

AD-A147 437

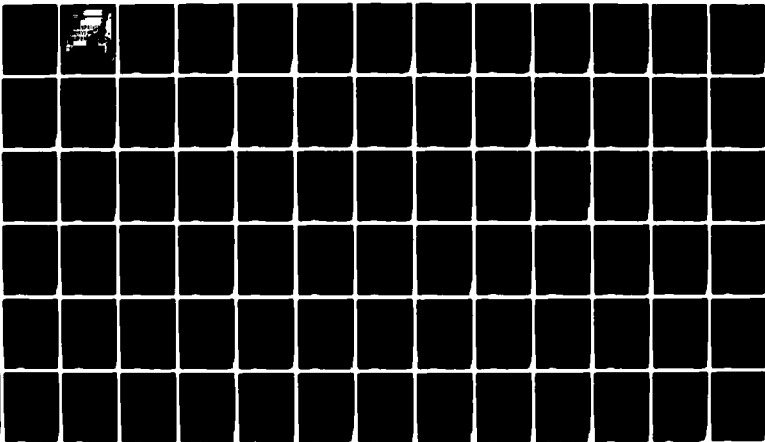
AIRCREW EGRESS SYSTEMS CAREER LADDER AFSC 423X2(U) AIR
FORCE OCCUPATIONAL MEASUREMENT CENTER RANDOLPH AFB TX
SEP 84

1/1

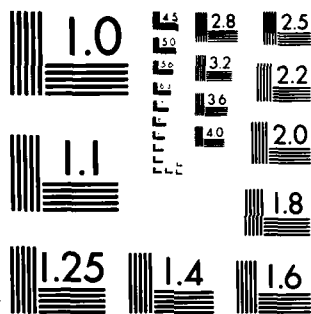
UNCLASSIFIED

F/G 5/9

NL



END
DATE
FILMED
12-84
DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



UNITED STATES AIR FORCE

AD-A147 437

OCCUPATIONAL SURVEY REPORT

AIRCREW EGRESS SYSTEMS
CAREER LADDER

AFSC 423X2

AFPT 90-423-503

SEPTEMBER 1984

Document has been approved

RECEIVED
NOV 13 1984

A

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

DTIC FILE COPY

84 11 09 045

DISTRIBUTION FOR
AFSC 423X2 OSR AND SUPPORTING DOCUMENTS

	<u>OSR</u>	<u>ANL</u> <u>EXT</u>	<u>TNG</u> <u>EXT</u>	<u>JOB</u> <u>INV</u>
AFHRL/MODS	2	1m	1m	
AFHRL/ID	1	1m	1m/1h	
AFLMC/LGM	1		1	
AFMEA/MEMD	1	1h	1	
AFMPC/MPCRQ	2			
ARMY OCCUPATIONAL SURVEY BRANCH	1			
CCAF/AYX	1			
DEFENSE TECHNICAL INFORMATION CENTER	1			
HQ AAC/DPAT	3		3	
HQ AFISC/DAP	1			
HQ AFLC/MPCA	3		3	
HQ AFSC/MPAT	3		3	
HQ ATC/DPAE	1		1	
HQ ATC/TTQL	2		1	
HQ ATC/TTY	2		1	
HQ PACAF/DPAL	1		1	
HQ PACAF/DPAT	3		3	
HQ SAC/DPAT	3		3	
HQ SAC/DPATC (ATCLO)	1		1	
HQ TAC/DPAT	3		3	
HQ TAC/DPLATC	1		1	
HQ USAF/LEY	1		1	
HQ USAF/MPPT	1		1	
HQ USAFE/DPAT	3		3	
HQ USAFE/DPATC	1		1	
HQ USMC (CODE TPI)	1			
LMDC/AN	1			
NODAC	1			
3330 TCHTW/TTGX (CHANUTE AFB IL)	5	2	9	2
355 TTW/MAT	2		2	
388 TFW/MAT	2		2	
3507 ACS/DPKI	1			
3785 FLDTG/TTFO	2		2	

m = microfiche only
h = hard copy only



Administrative routing slip with a grid for tracking document distribution. The grid contains several empty boxes for initials or dates. A handwritten 'A-1' is visible in the bottom left corner of the grid.

TABLE OF CONTENTS

	<u>PAGE NUMBER</u>
PREFACE.....	iii
SUMMARY OF RESULTS.....	iv
Survey Coverage.....	iv
Specialty Jobs.....	iv
Career Ladder Progression.....	iv
AFR 39-1 Specialty Descriptions.....	iv
Training Analysis.....	iv
Comparison to Previous Surveys.....	iv
Implications.....	iv
INTRODUCTION.....	1
SURVEY METHODOLOGY.....	2
Inventory Development.....	2
Survey Administration.....	2
Survey Sample.....	2
Task Factor Administration.....	4
Task Difficulty.....	4
Job Difficulty Index.....	4
Training Emphasis.....	4
SPECIALTY JOBS.....	6
Specialty Overview.....	6
Group Descriptions.....	8
Comparison of Specialty Jobs.....	15
Complexity.....	15
Job Satisfaction.....	16
Tasks Performed.....	16
ANALYSIS OF DAFSC GROUPS.....	23
Skill-Level Descriptions.....	23
ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS.....	29
ANALYSIS OF TAFMS GROUPS.....	30
First-Enlistment Personnel.....	30
Job Satisfaction.....	30
TRAINING ANALYSIS.....	35
Training Emphasis.....	35
Specialty Training Standard (STS).....	35
Plan of Instruction (POI).....	36
ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS.....	41
MAJCOM ANALYSIS.....	42
COMPARISON TO PREVIOUS SURVEYS.....	44
SURVEY COMMENTS.....	48
General Comments.....	48
Strength and Stamina.....	48
Training Considerations.....	48
IMPLICATIONS.....	50
APPENDIX A - REPRESENTATIVE TASKS FOR SPECIALTY JOB GROUPS.....	51
APPENDIX B - TASKS RECOMMENDED FOR SYSTEM-SPECIFIC TRAINING.....	52

PREFACE

This report presents the results of a detailed Air Force occupational survey of the Aircrew Egress Systems career ladder (AFSCs 42332, 42352, and 42372). Authority for conducting occupational surveys is contained in AFR 35-2. Computer products from which this report was produced are available for use by operating and training officials.

The survey instrument was developed by Mr Michael Bozardt, Inventory Developer, and computer programming support was furnished by Ms Becky Hernandez. Second Lieutenant Jarean L. Ray, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel (see distribution on page i). Additional copies are available upon request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150-5000.

PAUL T. RINGENBACH, Colonel, USAF
Commander
USAF Occupational Measurement
Center

WALTER E. DRISKILL, Ph. D.
Chief, Occupational Analysis Branch
USAF Occupational Measurement
Center

SUMMARY OF RESULTS

1. Survey Coverage: A total of 854 airmen (81 percent of eligible personnel) in the Aircrew Egress Systems career ladder were surveyed to obtain current career field information helpful in making training decisions and in examining the need to subdivide the specialty.
2. Specialty Jobs: Job groups in the egress career ladder are differentiated by egress system; however, personnel in most job groups still spend a great deal of time performing tasks common to many systems. There are some relatively small groups specializing on module systems (F/FB-111) or B-52 egress systems where there is little overlap with the remainder of the specialty.
3. Career Ladder Progression: As personnel progress through the career ladder, they perform more supervisory tasks, but they still perform a basically technical job. Job satisfaction indicators are good, and percentages reporting their training is well-utilized are especially high.
4. AFR 39-1 Specialty Descriptions: The 3-/5- and 7-skill level descriptions accurately reflect the jobs of career ladder personnel.
5. Training Analysis: Both the Specialty Training Standard (STS) and basic course Plan of Instruction (POI) need review. The STS is extremely general, making evaluation of training requirements difficult. Several tasks not matched to the POI should be considered for inclusion in the basic course. In general, it seems that personnel are probably receiving the training they need; however, documentation of required training should be improved.
6. Comparison to Previous Surveys: Utilization of the new ACES II system is a change in the career field which is expected to increase, making ACES II the most widely used egress system.
7. Implications: Analysis indicates that a core of common training, followed by system-specific training, would be most effective. Training documentation should be improved to aid training personnel in making such decisions.

**OCCUPATIONAL SURVEY REPORT
AIRCREW EGRESS SYSTEMS CAREER LADDER
(AFSS 42332, 42352, AND 42372)**

INTRODUCTION

This Occupational Survey Report (OSR), requested by the USAF Functional Manager, examines AFSC 423X2, Aircrew Egress Systems. The purpose of the survey was to provide updated career field data to aid in making training decisions and in determining if the specialty should be divided by seat technology. In addition, this report provides other information concerning personnel utilization, job structure, and impact on classification and training. The last OSR, which examined AFSCs 42332, 42352, 42372, and 42396, was published in January 1978.

The Aircrew Egress Systems specialty began in 1963 as AFSC 422X2; prior to that time, egress system responsibilities were handled by crew chiefs. In 1976, the specialty was redesignated AFSC 423X2. Major responsibilities of this specialty, according to AFR 39-1, include performing preventive maintenance on egress systems and related maintenance equipment; and installing, inspecting, removing, repairing, and modifying these systems and related aerospace ground equipment. In addition, the 7-skill level responsibilities include supervising aircrew egress systems maintenance activities.

Before receiving AFSC 42332, airmen complete a 7-week technical training course at the Chanute Technical Training Center, Illinois. The course includes training in principles of egress system maintenance; ground safety practices; electrical, pneudraulic, ballistic, and rocket fundamentals; equipment and tool maintenance and use; and inspection and operational checks of egress systems.

To better understand the career field, it is also helpful to know some of the characteristics of 423X2 personnel. Aircrew Egress Systems personnel average 12 years of education, indicating most have at least a high school education upon entering. Their average Armed Services Vocational Aptitude Battery (ASVAB) scores are 66 for mechanical and 62 for electronic (a score of either 40 for mechanical or 30 for electronic is required for AFSC 423X2). The most common paygrades are E-3 (25 percent), E-4 (26 percent), and E-5 (26 percent); the most common skill level (DAFSC) is 42352, held by 59 percent of the Aircrew Egress Systems personnel. On the average, personnel in this specialty have 7 years of total active federal military service (TAFMS).

