (IRE) LRUs | 83 |
| K483 PERFORM CONFIDENCE TEST OF DTSs | 83 |
| J400 ADJUST AIR NAVIGATION MULTIPLE INDICATOR (ANMI) SHOP REPLACEABLE UNITS (SRU) | 82 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 79 |

TABLE IC

GROUP ID NUMBER AND TITLE: STG102, MICROWAVE TEST STATION TECHNICIANS
 GROUP SIZE: 23

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|---|---|
| G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES | 100 |
| F185 CLEAN SHOP FACILITIES | 96 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 96 |
| G266 REMOVE OR REPLACE TEST STATION PINS OR CONNECTORS | 91 |
| L531 REPAIR 081 | 91 |
| M546 PERFORM CONFIDENCE TEST OF MTS _s | 87 |
| L509 ADJUST RADAR RECEIVER (022) SRU _s | 87 |
| L523 PERFORM PROGRAMMED TEST OF 039 LRU _s | 83 |
| M536 INSPECT AND CLEAN MICROWAVE SIGNAL SWITCHING UNITS (MSSU) ATTENUATORS | 83 |
| M539 ISOLATE MALFUNCTIONS WITHIN MSSU _s | 83 |
| M563 REPAIR MSSU _s | 83 |
| N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS | 83 |
| G227 INSPECT EQUIPMENT FOR CALIBRATION DATES | 78 |
| N618 PERFORM QA/FI OF SWITCHING COMPLEXES | 74 |
| F184 CLEAN OPTICAL SURFACES OR CONTACTS | 70 |
| N599 ISOLATE MALFUNCTIONS WITHIN SWITCHING COMPLEXES | 70 |
| M558 PERFORM QA/FI OF PHASEMETERS (PHM) | 70 |
| G248 PERFORM QA OR QC INSPECTION OF TEST STATIONS | 65 |
| L520 PERFORM PROGRAMMED TEST OF IB LRU _s | 65 |

TABLE ID

GROUP ID NUMBER AND TITLE: STG102, DISPLAYS TEST STATION TECHNICIANS
 GROUP SIZE: 32

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 100 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 100 |
| G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS | 100 |
| F185 CLEAN SHOP FACILITIES | 97 |
| K483 PERFORM CONFIDENCE TEST OF DTSs | 97 |
| E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG) | 94 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 94 |
| J400 ADJUST AIR NAVIGATION MULTIPLE INDICATOR (ANMI) SHOP REPLACEABLE UNITS (SRU) | 94 |
| J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs | 94 |
| J441 REPAIR CONVERTER PROGRAMMERS | 94 |
| J401 ADJUST HEADS UP DISPLAY (HUD) UNIT SRUs | 91 |
| J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS | 91 |
| J450 REPAIR PSDPS | 91 |
| J410 ISOLATE MALFUNCTIONS WITHIN FLIGHT DIRECTOR ADAPTER (FDA) LRUs | 87 |
| G227 INSPECT EQUIPMENT FOR CALIBRATION DATES | 81 |
| K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES | 81 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 78 |
| N643 REPAIR SWITCHING COMPLEXES | 78 |
| G273 RESEARCH PROGRAM MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES | 75 |
| J454 REPAIR 042 | 72 |
| N618 PERFORM OA/FI OF SWITCHING COMPLEXES | 72 |

TABLE II

GROUP ID NUMBER AND TITLE: STG032, MANUAL OR ELECTRONIC WARFARE
 GROUP SIZE: 373 TEST STATION CLUSTER
 PREDOMINANT GRADE: E-3/-4/-5 PERCENT OF SAMPLE: 44
 AVERAGE TAFMS: 65 AVERAGE TICF: 49

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 94 |
| G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE | 94 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 93 |
| F185 CLEAN SHOP FACILITIES | 89 |
| F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS | 74 |
| G254 PREPARE EQUIPMENT FOR TURN-IN | 69 |
| O653 REPAIR RADAR SYSTEM ANTENNAS | 66 |
| O650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS | 65 |
| Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T) | 63 |
| Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts | 63 |
| Q678 ISOLATE MALFUNCTIONS WITHIN AAIs | 63 |
| S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s | 63 |
| S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ) | 60 |
| S757 PERFORM OPERATIONAL CHECKOUT OF FAN TURBINE INLET TEMPERATURE (FTIT) INDICATORS | 56 |
| P665 REPAIR ANTENNA A TEST STATIONS | 56 |
| P659 ISOLATE MALFUNCTIONS WITHIN ANTENNA B TEST STATIONS | 54 |
| S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 53 |
| S722 ISOLATE MALFUNCTIONS WITHIN AVIONICS STATUS PANELS (ASP) | 52 |
| D86 CONDUCT OJT | 46 |
| D101 MAINTAIN TRAINING RECORDS | 45 |
| V926 PERFORM TITE BASIC CA/FIs | 38 |
| B51 SUPERVISE APPRENTICE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45134B) | 37 |
| U874 REPAIR AN/ALR-56 HIGH BAND RECEIVERS | 36 |
| U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 36 |
| U841 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 36 |