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

SURVEY METHODOLOGY

Inventory Development

USAF Job Inventory AFPT 90-423-503, dated September 1983, was used to collect the data for this survey. This inventory was developed using previous inventories, data from previous OSRs, and career ladder documents such as AFR 39-1 and the 423X2 STS, together with research and interviews at six bases. The current inventory consists of a task list containing 644 tasks divided into 18 functional or duty areas and a background section including such items as grade, TAFMS, aircraft systems worked on, and job satisfaction indicators.

Survey Administration

The inventory was distributed to Consolidated Base Personnel Offices in operational units worldwide for administration to 1,049 eligible job incumbents who were selected from a computer-generated mailing list obtained from the Air Force Human Resources Laboratory (AFHRL).

To complete the survey, each respondent first answered the background questions, then checked each task he or she performed. Finally, the incumbent rated each task checked according to relative time spent. The ratings ranged from 1 (a very small amount of time spent) to 9 (a very large amount of time spent). As part of the computer analysis, all the incumbent's ratings are combined and the total is assumed to represent 100 percent of time spent on the job; each task rating is then divided by this total and multiplied by 100 to give the relative percent time spent for each task. Using these figures, tasks can be compared in terms of relative percent time spent performing them.

Survey Sample

To ensure an accurate representation across major commands (MAJCOM) and paygrade groups, survey booklets were mailed to all eligible DAFSC 423X2 personnel (those in training, hospital, or PCS status were excluded). Table 1 reflects the percentage distribution, by MAJCOM, of personnel assigned to the career ladder as of September 1983 and of respondents in the survey sample. Tables 2 and 3 show similar information according to paygrade and TAFMS groups. The 854 respondents in the final sample represent 71 percent of the total assigned DAFSC 423X2 personnel (and 81 percent of those eligible). As Tables 1 through 3 reflect, the survey sample provides a very good representation of the career ladder population.

SUMMARY OF RESULTS

1. Survey Coverage: A total of 854 airmen (81 percent of eligible personnel) in the Aircrew Egress Systems career ladder were surveyed to obtain current career field information helpful in making training decisions and in examining the need to subdivide the specialty.
2. Specialty Jobs: Job groups in the egress career ladder are differentiated by egress system; however, personnel in most job groups still spend a great deal of time performing tasks common to many systems. There are some relatively small groups specializing on module systems (F/FB-111) or B-52 egress systems where there is little overlap with the remainder of the specialty.
3. Career Ladder Progression: As personnel progress through the career ladder, they perform more supervisory tasks, but they still perform a basically technical job. Job satisfaction indicators are good, and percentages reporting their training is well-utilized are especially high.
4. AFR 39-1 Specialty Descriptions: The 3-/5- and 7-skill level descriptions accurately reflect the jobs of career ladder personnel.
5. Training Analysis: Both the Specialty Training Standard (STS) and basic course Plan of Instruction (POI) need review. The STS is extremely general, making evaluation of training requirements difficult. Several tasks not matched to the POI should be considered for inclusion in the basic course. In general, it seems that personnel are probably receiving the training they need; however, documentation of required training should be improved.
6. Comparison to Previous Surveys: Utilization of the new ACES II system is a change in the career field which is expected to increase, making ACES II the most widely used egress system.
7. Implications: Analysis indicates that a core of common training, followed by system-specific training, would be most effective. Training documentation should be improved to aid training personnel in making such decisions.

**OCCUPATIONAL SURVEY REPORT
AIRCREW EGRESS SYSTEMS CAREER LADDER
(AFSS 42332, 42352, AND 42372)**

INTRODUCTION

This Occupational Survey Report (OSR), requested by the USAF Functional Manager, examines AFSC 423X2, Aircrew Egress Systems. The purpose of the survey was to provide updated career field data to aid in making training decisions and in determining if the specialty should be divided by seat technology. In addition, this report provides other information concerning personnel utilization, job structure, and impact on classification and training. The last OSR, which examined AFSCs 42332, 42352, 42372, and 42396, was published in January 1978.

The Aircrew Egress Systems specialty began in 1963 as AFSC 422X2; prior to that time, egress system responsibilities were handled by crew chiefs. In 1976, the specialty was redesignated AFSC 423X2. Major responsibilities of this specialty, according to AFR 39-1, include performing preventive maintenance on egress systems and related maintenance equipment; and installing, inspecting, removing, repairing, and modifying these systems and related aerospace ground equipment. In addition, the 7-skill level responsibilities include supervising aircrew egress systems maintenance activities.

Before receiving AFSC 42332, airmen complete a 7-week technical training course at the Chanute Technical Training Center, Illinois. The course includes training in principles of egress system maintenance; ground safety practices; electrical, pneudraulic, ballistic, and rocket fundamentals; equipment and tool maintenance and use; and inspection and operational checks of egress systems.

To better understand the career field, it is also helpful to know some of the characteristics of 423X2 personnel. Aircrew Egress Systems personnel average 12 years of education, indicating most have at least a high school education upon entering. Their average Armed Services Vocational Aptitude Battery (ASVAB) scores are 66 for mechanical and 62 for electronic (a score of either 40 for mechanical or 30 for electronic is required for AFSC 423X2). The most common paygrades are E-3 (25 percent), E-4 (26 percent), and E-5 (26 percent); the most common skill level (DAFSC) is 42352, held by 59 percent of the Aircrew Egress Systems personnel. On the average, personnel in this specialty have 7 years of total active federal military service (TAFMS).

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

SURVEY METHODOLOGY

Inventory Development

USAF Job Inventory AFPT 90-423-503, dated September 1983, was used to collect the data for this survey. This inventory was developed using previous inventories, data from previous OSRs, and career ladder documents such as AFR 39-1 and the 423X2 STS, together with research and interviews at six bases. The current inventory consists of a task list containing 644 tasks divided into 18 functional or duty areas and a background section including such items as grade, TAFMS, aircraft systems worked on, and job satisfaction indicators.

Survey Administration

The inventory was distributed to Consolidated Base Personnel Offices in operational units worldwide for administration to 1,049 eligible job incumbents who were selected from a computer-generated mailing list obtained from the Air Force Human Resources Laboratory (AFHRL).

To complete the survey, each respondent first answered the background questions, then checked each task he or she performed. Finally, the incumbent rated each task checked according to relative time spent. The ratings ranged from 1 (a very small amount of time spent) to 9 (a very large amount of time spent). As part of the computer analysis, all the incumbent's ratings are combined and the total is assumed to represent 100 percent of time spent on the job; each task rating is then divided by this total and multiplied by 100 to give the relative percent time spent for each task. Using these figures, tasks can be compared in terms of relative percent time spent performing them.

Survey Sample

To ensure an accurate representation across major commands (MAJCOM) and paygrade groups, survey booklets were mailed to all eligible DAFSC 423X2 personnel (those in training, hospital, or PCS status were excluded). Table 1 reflects the percentage distribution, by MAJCOM, of personnel assigned to the career ladder as of September 1983 and of respondents in the survey sample. Tables 2 and 3 show similar information according to paygrade and TAFMS groups. The 854 respondents in the final sample represent 71 percent of the total assigned DAFSC 423X2 personnel (and 81 percent of those eligible). As Tables 1 through 3 reflect, the survey sample provides a very good representation of the career ladder population.

TABLE 1
COMMAND DISTRIBUTION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED (N=1,206)</u>	<u>PERCENT OF SAMPLE (N=854)</u>
TAC	49	46
USAFE	18	18
ATC	11	11
SAC	10	11
PACAF	6	6
OTHER	6	8

Total Assigned: 1,206
 Total Eligible: 1,049*
 Total in Sample: 854
 Percent of Assigned in Sample: 71 percent
 Percent of Eligible in Sample: 81 percent

* Excludes those in training, hospital, or PCS status

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
E-1 through E-3	30	28
E-4	24	26
E-5	26	26
E-6	12	13
E-7	8	8
E-8	*	*

* Less than 1 percent

TABLE 3

TAFMS DISTRIBUTION OF SURVEY SAMPLE

<u>TAFMS (MONTHS)</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
1-48	47	40
49-96	23	27
97-144	12	11
145-192	12	13
193-240	5	6
241+	1	2

Task Factor Administration

In addition to the job inventory, selected senior personnel in AFSC 423X2 completed a second booklet which provided separately processed information concerning either task difficulty (TD) ratings or training emphasis (TE) ratings for each task. Task difficulty refers to the length of time required for the average job incumbent to learn to do the task. Training emphasis refers to the importance of structured training--that is, training provided through any organized training method, such as resident technical schools, field training detachments, mobile training teams, or formal OJT for first-term personnel. The distributions of both the TD and TE sample are shown in Table 4.

Task Difficulty. Each individual completing a task difficulty booklet rated each task in the inventory, with which they were familiar, on a 9-point scale ranging from 1 (extremely low relative difficulty) to 9 (extremely high relative difficulty). The interrater reliability (as assessed through components of variance of standardized group means) of the TD data provided by 35 NCOs was .90, indicating good agreement among raters. The TD ratings were adjusted to give a rating of 5.00 for a task of average difficulty, with a standard deviation of 1.00. The data are then used to rank order the inventory tasks by degree of difficulty.

Job Difficulty Index. Task difficulty is also used to compute a Job Difficulty Index (JDI) for job groups identified in the analysis of the survey, to provide a relative measure of the complexity of the jobs in comparison to each other. The JDI is computed based on the number of tasks performed and the average difficulty per unit time spent. Thus, a group will have a higher JDI as a result of spending more time on difficult tasks and performing more tasks. After measurements are standardized, the index ranges from 1.0 for a very simple job to 25.0 for a very complex job, with an average of 13.0.

Training Emphasis. Eighty-nine NCOs completed TE booklets, rating tasks they believed required training for first-term personnel on a 10-point scale ranging from 0 (no training emphasis) to 9 (extremely heavy training required), with a blank representing no training emphasis. The average TE rating was 1.78, with

a standard deviation of 1.55; using this information, tasks above 3.33 are considered high in training emphasis.

The interrater reliability of these ratings (as assessed through components of variance of standardized group means) was .97, indicating high agreement between raters overall. Although overall agreement was high, analysis of the training emphasis ratings indicated there were differences between raters on system-specific tasks. Raters working on the same egress system tended to rate similar tasks as requiring first-term training. As a result, training emphasis ratings were divided into different groups according to the different training policies. Such information may be helpful in identifying those tasks appropriate for more system-specific training through, for example, field training detachments or formal OJT.

When TD and TE ratings are used in conjunction with other information, such as the percent personnel of a certain group performing the task, these ratings can provide insight into training requirements. Such insight may help evaluate instruction needed to support AFSC-needed knowledges or skills.

TABLE 4

COMMAND DISTRIBUTION OF TASK DIFFICULTY
AND TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TD RATERS</u>	<u>PERCENT OF TE RATERS</u>
AAC	1	3	1
USAFE	18	20	17
AFLC	2	3	2
AFSC	3	3	1
ATC	11	11	12
PACAF	6	6	8
SAC	10	14	11
TAC	49	37	47
OTHER	*	3	0

* Less than .5 percent

SPECIALTY JOBS (Career Ladder Structure)

There are several important functions of the USAF Occupational Analysis Program; one that is especially important is examining the career ladder structure within the career field. Based on incumbent responses to survey questions, the analysis identifies groups of incumbents spending similar amounts of time performing many similar tasks. These similar groups are then brought together in a larger group.

In this way, analysis of the distinct jobs performed within the career field and of their relationship to each other results in a display of the career ladder structure. This information can then be used to understand current personnel utilization or to identify job satisfaction trends that may impact management decisions, or to examine such career ladder documents as AFR 39-1, Specialty Training Standards (STS), or basic course Plans of Instruction (POI).

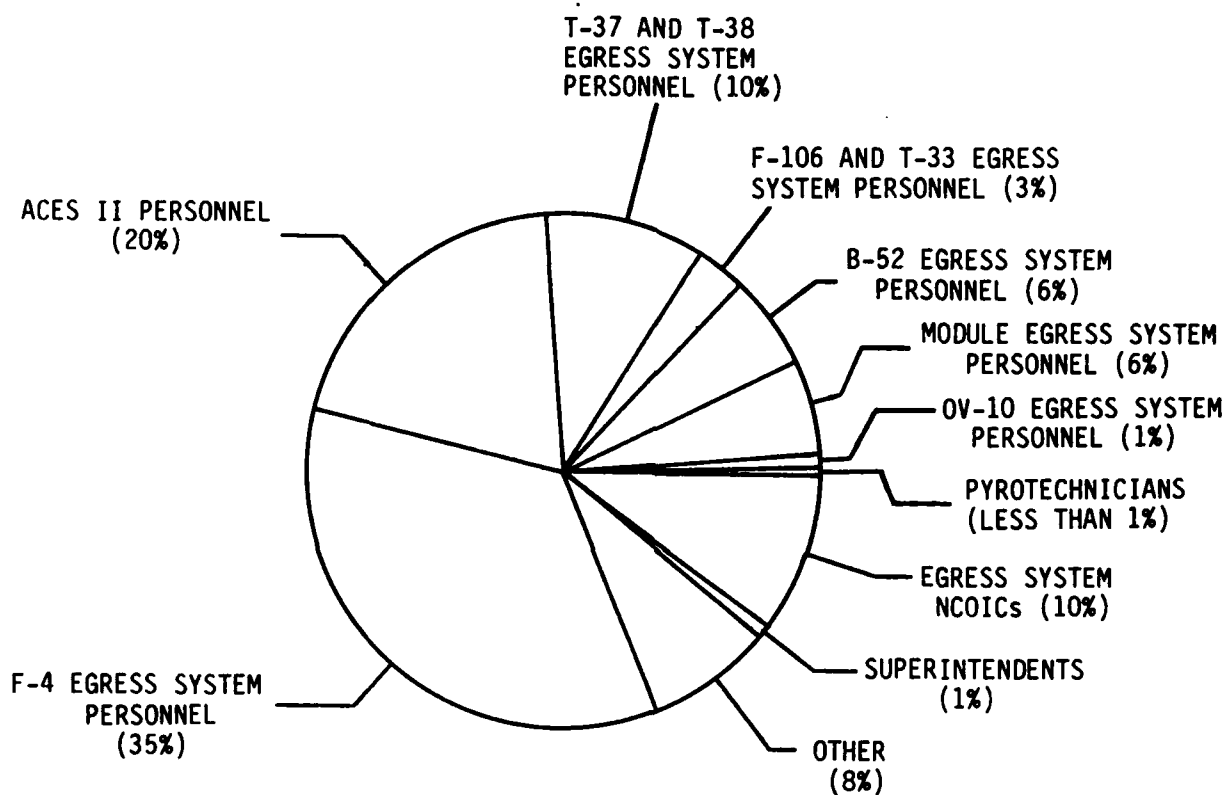
Specialty Overview

Personnel in the Aircrew Egress System career field spend much of their time performing tasks specific to a particular system. Analysis showed several job groups across the career ladder, according to egress systems for which personnel were responsible, which, in turn, varied according to aircraft and base assigned. Thus, although personnel performed many tasks common to several egress systems, there were still several very distinct job groups. Analysis identified eight independent job types and two clusters. This division of jobs is illustrated in Figure 1 and listed below. The group (GRP) or special (SPC) number refers to computer-printed information; the number of personnel in the group is represented by the letter N:

- I. F-4 EGRESS SYSTEM CLUSTER (GRP075, N=300)
- II. ADVANCED CONCEPT EJECTION SEAT (ACES) II CLUSTER (GRP071, N=167)
 - A. A-10 Egress System Personnel (GRP216, N=26)
 - B. F-15 Egress System Personnel (GRP153, N=52)
 - C. F-16 Egress System Personnel (GRP072, N=72)
- III. T-37/T-38 EGRESS SYSTEM PERSONNEL (GRP070, N=89)
- IV. F-106/T-33 EGRESS SYSTEM PERSONNEL (GRP140, N=25)
- V. B-52 EGRESS SYSTEM PERSONNEL (GRP124, N=47)
- VI. MODULE EGRESS SYSTEM PERSONNEL (GRP066, N=50)
- VII. OV-10 EGRESS SYSTEM PERSONNEL (SPC500, N=7)
- VIII. PYROTECHNICIANS (SPC501, N=3)
- IX. EGRESS SYSTEM NCOICs (GRP057, N=86)
- X. SUPERINTENDENTS (GRP103, N=5)

FIGURE 1

423X2 CAREER LADDER DISTRIBUTION
(PERCENT MEMBERS PERFORMING)



Ninety-two percent of the survey respondents clustered into the above job groups. The remaining 8 percent did not perform functions similar enough to form other groups, and the functions they did perform were too dissimilar or limited to be grouped with other job types. These personnel described themselves using such titles as Dispatcher, Equipment Manager, and Mobility NCO.

Group Descriptions

The following paragraphs describe the cluster and independent job types identified in the analysis. Tables 5 and 6 provide selected background and job satisfaction data for these groups, and Appendix A contains more detailed listings of representative tasks for each group.

I. F-4 EGRESS SYSTEM CLUSTER (GRP075). This cluster of jobs is the largest group, containing 300 airmen (35 percent of the sample). Their average number of tasks (171) is also the greatest of any of the groups. Fifty percent of the job time for the group is spent performing an average of over 70 tasks, which include tasks specific to the F-4 egress system, as well as general aircrew egress tasks. In fact, over 38 percent of their total job time is spent on specific F-4 egress system tasks and nearly 35 percent is spent on general egress tasks. Representative tasks include the following:

- remove or install F-4 ejection seat buckets
- remove or install ejection seat main beams
- inspect F-4 ejection seat catapult guns
- adjust ejection seat bucket components, such as
slippers or linkages
- remove or install ejection seat leg restraint
mechanisms

The average grade of personnel in this group is E-4, with 64 percent qualified at the 5-skill level and 30 percent qualified at the 7-skill level. Forty-two percent of the personnel in this cluster are in their first enlistment and 31 percent are in their second enlistment. They work primarily in TAC (56 percent), USAFE (20 percent), and PACAF (12 percent).

Within this cluster, there are a few variations of the basic jobs formed by those who work on other aircraft egress systems in addition to the F-4 system and by those who supervised in addition to doing the technical work.

A few small groups within this cluster worked on only one aircraft egress system in addition to the F-4 system. For example, one group worked on egress systems for both the F-4 and F-16, and one worked on systems for both the F-4 and F-5. One group, all assigned to Kadena AB, worked on both the F-4 and F-15 egress systems. These groups still spend over two-thirds of their total job time performing general aircrew egress tasks and F-4 egress system maintenance tasks. They spend only about 10 percent of their job time performing tasks related to maintenance of the second egress system.

Another variation is performed by those who work on multiple systems. For example, Nellis AFB and Eglin AFB have F-4s, F-15s, F-16s, F-5s, A-10s, etc.

Personnel at these bases maintain the egress systems for all aircraft there. Their job is more complex than that of other F-4 egress system personnel because they perform not only the general egress tasks (which account for 26 percent of their total job time), but also tasks for each of the different aircraft egress systems. Thus, they average over 300 tasks, and 142 tasks take half their total job time. As a group, they spend the most job time specific to any system on maintenance for the F-4 egress system (21 percent), and spend smaller amounts on ACES II systems (16 percent) and T-38 or F-5 egress systems (8 percent).

Another group working on multiple systems has a slightly different job. These personnel are assigned to Edwards AFB and all are in AFSC. Their job involves more work on the ejection seat than on other parts of the system, such as the canopy system. Thus, they average only 130 tasks, less than half of what the first multiple system job variation performed. Their job includes performing general operational checks and general egress tasks, such as removing and installing parachutes. An interview with one of the people in this shop indicated that the job involves tasks related to added modifications to the egress systems, due to some of the instrumentation used in the research and development at Edwards AFB. Personnel performing this job variation still spend about a third of their total job time (33 percent) performing the general aircrew egress tasks. They spend about 19 percent of their job time performing tasks related to maintenance of F-4 egress systems, 13 percent on T-38 or F-5 egress system maintenance, and 12 percent on ACES II systems.