TABLE IIA

GROUP ID NUMBER AND TITLE: STG246, TACTICAL ELECTRONIC WARFARE
 SYSTEM (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) (TRU ONLY) TECHNICIANS
 GROUP SIZE: 5

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|--|----------------------------------|
| E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL) | 100 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 100 |
| E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG) | 100 |
| G227 INSPECT EQUIPMENT FOR CALIBRATION DATES | 100 |
| G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES | 100 |
| G237 ISOLATE MALFUNCTIONS WITHIN TEST STATION INTERFACE ADAPTERS | 100 |
| G264 REMOVE OR REPLACE TEST STATION INTERFACE COMPONENTS | 100 |
| G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE | 100 |
| V910 ISOLATE MALFUNCTIONS WITHIN TITE FREQUENCY SYNTHESIZERS | 100 |
| V913 ISOLATE MALFUNCTIONS WITHIN TITE INPUT/OUTPUT CAGES | 100 |
| V926 PERFORM TITE BASIC OA/FIS | 100 |
| V931 PERFORM TITE DISC UPDATES | 100 |
| V945 REPAIR TITE UUT POWER SUPPLIES | 100 |
| E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD) | 80 |
| V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT | 80 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 60 |

TABLE IIB

GROUP ID NUMBER AND TITLE: STG104, TACTICAL ELECTRONIC WARFARE SYSTEM
(TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) TECHNICIANS
GROUP SIZE: 126

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|--|----------------------------------|
| U839 ISOLATE MALFUNCTIONS WITHIN AN/ALQ-135 TUNING UNITS | 99 |
| U841 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 99 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 98 |
| U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 98 |
| U873 REPAIR AN/ALQ-135 TUNING UNITS | 98 |
| V926 PERFORM TITE BASIC OA/FIs | 97 |
| G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS | 96 |
| U837 ISOLATE MALFUNCTIONS WITHIN AN/ALQ-135 LVPSs | 96 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 94 |
| U848 PERFORM OPERATIONAL TEST OF AN/ALQ-128 R/Ts | 94 |
| V932 PERFORM TITE DISC-TO-DISC TRANSFER PROCEDURES | 91 |
| F185 CLEAN SHOP FACILITIES | 90 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 90 |
| U864 PROGRAM OR REPROGRAM AN/ALR-56 RECEIVER PROCESSORS | 90 |
| V917 ISOLATE MALFUNCTIONS WITHIN TITE RADIO FREQUENCY (RF) CONSOLES | 88 |
| V944 REPAIR TITE RF CONSOLES | 87 |
| F220 SOLDER COMPONENTS, SUCH AS RELAYS, RESISTERS, OR PLUGS | 83 |
| V942 REPAIR TITE INTERFACE CHASSIS | 78 |
| E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA) | 74 |
| V920 ISOLATE MALFUNCTIONS WITHIN TITE SYNTHESIZER SYSTEMS | 72 |

TABLE IIC

GROUP ID NUMBER AND TITLE: STG135, ANTENNA A AND B TEST STATION
 GROUP SIZE: 12 TECHNICIANS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 100 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 100 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 100 |
| 0648 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES (LVPS) | 100 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 92 |
| G254 PREPARE EQUIPMENT FOR TURN-IN | 92 |
| 0655 REPAIR RADAR SYSTEM TRANSMITTERS | 92 |
| P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS | 92 |
| G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE | 92 |
| P661 PERFORM CONFIDENCE TEST OF ANTENNA A TEST STATIONS | 92 |
| P663 PERFORM OA/FI OF ANTENNA A TEST STATIONS | 92 |
| 0645 ALIGN RADAR SYSTEM ANTENNAS | 83 |
| 0646 ALIGN RADAR SYSTEM TRANSMITTERS | 83 |
| 0650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS | 83 |
| 0653 REPAIR RADAR SYSTEM ANTENNAS | 83 |
| P656 CALIBRATE ANTENNA A TEST STATIONS | 83 |
| P666 REPAIR ANTENNA B TEST STATIONS | 83 |
| P667 SERVICE ANTENNA A TEST STATION HYDRAULIC POWER SUPPLIES | 83 |
| E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL) | 75 |
| F185 CLEAN SHOP FACILITIES | 75 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 75 |