Another variation is performed by those who supervise in addition to doing the technical work. The F-4 egress system personnel who also supervise spend only about 18 percent of their time performing tasks related to supervision, such as determining work priorities, demonstrating how to locate technical information, or conducting OJT. They still spend about a third of their time (33 percent) performing tasks related to F-4 egress system maintenance and nearly the same amount of time (29 percent) performing general aircrew egress tasks. Because supervisory responsibilities are added to the technical responsibilities, these personnel perform a much greater number of tasks, averaging 238. Personnel who perform this job variation have more experience than others in the cluster. Their average grade is between E-5 and E-6, and 69 percent are qualified at the 7-skill level. About 65 percent are in their third or subsequent enlistment.

II. ACES II CLUSTER (GRP071). This cluster contains 167 airmen, accounting for 20 percent of the sample. Most of these airmen (65 percent) are in TAC and about 19 percent are in USAFE. Their average grade is E-4. Personnel in this cluster perform very little supervision, concentrating on general aircrew tasks and tasks specific to their particular Advanced Concept Ejection Seat (ACES II) system. ACES II systems are currently used in the A-10, F-15, and F-16; this cluster includes job types specialized according to these aircraft systems.

A. A-10 Egress System Personnel (GRP216). Of their total job time, A-10 personnel spend the largest portion (46 percent) performing general aircrew egress tasks. They spend the next largest portion of their time (24 percent) performing tasks involved with maintaining the ACES II system on the A-10. As a group, they perform an average of 81 tasks, with nearly half their job time spent on 35 tasks. Some tasks which best differentiate this job type include the following:

- raise or lower A-10 ejection seats to or from maintenance position
- remove or install A-10 canopy hold-open fixtures
- remove or install A-10 ejection seats
- inspect electro-explosive devices (EED)
- adjust ballistic canopy removers
- inspect ballistic removers

Most of the personnel in this job type are qualified at the 5-skill level (81 percent). Almost all are in their first or second enlistment (65 percent and 27 percent, respectively). About 46 percent are assigned outside the continental United States.

B. F-15 Egress System Personnel (GRP153). Similar to A-10 personnel, F-15 personnel spend the largest portion of time (43 percent) on general egress tasks and the next largest on ACES II tasks (24 percent). Although they spend a similar amount of time on ACES II maintenance, the tasks they perform are those related more specifically to the F-15. They perform an average of 98 tasks, with about 46 tasks taking nearly half their total job time. Representative tasks include the following:

- remove or install F-15 ejection seats
- remove or install F-15 shielded mild detonating cord (SMDC)
- inspect F-15 canopy hinge bellcrank restraints
- remove or install F-15B/D pyrotechnic modules
- remove or install F-15 pyrotechnic modules
- inspect egress systems support dollies

About 79 percent of these personnel are qualified at the 5-skill level, with 58 percent in their first enlistment and 29 percent in their second enlistment.

C. F-16 Egress System Personnel (GRP072). Personnel in this job type spend more time performing ACES II maintenance than the other two job types. They spend about 32 percent of the total job time performing ACES II maintenance tasks related to the F-16, and about 38 percent performing general egress tasks. Their average number of tasks is greater than the other two job types (116 tasks) and nearly half their job time is spent performing as many as 53 tasks. Some tasks which represent the job performed by F-16 egress system personnel include the following:

- remove or install F-16 ejection seats
- remove or install F-16 canopy rockets
- remove or install F-16 canopy actuator release bolts
- remove or install canopies
- rig or adjust canopies
- inspect canopy transparent surfaces

This job includes more senior personnel than the other two. Although the majority (56 percent) are qualified at the 5-skill level, nearly 32 percent are qualified at the 7-skill level. About 32 percent are also in their third or subsequent enlistment. The greatest percentage, though, are in their first enlistment (54 percent).

III. T-37/T-38 EGRESS SYSTEM PERSONNEL (GRP070). This job group is composed of 89 airmen (nearly 10 percent of the sample), who work on T-37s, A-37s, T-38s, and F-5s. Most of the airmen work on T-37s and T-38s (reflected in the fact that 64 percent of this group is in ATC), though 10 work on just T-37s and A-37s (at Davis-Monthan) and a few work on just T-38s. As a group, these airmen spend nearly 42 percent of their total job time performing general aircrew egress tasks, 20 percent performing T-38 or F-5 egress system maintenance, and 13 percent on T-37 or A-37 egress system maintenance. Personnel in this group perform an average of 134 tasks, with 64 tasks taking about half their total job time. Representative tasks include the following:

- remove or install canopies
- remove or install T-38 or F-5 ejection seats
- remove or install T-37 or A-37 ejection seats
- perform TCTO modifications to T-38 or F-5 egress systems
- remove or install T-38 or F-5 ejection seat rotary actuators
- inspect canopy firing release mechanisms or exactors

The average grade of personnel in this job group is between E-4 and E-5, and about 71 percent are qualified at the 5-skill level. Only 37 percent are in their first enlistment, and 33 percent are in their second enlistment.

About 8 to 10 percent of this job group also act as supervisors, in addition to their maintenance responsibilities. These working supervisors perform a number of supervisory tasks, such as advising maintenance personnel on egress systems maintenance, supervising Aircrew Egress Systems Mechanics (AFSC 42352), or demonstrating how to locate technical information. They still spend about two-thirds of their total job time on general aircrew egress tasks and tasks related to maintenance of T-37/A-37 or T-38/F-5 egress systems, and they spend only 23 percent of their time on supervisory-related duties.

IV. F-106/AND T-33 EGRESS SYSTEM PERSONNEL (GRP140). This independent job type contains 25 members (3 percent of the sample). Of these members, 68 percent are in TAC (most from Griffiss, Minot, and Tyndall) and 28 percent (7 members) are in AF Elements at K. I. Sawyer AFB. These personnel work on both F-106 and T-33 egress systems, and spend about 28 percent of their total job

time on tasks specific to those systems, though more of that time is spent on F-106 than T-33 egress systems. They spend nearly 46 percent of their job time performing general aircrew egress system tasks, most of which are similar across systems. Personnel in this job group average 115 tasks, with about 50 tasks taking half their total job time. Some of the tasks typical of the jobs they perform are the following:

- remove or install F-106B aft ejection seats
- remove or install F-106 canopy actuators
- perform operational checks of F-106 rudder pedals
- remove or install T-33 ejection seat initiators
- inspect T-33 seat rollers
- remove or install canopy thrusters

The average grade of personnel in this job group is just over E-4, and 60 percent are qualified at the 5-skill level. Forty-four percent are in their first enlistment and 36 percent are in their second enlistment.

As in the T-37 and T-38 independent job type, some members of this group also perform supervisory tasks. Though they act as working supervisors and spend a slightly greater amount of job time on supervisory tasks, such as determining work priorities and interpreting policies, directives, or procedures for subordinates, they still spend about 55 percent of their job time performing general egress tasks or tasks related to F-106 and T-33 egress system maintenance.

V. B-52 EGRESS SYSTEM PERSONNEL (GRP124). About 6 percent of the sample (47 airmen) are contained in this job group. As expected for personnel working on B-52 systems, 98 percent are in SAC (1 member is an FTD instructor in ATC). They spend over 50 percent of their time performing general aircrew egress tasks and about 16 percent maintaining B-52 egress systems. About 16 percent of their job time is also spent preparing forms, records, or reports. Personnel in this independent job type average 87 tasks and spend half their total job time on about 37 tasks. Some of the tasks representative of their job include the following:

- remove or install escape hatches
- adjust seat tilt or horizontal actuators
- perform operational checks of hatch unlock warning light systems
- remove or install B-52 upward ejection seats
- make entries on AF Forms 1492 (Danger)

Personnel in this group are slightly more junior. They hold an average grade of almost E-4, and 75 percent are qualified at the 5-skill level. Of this group, about half the members have been in their present job one year or less. Almost 90 percent are in their first or second enlistment; 53 percent are in their first enlistment and 36 percent are in their second enlistment.

VI. MODULE EGRESS SYSTEM PERSONNEL (GRPO66). There are 50 airmen (6 percent of the sample) in this independent job type, performing maintenance on the F-111, EF-111, and FB-111 egress system, which is an ejectable crew module.

Personnel in this job group perform a different type of job than those in other groups, spending 53 percent of their total job time performing tasks specific to this module system and only 13 percent performing general aircrew egress tasks. Besides spending a much smaller amount of time on the general egress tasks, the majority of personnel in this group also perform a much smaller number of these tasks, indicating they have much less in common with other egress system groups than those groups have with each other. Interviews with people in the field indicate that F-111 work is more limited because much of the in-depth work is done when the aircraft is sent to the depot. On the average, these airmen perform 88 tasks and spend about half their total job time on just 39 tasks. Representative tasks include the following:

- inspect SMDC
- remove or install crew module emergency radio beacons
- remove or install Shielded Mild Detonating Cards (SMDC)
- inspect explosive panels, pyrotechnic panels, or access covers
- remove or install module flotation bags

Personnel in this job group are nearly evenly split between TAC (38 percent) and USAFE (36 percent), with 18 percent in SAC. Their average grade is E-4, and 58 percent are qualified at the 5-skill level. Of this job group, about half (48 percent) are in their first enlistment, and 36 percent are in their second enlistment.

A variation within this group is a smaller group of about 18 working supervisors. Although they perform more supervisory tasks, such as preparing APRs or determining work priorities, they still spend about 65 percent of their total job time maintaining module egress systems and performing the general aircrew egress tasks.

VII. OV-10 EGRESS SYSTEM PERSONNEL (SPC500). There are seven members (about 1 percent) in this independent job type. These members perform a more general and limited job, averaging only 61 tasks, with only 22 tasks taking half their total job time. Most tasks specific to other aircraft (such as the F-4, which also has a Martin-Baker ejection seat) are part of preventive maintenance, but OV-10 people do very little preventive maintenance. Thus, their job consists of more general tasks, involving such activities as safety wiring, installing hoses, or visually inspecting systems.

Preventive maintenance requires tearing down and inspecting in greater depth for the OV-10; some of this type of work is done about every 6 years during a catapult time change. Currently, the TO is not specific and requires only visual inspection, but a planned revision will include depot maintenance, which would require more preventive maintenance.

Because the work on OV-10 egress systems is so limited, personnel in this group perform many additional duties, such as Technical Order Monitor, Bench Stock Monitor, and PMEL Monitor. NCOs in the field, qualified at the 7-skill level, suggested that OV-10 personnel are utilized at only about 30 percent of their time in the field.

Personnel in this job group have an average grade between E-4 and E-5. About 57 percent are qualified at the 5-skill level and about 43 percent are qualified at the 7-skill level. These personnel are more senior, with about 57 percent in their third or subsequent enlistment.

VIII. PYROTECHNICIANS (SPC501). This independent job type contains three members, all stationed at McClellan AFB. They specialize in depot work, which involves time changes for items related to egress system rocket motors and explosive lines, mostly for F-111s and F-4s, but they also perform other tasks related to the depot work. Some of the tasks which are representative of their job include the following:

- remove or install aircraft external fuel tanks
- seal module explosive panels or access covers
- operationally check ejection seat ballistic linkages
- remove or install explosive squibs or cartridges in external store systems
- clean and lubricate F-4 ejection seat catapult guns
- remove or install pyrotechnic panels

Personnel in this group average 154 tasks. About 22 percent of their time is spent on tasks specific to the F-4 egress system maintenance and about 18 percent is spent on module egress system maintenance.

At the time of the survey, these pyrotechnicians all held the grade of E-5 and were qualified at the 5-skill level. One is in his second enlistment and two are in their third enlistment. All are in AFLC.

IX. EGRESS SYSTEM NCOICs (GRPO57). About 10 percent of the sample (86 members) forms this independent job type. Although they work on different egress systems (primarily the B-52, ACES II, and F-4 egress systems), they have in common general aircrew egress tasks and supervisory tasks. In addition to these, they perform tasks related to the maintenance of their own specific systems. They spend 27 percent of their total job time performing general egress tasks, such as performing egress final inspections and performing safety wiring. They also spend 20 percent of their job time preparing forms, records, or reports and from 12 to 14 percent performing system-specific maintenance. Because they are working supervisors with both supervisory and technical responsibilities, they perform more tasks than many other job groups, averaging 153, with about 78 tasks taking half their total job time. Representative tasks include the following:

- supervise Aircrew Egress System Mechanics (AFSC 42352)
- determine work priorities
- perform quality inspections on egress systems maintenance
- prepare APRs
- perform section or shop safety inspections
- evaluate compliance with performance standards

The average grade of personnel in this job group is nearly E-6, and 84 percent are qualified at the 7-skill level. Over 87 percent are in their third or subsequent enlistment.

X. SUPERINTENDENTS (GRP103). Five members (nearly 1 percent of the sample) are in this group. Of these five, two are FTD superintendents, one is the CDC writer and course manager, one acts as a functional manager for Headquarters TAC, and one is a branch superintendent. Although the title of superintendent is usually reserved for 9-skill level personnel, this small group holds many of the same responsibilities. Their job, as a group, is almost all supervisory and administrative; 99 percent of their total job time is spent performing tasks related to these duties. They average only 59 tasks and spend half their total job time on 28 tasks. Some tasks representative of their job include the following:

- establish performance standards for subordinates
- direct or implement training programs other than OJT
- evaluate inspection reports or procedures
- write staff studies, surveys, or special reports
- initiate personnel action requests
- make entries on AF Forms 2095 (Assignment/Personnel Action)

Personnel in this group have an average grade of just over E-7, and all hold a duty AFSC of 42372. Three of the five hold a primary AFSC of 42399. They average over 18 years total active federal military service (TAFMS).

Comparison of Specialty Jobs

In addition to individual descriptions of the different jobs, it is helpful to compare them to each other to better understand the career ladder structure. Although the specialty jobs all seem very different from each other--considering the different tasks specific to each system--they also have much in common. A comparison of the jobs in terms of complexity, satisfaction, and task performance highlights the differences and similarities.

Complexity. The Job Difficulty Index (JDI), which is based on the number of tasks performed and the relative difficulty of these tasks with respect to time spent (see Task Factor Administration section), can be used to compare the complexity of career ladder jobs. For example, the Egress System NCOICs have the highest JDI (16.3), well above the standardized average of 13.0. Their job involves a large number of tasks (an average of 152), because they have both supervisory and technical responsibilities. F-4 Egress System Personnel have a JDI almost as high (15.5), indicating they work on a more complex system. Within this cluster, the JDI for different variations of the job ranges to as high as 20.1 for personnel who work on multiple systems at Nellis AFB, Eglin AFB, etc. The job with the lowest JDI (6.1) is that of the OV-10 Egress System Personnel. They perform fewer tasks (an average of only 61) and also perform many of the less difficult tasks. The jobs of the other cluster and independent job types are closer to the standardized average of 13.0 (see Table 5).

Job Satisfaction. As Table 6 shows, job satisfaction indicators are fairly high for most groups and slightly higher for those with supervisory responsibilities. Percentages are nearly the same across most job groups for each of the questions and show that in each group but one, a majority of the personnel responded positively. Pyrotechnicians, however, responded very negatively on all the job satisfaction indicators, but all reported that they intend to reenlist. There are only three members of this group, but all three report they find their job dull and they feel their talents and training are used little or not at all. Their perception that their talents and training are not used may be because they do a lot of depot work not directly related to egress systems, such as removing or installing aircraft fuel tanks and pods. Two of the three report they are dissatisfied with the sense of accomplishment they gain from their work, but one reports he is satisfied. One other group deserves attention: F-106/T-33 Egress System Personnel show a lower percentage (44 percent) who are satisfied with the sense of accomplishment they gain from their job; about one-third report they are dissatisfied, and 24 percent report they are neither satisfied nor dissatisfied.

Tasks Performed. The individual specialty job descriptions point out the differences between each of the job groups. The different job groups, however, perform many of the same general aircrew egress tasks; for most groups, these tasks consumed the largest single percentage of the group's total job time.

Those tasks performed by over 50 percent of the members of 5 or more groups were considered common to those groups. Of the general aircrew egress tasks, five were common to all job groups except the Superintendents (see Table 7). Eighteen tasks were common to all job groups except the Superintendents and the Module Egress System Personnel. These tasks, listed in Table 8, include inspecting, removing, or installing ejection seat inertia reels, initiators, and ejection seat positioning actuators, as well as other tasks. Overall, about 54 percent of the general tasks were common to 5 or more groups, indicating there is much commonality between the different egress systems.

The commonality between many of the groups also highlights the differences in two of the job groups. The first group, Superintendents, do not perform technical tasks. The second group, Module Egress System Personnel, do not perform many of the common set of tasks because the systems they work on are much different. The F-111 module egress system involves maintenance of the module, rather than of the ejection seat alone, as in other aircraft systems. The differences in this group can be seen more clearly in Table 9; the box highlights the data for Module Egress System Personnel.

One of the reasons for conducting this survey was to examine the possibility of subdividing the specialty by seat technology. As the individual descriptions of the job groups pointed out, there is a great deal of difference between the various egress systems. As the above discussion emphasized, there is still a great deal of commonality between the systems, suggesting that a single, unified specialty is appropriate. The differences between the systems will impact training, though, as will be discussed in a later section of this report.

TABLE 5
SELECTED BACKGROUND DATA FOR SPECIALTY JOB GROUPS

	CLUSTERS				INDEPENDENT JOB TYPES	
	ACES II PERSONNEL		JOB TYPES		T-37/T-38	F-106/T-33
	F-4 EGRESS SYSTEM PERSONNEL	TOTAL	A-10	F-15	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL
NUMBER IN GROUP	300	167			89	25
PERCENT OF SAMPLE	35%	20%			10%	3%
AVERAGE NUMBER OF TASKS	171	99	81	98	134	115
JOB DIFFICULTY INDEX (JDI)	15.5	10.8	8.0	10.1	13.3	12.2
MAJCOM (PERCENT):						
TAC	56%	65%	54%	71%	65%	68%
USAFE	20%	18%	27%	14%	21%	0
ATC	1%	4%	4%	0	7%	0
SAC	*	0	0	0	0	0
PACAF	12%	5%	8%	2%	6%	4%
OTHER	9%	8%	7%	13%	1%	28%
DAFSC (PERCENT):						
42332	6%	10%	4%	4%	12%	12%
42352	64%	66%	81%	79%	56%	60%
42372	30%	25%	15%	17%	32%	28%
AVERAGE GRADE						
AVERAGE TICF (MOS)	E-4	E-4	E-4	E-4	E-4	E-4
AVERAGE TAFMS (MOS)	65	55	40	52	64	72
PERCENT FIRST ENLISTMENT	77	65	45	58	78	74
	42	56	65	58	54	44

* Less than 1 percent

TABLE 5 (Continued)
 SELECTED BACKGROUND DATA FOR SPECIALTY JOB GROUPS

	B-52 EGRESS SYSTEM PERSONNEL	MODULE EGRESS SYSTEM PERSONNEL	INDEPENDENT JOB TYPES				SUPER- INTENDENTS
			OV-10 EGRESS PERSONNEL	EGRESS SYSTEM PERSONNEL	PYRO- TECHNICIANS	SYSTEM NCOIC	
NUMBER IN GROUP	47	50	7	3	5		
PERCENT OF SAMPLE	6%	6%	1%	*	1%		
AVERAGE NUMBER OF TASKS	87	88	61	154	59		
JOB DIFFICULTY INDEX (JDI)	10.5	12.1	6.1	14.7	14.9		
MAJCGM (PERCENT):							
TAC	0	38%	0	0	45%	20%	
USAFE	0	36%	57%	0	20%	20%	
ATC	2%	2%	0	0	2%	60%	
SAC	98%	18%	0	0	22%	0	
PACAF	0	0	43%	0	5%	0	
OTHER	0	6%	0	100%	6%	0	
DAFSC (PERCENT):							
42332	13%	20%	0	0	0	0	
42352	74%	58%	57%	100%	15%	0	
42372	13%	22%	43%	0	84%	100%	
AVERAGE GRADE							
AVERAGE TICF (MOS)	E-4 49	E-4 60	E-4 72	E-5 108	E-6 141	E-7 181	
AVERAGE TAFMS (MOS)	53	68	110	112	165	218	
PERCENT FIRST ENLISTMENT	53	48	29	0	5	0	