TABLE IID

GROUP ID NUMBER AND TITLE: GRP074, AVIONICS TECHNICIANS
 GROUP SIZE: 204

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s | 97 |
| Q694 REPAIR AAIs | 96 |
| Q679 ISOLATE MALFUNCTIONS WITHIN AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO SYSTEMS TO SRUs OR CHASSIS | 95 |
| Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts | 95 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 94 |
| S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s | 94 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 93 |
| Q676 ALIGN IDENTIFICATION FRIEND OR FOE (IFF) LRUs | 93 |
| S794 REPAIR ICCPs OR ICCP(HQ)s | 93 |
| F185 CLEAN SHOP FACILITIES | 92 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 91 |
| O650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS | 91 |
| S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ) | 91 |
| S735 ISOLATE MALFUNCTIONS WITHIN MAIN COMMUNICATIONS CONTROL PANELS (MCCP) | 91 |
| S754 PERFORM OPERATIONAL CHECKOUT OF CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 90 |
| G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS | 89 |
| E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG) | 88 |
| F203 PERFORM SAFETY WIRING | 88 |
| S792 REPAIR CONTROLLER AIRCRAFT GRIP ASSEMBLIES | 88 |
| O647 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM ANTENNAS | 87 |
| P668 SERVICE ANTENNA B TEST STATION COOLANT CONDITIONING UNIT (CCU) SYSTEM WITH COOLANT OIL | 84 |
| S746 PERFORM OPERATIONAL CHECKOUT OF ALTITUDE INDICATORS | 83 |
| R704 PERFORM IDENTIFICATION FRIEND OR FOE (IFF) RADIO FREQUENCY (RF) LOSS CORRECTION CHART PROCEDURES | 82 |

TABLE IIE

GROUP ID NUMBER AND TITLE: STG064, TEAM LEADERS
 GROUP SIZE: 12

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|---|---|
| E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG) | 100 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 100 |
| G257 REMOVE OR REPLACE LRU MINOR HARDWARE | 100 |
| D101 MAINTAIN TRAINING RECORDS | 92 |
| E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA) | 83 |
| G237 ISOLATE MALFUNCTIONS WITHIN TEST STATION INTERFACE ADAPTERS | 83 |
| F185 CLEAN SHOP FACILITIES | 75 |
| G268 REMOVE OR REPLACE TEST STATION TESTER REPLACEABLE UNITS- (TRU) | 75 |
| E167 PERFORM ROUTINE INSPECTION OF TOOLS | 75 |
| A8 DETERMINE WORK PRIORITIES | 67 |
| B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B) | 67 |
| E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT | 67 |
| F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS | 67 |
| G226 FABRICATE OR REBUILD AVIONICS CABLES | 67 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 58 |
| G254 PREPARE EQUIPMENT FOR TURN-IN | 58 |
| A20 PLAN OR SCHEDULE WORK ASSIGNMENTS | 50 |
| U875 REPAIR AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 50 |
| U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS | 42 |
| U840 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 HIGH BAND RECEIVERS | 42 |
| U857 PERFORM OPERATIONAL TEST OF AN/ALR-56 HIGH BAND RECEIVERS | 42 |

TABLE III

GROUP ID NUMBER AND TITLE: STG054, SUPERVISORY CLUSTER
 GROUP SIZE: 76 PERCENT OF SAMPLE: 9
 PREDOMINANT GRADE: E-6 AVERAGE TICF: 104
 AVERAGE TAFMS: 154

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|---|-----------------------------------|
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 96 |
| C79 WRITE APRs | 93 |
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 92 |
| D83 ANNOTATE TRAINING RECORDS | 87 |
| C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS | 80 |
| A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES | 80 |
| D101 MAINTAIN TRAINING RECORDS | 79 |
| A20 PLAN OR SCHEDULE WORK ASSIGNMENTS | 78 |
| A21 PLAN OR SCHEDULE WORK PRIORITIES | 78 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 78 |
| B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174) | 75 |
| E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS | 71 |
| E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL) | 67 |
| B40 IMPLEMENT SAFETY OR SECURITY PROGRAMS | 67 |
| D90 DETERMINE TRAINING REQUIREMENTS | 66 |
| E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA) | 59 |
| D86 CONDUCT OJT | 58 |
| C72 INDORSE AIRMAN PERFORMANCE REPORTS (APR) | 51 |
| B28 ADJUST DAILY MAINTENANCE PLANS TO MEET OPERATIONAL COMMITMENTS | 51 |
| A13 DEVELOP SELF-INSPECTION PROGRAMS | 51 |
| D104 PREPARE JOB QUALIFICATION STANDARDS (JQS) | 46 |
| B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B) | 46 |
| G245 PERFORM QA OR QC INSPECTION OF LRUs | 43 |
| E120 COMPILE DATA FOR REPORTS | 38 |

TABLE IIIA

GROUP ID NUMBER AND TITLE: STG122, INSTRUCTORS OR SUPERVISORS
 GROUP SIZE: 11

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|---|---|
| D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS | 100 |
| B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS | 91 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 91 |
| C79 WRITE APRs | 91 |
| D83 ANNOTATE TRAINING RECORDS | 91 |
| D97 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS | 91 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 91 |
| D103 PLAN OR SCHEDULE TRAINING, SUCH AS OJT AND ANCILLARY TRAINING | 91 |
| D99 EVALUATE PROGRESS OF TRAINEES | 82 |
| D107 WRITE TEST QUESTIONS | 82 |
| A20 PLAN OR SCHEDULE WORK ASSIGNMENTS | 73 |
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 73 |
| C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS | 73 |
| C78 SELECT PERSONNEL FOR SPECIALIZED TRAINING | 73 |
| D86 CONDUCT OJT | 73 |
| D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS | 73 |
| B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174) | 64 |
| B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B) | 55 |

TABLE IIIB

GROUP ID NUMBER AND TITLE: GRP092, PRODUCTION SUPERVISORS
 GROUP SIZE: 30

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|--|---|
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 100 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 100 |
| E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS | 100 |
| D101 MAINTAIN TRAINING RECORDS | 97 |
| A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES | 93 |
| A21 PLAN OR SCHEDULE WORK PRIORITIES | 93 |
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 93 |
| C79 WRITE APRs | 93 |
| E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL) | 93 |
| E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT | 90 |
| B35 DIRECT SHOP MAINTENANCE ACTIVITIES | 80 |
| B36 DIRECT UTILIZATION OR MAINTENANCE OF EQUIPMENT | 80 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 80 |
| A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES | 77 |
| G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU) | 77 |
| G245 PERFORM QA OR QC INSPECTION OF LRUs | 73 |
| E171 PROCESS DIFM ITEMS | 73 |
| C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS | 70 |
| F185 CLEAN SHOP FACILITIES | 70 |
| G254 PREPARE EQUIPMENT FOR TURN-IN | 70 |
| B50 SUPERVISE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45154A) | 63 |
| G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS | 63 |
| D90 DETERMINE TRAINING REQUIREMENTS | 57 |

TABLE IIIC

GROUP ID NUMBER AND TITLE: STG100, AUTOMATIC TEST STATION (ATS) NCOICs
 GROUP SIZE: 31

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|--|----------------------------|
| B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES | 100 |
| A25 SCHEDULE PERSONNEL FOR LEAVE OR TEMPORARY DUTY (TDY) ASSIGNMENT | 97 |
| C79 WRITE APRs | 97 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 97 |
| B30 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL | 94 |
| A2 ASSIGN PERSONNEL TO DUTY POSITIONS | 90 |
| A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES | 90 |
| B35 DIRECT SHOP MAINTENANCE ACTIVITIES | 90 |
| B40 IMPLEMENT SAFETY OR SECURITY PROGRAMS | 90 |
| B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174) | 87 |
| D84 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS | 87 |
| C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS | 84 |
| D98 EVALUATE PERSONNEL FOR TRAINING NEEDS | 84 |
| C56 ANALYZE WORKLOAD REQUIREMENTS | 81 |
| C67 EVALUATE SAFETY OR SECURITY PROGRAMS | 81 |
| D83 ANNOTATE TRAINING RECORDS | 81 |
| A22 PLAN SAFETY OR SECURITY PROGRAMS | 74 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 71 |
| D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS | 68 |
| E120 COMPILE DATA FOR REPORTS | 52 |

TABLE IV

GROUP ID NUMBER AND TITLE: STG020, TRAINING CLUSTER
 GROUP SIZE: 40 PERCENT OF SAMPLE: 5
 PREDOMINANT GRADE: E-5 AVERAGE TICF: 91
 AVERAGE TAFMS: 96