* Less than 1 percent

TABLE 6

JOB SATISFACTION INDICATORS BY SPECIALTY GROUP
(PERCENT MEMBERS RESPONDING)*

	CLUSTERS			INDEPENDENT JOB TYPES			
	F-4 EGRESS SYSTEM PERSONNEL	ACES II PERSONNEL		T-37/T-38 EGRESS SYSTEM PERSONNEL	F-106/T-33 EGRESS SYSTEM PERSONNEL		
		JOB TYPES	TOTAL		A-10	F-15	F-16
<u>EXPRESSED JOB INTEREST:</u>							
DULL	15	16	23	12	14	18	8
SO-SO	25	19	19	23	17	23	32
INTERESTING	58	64	58	65	68	60	60
<u>PERCEIVED USE OF TALENTS:</u>							
LITTLE OR NOT AT ALL	32	28	23	27	28	30	24
FAIRLY WELL TO PERFECTLY	68	72	77	73	71	70	76
<u>PERCEIVED USE OF TRAINING:</u>							
LITTLE OR NOT AT ALL	10	8	4	10	10	10	12
FAIRLY WELL TO PERFECTLY	90	90	96	90	88	90	88
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>							
DISSATISFIED	24	20	19	14	24	15	32
NEUTRAL	16	16	15	19	13	20	22
SATISFIED	60	64	65	67	64	65	44
<u>REENLISTMENT INTENTIONS:</u>							
WILL RETIRE	3	2	0	0	4	3	0
WILL NOT/PROBABLY WILL NOT REENLIST	23	23	12	29	22	26	24
WILL/PROBABLY WILL REENLIST	73	73	85	71	71	70	76

* Columns may not add up to 100 percent due to rounding and nonresponse

TABLE 6 (Continued)

JOB SATISFACTION INDICATORS BY SPECIALTY GROUP
(PERCENT MEMBERS RESPONDING)*

	INDEPENDENT JOB TYPES									
	B-52		MODULE		OV-10		EGRESS			
	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL	EGRESS SYSTEM PERSONNEL	PYRO-TECHNICIANS	EGRESS SYSTEM NCOs	SUPER-INTENDENTS	
<u>EXPRESSED JOB INTEREST:</u>										
DULL	15	14	14	14	14	14	100	9	20	
SO-SO	28	28	28	29	29	29	0	20	0	
INTERESTING	57	58	58	57	57	57	0	71	80	
<u>PERCEIVED USE OF TALENTS:</u>										
LITTLE OR NOT AT ALL	21	24	24	14	14	14	100	20	20	
FAIRLY WELL TO PERFECTLY	79	76	76	86	86	86	0	80	80	
<u>PERCEIVED USE OF TRAINING:</u>										
LITTLE OR NOT AT ALL	4	10	10	0	0	0	100	12	20	
FAIRLY WELL TO PERFECTLY	96	90	90	100	100	100	0	88	80	
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>										
DISSATISFIED	28	10	10	14	14	14	67	23	20	
NEUTRAL	11	16	16	29	29	29	0	13	0	
SATISFIED	62	72	72	57	57	57	33	64	80	
<u>REENLISTMENT INTENTIONS:</u>										
WILL RETIRE	2	6	6	14	14	14	0	13	20	
WILL NOT/PROBABLY WILL NOT REENLIST	30	22	22	14	14	14	0	12	40	
WILL/PROBABLY WILL REENLIST	68	72	72	71	71	71	100	76	40	

* Columns may not add up to 100 percent due to rounding and nonresponse

TABLE 7

GENERAL EGRESS TASKS COMMON TO NINE OF TEN JOB GROUPS*
(PERCENT MEMBERS PERFORMING)

TASKS	F-4	ACES II	T-37/ T-38	F-106/ T-33	B-52	MODULE	OV-10	PYRO	NCOTCS
F137 ADJUST INERTIA REEL, LINKAGES, OR CONTROLS	96	66	94	100	89	64	72	80	72
F168 PACK OR UNPACK EXPLOSIVE COMPONENTS FOR SHIPPING	58	59	69	80	77	68	51	59	71
F170 PERFORM COCKPIT FOD CHECKS	92	90	94	100	64	82	85	89	86
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	95	92	99	100	100	68	80	90	86
F179 PERFORM SAFETY WIRING	93	96	94	96	98	88	89	91	84

* Superintendents not listed

TABLE 8

GENERAL EGRESS TASKS COMMON TO EIGHT OF TEN JOB GROUPS*
(PERCENT MEMBERS PERFORMING)

TASKS	F-4	ACES II	T-37/ T-38	F-106/ T-33	B-52	MODULE	OV-10	PYRO	NCOICs
F138 ARM OR DEARM EJECTION SEATS	98	90	99	100	96	34	84	89	79
F141 INSPECT BALLISTIC HOSES	95	95	99	100	100	10	79	86	98
F149 INSPECT EJECTION SEAT BALLISTIC LINKAGES	80	55	87	88	77	6	56	60	77
F150 INSPECT EJECTION SEAT CATAPULTS	93	90	96	100	98	6	77	84	91
F155 INSPECT EJECTION SEAT INERTIA, REELS, LINKAGES, STRAPS, OR CONTROLS	96	95	99	100	98	42	81	87	95
F156 INSPECT EJECTION SEAT LAP BELTS	95	96	97	100	64	20	81	86	88
F158 INSPECT EJECTION SEAT POSITIONING ACTUATORS	87	57	67	72	98	16	65	67	74
F160 INSPECT EJECTION SEAT STRUCTURES	83	92	90	100	96	14	72	80	94
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	83	70	91	92	98	20	62	73	90
F171 PERFORM CORROSION CONTROL ON EJECTION SEAT SYSTEMS, SUCH AS SCRAPING, PAINTING OR ANTICORROSION TREATMENT	86	81	94	88	70	22	71	77	76
F182 PERFORM TC TO MODIFICATIONS TO EJECTION SEATS	78	86	84	100	81	6	67	78	86
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	55	72	90	96	55	8	55	65	57
F189 REMOVE OR INSTALL EGRESS SYSTEM BALLISTIC OR PNEUMATIC LINES, TUBES OR HOSES	91	75	84	88	94	42	70	79	65
F190 REMOVE OR INSTALL EJECTION CATAPULTS	96	83	92	88	89	10	75	85	77
F191 REMOVE OR INSTALL EJECTION SEAT BALLISTIC LINKAGES OR CABLES	74	50	75	80	72	2	49	58	52
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	95	92	93	96	96	40	75	88	76
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	94	80	88	92	94	18	68	78	73
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	89	60	71	96	94	8	62	76	65

* Superintendents not listed

ANALYSIS OF DAFSC GROUPS

Examining the occupational survey data by skill levels, as well as by job groups, is also helpful in understanding the Aircrew Egress Systems specialty. The DAFSC analysis compares the skill levels to highlight any differences in tasks performed. This information is especially helpful in evaluating career ladder documents such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

A comparison of duty and task performance between the 3- and 5-skill level (42332 and 42352) personnel indicates the jobs they perform are nearly the same, with only a few minor differences. In this report, therefore, they are discussed as one group. The distribution of skill-level groups across the career ladder jobs is shown in Table 9. To give a sense of the progression through the skill levels, relative time spent on each duty by skill-level group is presented in Table 10.

Skill-Level Descriptions

DAFSC 42332/52. Of the survey sample, 565 (66 percent) are qualified at a 3- or 5-skill level. As a group, their average number of tasks performed is 116, with 82 tasks accounting for about half their job time. Their Job Difficulty Index (JDI) is 11.8, fairly close to the standardized average of 13.0. Their work is primarily technical, and 38 percent of their total job time, as a group, is spent on general aircrew egress tasks common to many of the different egress systems. This is consistent with the job group descriptions in the previous section, which mentioned that these general tasks took over a third of many of the different groups' time. Representative tasks for DAFSC 42332/52 personnel are shown in Table 11. Only about 9 percent of the total job time of this group is spent on supervisory-related tasks, reflective of the fact that only 22 percent report they supervise other personnel. The majority of this group (60 percent) are in their first enlistment, and 30 percent are in their second enlistment. All job satisfaction indicators are high, with at least 60 percent responding positively toward job interest, use of talents and training, and sense of accomplishment. Perceived use of training was especially high; 91 percent reported that their job utilizes their training fairly well to perfectly. Reenlistment intentions were also positive, with 70 percent reporting they are likely to reenlist.

DAFSC 42372. About a third of the sample (34 percent) is qualified at the 7-skill level. They perform more tasks than 3- and 5-skill level personnel, averaging 148 tasks, with 97 taking about half their total job time. Their JDI is also higher (15.4), reflecting the greater number of tasks and the more difficult supervisory tasks they perform. DAFSC 42372 personnel continue to perform technical tasks while increasing the amount of supervisory responsibilities. The box in Table 10 highlights the increased amount of time spent by 7-skill level personnel on supervisory-related duties. The increased supervisory responsibilities are also reflected in the percentage who report they supervise other personnel (83 percent). Representative tasks for DAFSC 42372 personnel are listed in Table 12. Note that over 75 percent perform both

supervisory and technical tasks, demonstrating the mixed content of their job. About 77 percent of this group are in their third or subsequent enlistment. Job satisfaction indicators are again high; 63 percent or more responded positively regarding job interest, utilization of talents and training, and sense of accomplishment from work. As with 3- and 5-skill level personnel, an especially large percentage (89 percent) of 7-skill level personnel perceived that their training is utilized fairly well to perfectly. Seventy-eight percent report they are likely to reenlist.