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| D82 ADMINISTER TESTS | 90 |
| D106 SCORE TESTS | 90 |
| D107 WRITE TEST QUESTIONS | 80 |
| D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING | 75 |
| D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS | 67 |
| D99 EVALUATE PROGRESS OF TRAINEES | 57 |
| D93 DEVELOP PERFORMANCE TESTS | 57 |
| D89 COUNSEL TRAINEES ON TRAINING PROGRESS | 52 |
| F185 CLEAN SHOP FACILITIES | 40 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 37 |
| D83 ANNOTATE TRAINING RECORDS | 32 |
| B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS | 27 |
| D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS | 22 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 22 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 22 |
| N606 PERFORM OA/FI OF DIA AUX DRAWERS | 22 |
| N605 PERFORM OA/FI OF DIAs | 20 |
| F217 RESEARCH TECHNICAL ORDERS | 20 |
| D105 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT | 20 |

TABLE IVA

GROUP ID NUMBER AND TITLE: STG037, CLASSROOM INSTRUCTORS
 GROUP SIZE: 33

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| D82 ADMINISTER TESTS | 97 |
| D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING | 79 |
| D107 WRITE TEST QUESTIONS | 79 |
| D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS | 67 |
| D99 EVALUATE PROGRESS OF TRAINEES | 57 |
| D83 ANNOTATE TRAINING RECORDS | 33 |
| F185 CLEAN SHOP FACILITIES | 33 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 30 |
| B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS | 24 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 24 |
| E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD) | 24 |
| V926 PERFORM TITE BASIC OA/FIs | 21 |
| D100 EVALUATE TRAINING METHODS AND TECHNIQUES | 18 |
| D101 MAINTAIN TRAINING RECORDS | 18 |
| V928 PERFORM TITE DAILY CONFIDENCE TESTS (DCT) | 18 |
| A4 COORDINATE CALIBRATION OF SPECIAL TOOLS OR TEST EQUIPMENT WITH PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL) | 15 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 15 |
| D97 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS | 12 |
| E159 MAINTAIN TECHNICAL ORDER FILES | 12 |

TABLE IVB

GROUP ID NUMBER AND TITLE: STG047, EQUIPMENT INSTRUCTORS
 GROUP SIZE: 7

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| J429 PERFORM PROGRAMMED TEST OF HUD UNIT LRUs | 100 |
| K491 PERFORM OA/FI OF FMNAs | 100 |
| L522 PERFORM PROGRAMMED TEST OF 022 LRUs | 100 |
| M552 PERFORM OA/FI OF MSSUs | 100 |
| D106 SCORE TESTS | 86 |
| D107 WRITE TEST QUESTIONS | 86 |
| I381 PERFORM OA/FI OF PNEUGS | 86 |
| K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES | 86 |
| K483 PERFORM CONFIDENCE TEST OF DTSs | 86 |
| F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS | 71 |
| D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS | 71 |
| H316 PERFORM PROGRAMMED TEST OF IMU LRUs | 71 |
| I386 PERFORM OA/FI OF RATE TABLES | 71 |
| D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING | 57 |
| D82 ADMINISTER TESTS | 57 |
| D93 DEVELOP PERFORMANCE TESTS | 57 |
| D99 EVALUATE PROGRESS OF TRAINEES | 57 |
| M551 PERFORM OA/FI OF IFSSs | 57 |
| M559 PERFORM OA/FI OF XBSSs | 57 |
| A7 DETERMINE PUBLICATION REQUIREMENTS | 43 |
| B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS | 43 |
| G273 RESEARCH PROGRAM MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES | 43 |
| B34 DIRECT MAINTENANCE OF TECHNICAL ORDER (TO) FILES | 29 |

TABLE V

GROUP ID NUMBER AND TITLE: STG091, DUE IN FOR MAINTENANCE MONITOR IJT
 GROUP SIZE: 11 PERCENT OF SAMPLE: 1
 PREDOMINANT GRADE: E-4 AVERAGE TICF: 51
 AVERAGE TAFMS: 58