Table 13 presents tasks which show differences between DAFSC 42332/52 and 42372 personnel. Note that differences occur mostly in the supervisory tasks which 7-skill level personnel perform and 3- and 5-skill level personnel do not perform. Of tasks performed by more 3- and 5-skill level personnel than 7-skill level personnel, only 1 showed a difference of over 10 percent of the members performing, and this task was performed by less than a third of DAFSC 42332/52 personnel. The nature of the differences indicates that all personnel perform the general duties of the career field, which are primarily technical in nature, and 7-skill level personnel perform supervisory duties in addition. This finding is consistent with the AFR 39-1 Specialty Description for the Aircrew Egress Systems Technician.

TABLE 9
DISTRIBUTION OF DAFSC GROUP MEMBERS
ACROSS CAREER LADDER JOB GROUPS
(NUMBER RESPONDING)

JOB GROUPS	DAFSC 42332/52	DAFSC 42372
I. F-4 EGRESS SYSTEM CLUSTER (N=300)	211	89
II. ACES II CLUSTER (N=167)	126	41
III. T-37/T-38 EGRESS SYSTEM PERSONNEL (N=89)	66	23
IV. F-106/T-33 EGRESS SYSTEM PERSONNEL (N=25)	18	7
V. B-52 EGRESS SYSTEM PERSONNEL (N=47)	41	6
VI. MODULE EGRESS SYSTEM PERSONNEL (N=50)	39	11
VII. OV-10 EGRESS SYSTEM PERSONNEL (N=7)	4	3
VIII. PYROTECHNICIANS (N=3)	3	0
IX. EGRESS SYSTEM NCOICs (N=86)	13	72
X. SUPERINTENDENTS (N=5)	0	5
NOT GROUPED	<u>44</u>	<u>30</u>
TOTAL	565	287

TABLE 10
RELATIVE PERCENT TIME SPENT ON
DUTIES BY DAFSC GROUPS

JOB GROUPS	DAFSC 42332/52 (N=565)	DAFSC 42372 (N=287)
A ORGANIZING AND PLANNING	2	7
B DIRECTING AND IMPLEMENTING	4	8
C INSPECTING AND EVALUATING	1	6
D TRAINING	2	5
E PREPARING FORMS, RECORDS, OR REPORTS	11	14
F PERFORMING GENERAL AIRCREW EGRESS TASKS	38	29
G MAINTAINING AIRCREW EGRESS NONPOWERED AGE AND SUPPORT EQUIPMENT	4	3
H MAINTAINING ADVANCED CONCEPT EJECTION SEAT (ACES II) SYSTEMS	8	8
I MAINTAINING F-4 EGRESS SYSTEMS	16	11
J MAINTAINING F/EF-111, FB-111 MODULE EGRESS SYSTEMS	4	2
K MAINTAINING F-101 EGRESS SYSTEMS	*	0
L MAINTAINING F-106 EGRESS SYSTEMS	1	1
M MAINTAINING B-52 EGRESS SYSTEMS	1	1
N MAINTAINING T-33 EGRESS SYSTEMS	1	1
O MAINTAINING T-38 OR F-5 EGRESS SYSTEMS	4	2
P MAINTAINING T-37 OR A-37 EGRESS SYSTEMS	2	1
Q MAINTAINING A-7 EGRESS SYSTEMS	*	*
R PERFORMING CROSS UTILIZATION TRAINING (CUT) DUTIES	1	1
TOTAL	100	100

* Less than 1/2 percent

TABLE 11
REPRESENTATIVE TASKS PERFORMED
BY 42332/52 PERSONNEL

TASKS	PERCENT PERFORMING (N=565)
F179 PERFORM SAFETY WIRING	89
F138 ARM OR DEARM EJECTION SEATS	87
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	87
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	86
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	86
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	85
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	85
F170 PERFORM COCKPIT FOD CHECKS	84
F141 INSPECT BALLISTIC HOSES	84
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	84
F156 INSPECT EJECTION SEAT LAP BELTS	82
F150 INSPECT EJECTION SEAT CATAPULTS	81
F190 REMOVE OR INSTALL EJECTION CATAPULTS	81
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	79
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	78
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	77
F160 INSPECT EJECTION SEAT STRUCTURES	77
F171 PERFORM CORROSION CONTROL ON EJECTION SEAT SYSTEMS, SUCH AS SCRAPING, PAINTING OR ANTI-CORROSION TREATMENT	75
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	75
F189 REMOVE OR INSTALL EGRESS SYSTEM BALLISTIC OR PNEUMATIC LINES, TUBES, OR HOSES	75
F201 REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	73
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	71
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	70
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	70
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	68

TABLE 12
REPRESENTATIVE TASKS PERFORMED BY
43272 PERSONNEL

TASKS	PERCENT PERFORMING (N=287)
F141 INSPECT BALLISTIC HOSES	89
A1 ADVISE MAINTENANCE PERSONNEL ON EGRESS SYSTEMS MAINTENANCE	87
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	87
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	84
B34 SUPERVISE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42352)	83
F150 INSPECT EJECTION SEAT CATAPULTS	83
C56 PREPARE APRs	83
F179 PERFORM SAFETY WIRING	83
F177 PERFORM OPERATIONAL CHECKS OR SEAT INERTIA REELS	83
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	82
F170 PERFORM COCKPIT FOD CHECKS	82
F156 INSPECT EJECTION SEAT LAP BELTS	82
F160 INSPECT EJECTION SEAT STRUCTURES	82
B22 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	82
F172 PERFORM EGRESS FINAL INSPECTIONS	81
F178 PERFORM QUALITY INSPECTIONS ON EGRESS SYSTEMS MAINTENANCE	81
F138 ARM OR DEARM EJECTION SEATS	80
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	80
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	79
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	79
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	78
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	76
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	76
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	76
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	75

TABLE 13

REPRESENTATIVE TASK DIFFERENCES BETWEEN 42332/52
AND 42372 PERSONNEL
(PERCENT MEMBERS RESPONDING)

TASKS	DAFSC 42332/52 (N=565)	DAFSC 42372 (N=287)	DIFFERENCE
R631 POSITION NONPOWERED OR POWERED AEROSPACE GROUND EQUIPMENT (AGE) TO AIRCRAFT	32	20	+12
.	.	.	.
.	.	.	.
.	.	.	.
D62 CONDUCT OJT	29	65	-36
A5 DETERMINE WORK PRIORITIES	34	72	-38
A16 PLAN WORK ASSIGNMENTS	21	60	-39
D66 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	30	70	-40
E102 MAKE ENTRIES ON AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	35	75	-40
D65 COUNSEL TRAINEES ON TRAINING PROGRESS	21	63	-42
B34 SUPERVISE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42352)	40	83	-43
F178 PERFORM QUALITY INSPECTIONS ON EGRESS SYSTEMS MAINTENANCE	37	81	-44
D76 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	19	64	-45
B31 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	19	66	-47
F172 PERFORM EGRESS FINAL INSPECTIONS	33	81	-48
B22 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	27	82	-55
C56 PREPARE APRS	25	83	-58

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

AFR 39-1 Specialty Descriptions are intended to provide a broad overview of duties and responsibilities for each skill level of a specialty. The Specialty Descriptions for AFSC 423X2 are dated 1 January 1982. Comparing occupational survey data by skill level, as discussed in the previous section, to the specialty descriptions for the Aircrew Egress Systems Mechanic (AFSC 42312, 42332, and 42352) and for the Aircrew Egress Systems Technician (AFSC 42372) shows that AFR 39-1 accurately reflects the responsibilities of the appropriate skill levels. The duties and responsibilities explained in the specialty description for the Aircrew Egress Systems Mechanic, which relate to maintenance of egress systems, are well supported by survey data. The same is true of the description of the Technician's duties and responsibilities, which relates to maintenance of egress systems and to supervision of egress systems maintenance personnel.

ANALYSIS OF TAFMS GROUPS

To understand how jobs within a career ladder change with time and experience, occupational survey data are also analyzed by total active federal military service (TAFMS) groups. Table 14 presents relative percent time spent on duties for first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97 or more months TAFMS) groups. The Aircrew Egress Systems specialty is typical of most specialties in that performance of supervisory, managerial, and training tasks increases as time in service and experience increase. The vertical box in Table 14 highlights this fact. As members spend more time on these duties, there is a slight decrease in the relative percent time they spend on technical tasks that are more general in nature, as highlighted by the horizontal box in Table 14.

First-Enlistment Personnel

The survey sample contains 344 airmen (40 percent) in their first enlistment. About one-third are in their first job (1-24 months TAFMS). About 60 percent of the first-enlistment personnel hold the grade of E-3, and over 99 percent are E-4 or below. As a group, they perform an average of 110 tasks, concentrating on the more general aircrew egress tasks, though they perform a full range of technical tasks on their specific egress systems. Table 15 lists representative tasks for this group and Figure 2 shows the distribution across specialty jobs. Comparing Figure 2 to Figure 1 in the SPECIALTY JOBS section shows percentages of first-enlistment personnel are slightly greater than the total population for ACES II and less than the total population for Egress System NCOICs. Also, Pyrotechnicians and Superintendents are not represented by first-term personnel. These findings have some implications for specialty training programs which will be discussed in the next section of this report.

Job Satisfaction

TAFMS group perceptions of jobs, together with similar data for comparative groups, may give managers a better understanding of some of the factors which may affect the job performance of airmen in the career field. Five attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from the work, and reenlistment intentions provided this information. Table 14 presents this data for 423X2 TAFMS groups and for a comparative sample of mission equipment maintenance AFSs surveyed in 1983.

A comparison of the two samples shows that percentages responding positively on job interest, perceived use of talents, and sense of accomplishment are slightly lower for 423X2 personnel. They are, however, still high, with about two-thirds or more responding positively, and reenlistment intentions are slightly higher than the comparative sample. Note that the percentage of 423X2 personnel reporting their training is used fairly well to perfectly is extremely high. The responses to the job attitude questions on the inventory indicate that, for the most part, Aircrew Egress Systems personnel are satisfied with their jobs and especially pleased with how they are using their training.