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| <u>REPRESENTATIVE TASKS</u> | <u>PERCENT MEMBERS PERFORMING</u> |
|--|-----------------------------------|
| E144 MAINTAIN AF FORMS 2005 SUSPENSE FILES | 100 |
| E126 COMPLETE DD FORMS 1348-1 (DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT) | 91 |
| E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG) | 91 |
| E147 MAINTAIN DUE-IN-FROM-MAINTENANCE (DIFM) TRANSACTION ROSTERS (D23) | 91 |
| E171 PROCESS DIFM ITEMS | 91 |
| E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST) | 82 |
| E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL) | 73 |
| E163 MAINTAIN TRANSACTION ROSTERS, SUCH AS D04, D18, D19, AND M30 | 73 |
| E169 PREPARE INITIAL ISSUE OR BYPASS LETTERS FOR REPAIR CYCLE TURN-INS | 55 |
| E115 ANNOTATE OR COMPLETE AF FORMS 2413 (SUPPLY CONTROL LOG) | 45 |
| E127 COMPLETE DD FORMS 1348-6 (DOD SINGLE LINE ITEM REQUISITION SYSTEM DOCUMENT) | 45 |
| E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS | 45 |
| E151 MAINTAIN MICROFICHE STOCK FILES | 36 |
| E176 REVIEW AF FORMS 2413 | 36 |
| B43 IMPLEMENT SUPPLY PROCEDURES | 36 |
| A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES | 27 |
| E128 EVALUATE SUPPLY PRACTICES OR PROCEDURES | 27 |
| E161 MAINTAIN TEST STATION STATUS INDICATORS, SUCH AS BOARDS, GRAPHS, OR CHARTS | 27 |
| E180 VALIDATE BENCHSTOCK LISTINGS | 27 |
| F195 PACK OR UNPACK LINE REPLACEABLE UNITS (LRU) FOR STORAGE, SHIPMENT, OR CLIMATIC CONDITIONS | 27 |
| G224 CALIBRATE TORQUE WRENCHES | 27 |
| G254 PREPARE EQUIPMENT FOR TURN-IN | 27 |
| E146 MAINTAIN DEFICIENCY, SERVICE, OR STATUS REPORTS | 18 |
| F185 CLEAN SHOP FACILITIES | 18 |

TABLE VI

GROUP ID NUMBER AND TITLE: STG045, QUALITY ASSURANCE OR QUALITY CONTROL INSPECTOR IJT

GROUP SIZE: 8 PERCENT OF SAMPLE: 1

PREDOMINANT GRADE: E-5 AVERAGE TICF: 64

AVERAGE TAFMS: 137

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

| REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING |
|---|----------------------------|
| C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS | 87 |
| C74 INSPECT SHOP MAINTENANCE ACTIONS | 87 |
| G245 PERFORM QA OR QC INSPECTION OF LRUs | 87 |
| G246 PERFORM QA OR QC INSPECTION OF TEST STATION COMMON MAINTENANCE TEST PACKAGES (CMTP) | 87 |
| G247 PERFORM QA OR QC INSPECTION OF TEST STATION MAINTENANCE TEST PACKAGES (MTP) | 87 |
| G248 PERFORM QA OR QC INSPECTION OF TEST STATIONS | 87 |
| A10 DEVELOP INSPECTION PROCEDURES | |
| A12 DEVELOP QUALITY ASSURANCE PROGRAMS | 75 |
| C60 EVALUATE INSPECTION REPORT FINDINGS | 75 |
| C67 EVALUATE SAFETY OR SECURITY PROGRAMS | 75 |
| C75 INVESTIGATE ACCIDENTS OR INCIDENTS | 75 |
| C81 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS | 75 |
| C69 EVALUATE TECHNICAL ORDER IMPROVEMENT REPORTS | 75 |
| G244 PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTION OF LRU TEST PACKAGES | 75 |
| E166 PERFORM PERIODIC INSPECTION OF TOOLS | 62 |
| C59 EVALUATE EQUIPMENT MODIFICATION DATA | 62 |
| C68 EVALUATE SUGGESTIONS | 62 |
| E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS | 62 |
| E167 PERFORM ROUTINE INSPECTION OF TOOLS | 62 |
| E177 REVIEW AFTO FORMS 244 AND 245 | 62 |
| A13 DEVELOP SELF-INSPECTION PROGRAMS | 50 |
| E124 COMPLETE AF FORMS 2420 (QUALITY CONTROL INSPECTION SUMMARY) | 50 |
| C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS | 50 |
| E173 REPORT MATERIAL DEFICIENCIES | 37 |
| G249 PERFORM TCTO INSPECTIONS AND MODIFICATIONS OF LRUs | 37 |
| G227 INSPECT EQUIPMENT FOR CALIBRATION DATES | 37 |