FIGURE 2

DISTRIBUTION OF FIRST-ENLISTMENT PERSONNEL
ACROSS JOB SPECIALTY GROUPS
(PERCENT MEMBERS PERFORMING)

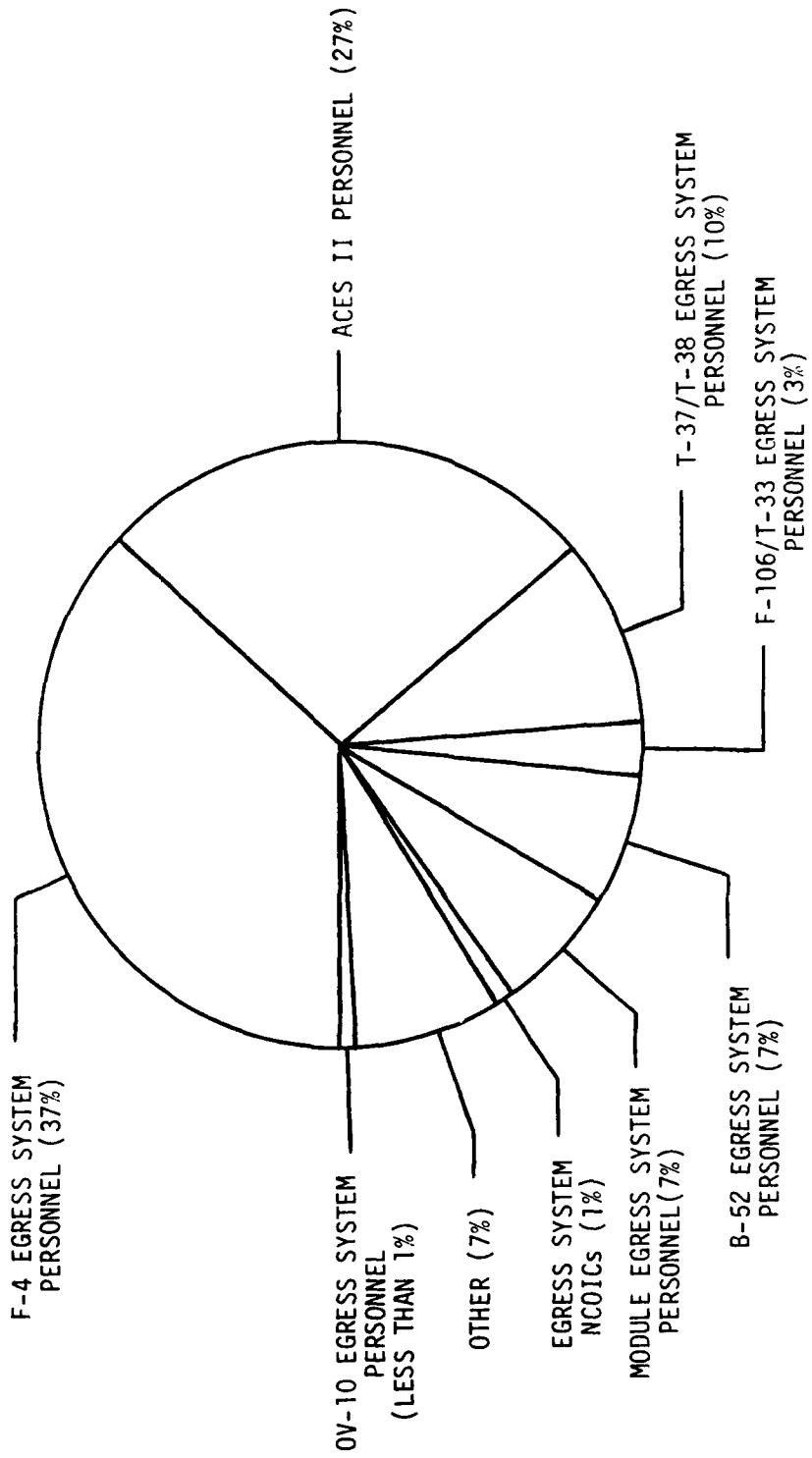


TABLE 14
RELATIVE PERCENT TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	TAFMS (MONTHS)		
	1-48 (N=344)	49-96 (N=228)	97+ (N=278)
A ORGANIZING AND PLANNING	1	4	7
B DIRECTING AND IMPLEMENTING	3	5	8
C INSPECTING AND EVALUATING	*	2	6
D TRAINING	*	3	6
E PREPARING FORMS, RECORDS, OR REPORTS	11	11	15
F PERFORMING GENERAL AIRCREW EGRESS TASKS	40	36	28
G MAINTAINING AIRCREW EGRESS NONPOWERED AGE AND SUPPORT EQUIPMENT	5	3	3
H MAINTAINING ADVANCED CONCEPT EJECTION SEAT (ACES II) SYSTEMS	10	6	7
I MAINTAINING F-4 EGRESS SYSTEMS	16	16	11
J MAINTAINING F/EF-111, FB-111 MODULE EGRESS SYSTEMS	4	5	2
K MAINTAINING F-101 EGRESS SYSTEMS	*	*	0
L MAINTAINING F-106 EGRESS SYSTEMS	*	*	*
M MAINTAINING B-52 EGRESS SYSTEMS	1	1	1
N MAINTAINING T-33 EGRESS SYSTEMS	*	*	*
O MAINTAINING T-38 OR F-5 EGRESS SYSTEMS	3	4	2
P MAINTAINING T-37 OR A-37 EGRESS SYSTEMS	2	2	1
Q MAINTAINING A-7 EGRESS SYSTEMS	*	*	*
R PERFORMING CROSS UTILIZATION TRAINING DUTIES	1	1	*

* Less than 1 percent

TABLE 15

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT PERFORMING (N=344)
F179 PERFORM SAFETY WIRING	90
F138 ARM OR DEARM EJECTION SEATS	88
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	87
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	86
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	86
F170 PERFORM COCKPIT FOD CHECKS	85
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	85
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	85
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	84
F141 INSPECT BALLISTIC HOSES	84
F190 REMOVE OR INSTALL EJECTION CATAPULTS	83
F156 INSPECT EJECTION SEAT LAP BELTS	82
F150 INSPECT EJECTION SEAT CATAPULTS	80
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	78
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	77
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	76
F160 INSPECT EJECTION SEAT STRUCTURES	76
F189 REMOVE OR INSTALL EGRESS SYSTEM BALLISTIC OR PNEUMATIC LINES, TUBES, OR HOSES	75
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	74
F171 PERFORM CORROSION CONTROL ON EJECTION SEAT SYSTEMS, SUCH AS SCRAPING, PAINTING, OR ANTI-CORROSION TREATMENT	74
F201 REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	73
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	73
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	69
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	69
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	68

TABLE 16

JOB SATISFACTION INDICATORS BY TAFMS GROUP
(PERCENT MEMBERS RESPONDING)*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	423X2 (N=344)	COMPARATIVE SAMPLE** (N=3,206)	423X2 (N=228)	COMPARATIVE SAMPLE** (N=1,447)	423X2 (N=278)	COMPARATIVE SAMPLE** (N=2,200)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	14	10	18	12	13	7
SO-SO	26	18	23	15	18	12
INTERESTING	60	70	58	72	68	79
<u>PERCEIVED USE OF TALENTS:</u>						
LITTLE OR NOT AT ALL	31	20	30	19	22	15
FAIRLY WELL TO PERFECTLY	69	79	70	81	78	85
<u>PERCEIVED USE OF TRAINING:</u>						
LITTLE OR NOT AT ALL	7	20	12	22	11	19
FAIRLY WELL TO PERFECTLY	93	80	88	77	88	81
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
DISSATISFIED	17	16	28	20	22	18
NEUTRAL	18	13	17	11	12	9
SATISFIED	66	71	56	69	66	73
<u>REENLISTMENT INTENTIONS:</u>						
WILL RETIRE	0	0	0	0	13	19
WILL NOT/PROBABLY WILL NOT REENLIST	34	46	22	29	9	8
WILL/PROBABLY WILL REENLIST	64	53	78	70	78	72

* Columns may not equal 100 percent due to nonresponse and rounding
 ** Comparative sample of mission maintenance career ladders surveyed in 1983, including
 AFSS 30XXX, 31XXX, 32XXX, 34XXX, 36XXX, 40XXX, 42XXX, 43XXX, 44XXX, 45XXX, and 46XXX

TRAINING ANALYSIS

Information gathered with the occupational survey is also used to assist the development or evaluation of training programs that are relevant for personnel working in their first assignments. Some factors which may be used include percent of first-job (1-24 months TAFMS) or first-enlistment (1-48 months TAFMS) personnel performing tasks, along with training emphasis (TE) and task difficulty (TD) ratings (as explained in the Task Factor Administration section). These factors were used in evaluating the 423X2 STS and the POI for Course 3ABR42332, based on the matching of inventory tasks to appropriate sections of the STS and POI by technical school personnel from the Chanute Technical Training Center, Chanute AFB IL. A complete computer listing displaying the percent members performing, TE and TD ratings for each task, along with STS and POI matchings, has been forwarded to the technical school for use in further detailed reviews of training documents. A summary of that information is described below.

Training Emphasis

Training emphasis ratings are helpful in determining which tasks are most important for first-enlistment training. Twenty tasks rated by senior egress system personnel as highest in importance for first-enlistment training are listed in Table 17. This list shows the types of tasks considered most important for training in the egress system specialty. Note that all but one task are performed by a majority of first-enlistment personnel, and even this one is performed by over 30 percent. In all, 112 tasks were rated high in TE.

When matched to training documents, such as the STS and POI, TE ratings can be helpful in determining which tasks personnel should be trained on. For example, of the 112 tasks rated high in TE, all but about 30 are taught in the basic course. These tasks will be discussed more completely in a review of the POI later.

Specialty Training Standard (STS)

A comprehensive review of STS 423X2, dated August 1982, compared STS items to occupational survey data. To evaluate the STS, which provides comprehensive coverage of the significant jobs performed by personnel in the field, survey data were matched to significant paragraphs or subparagraphs. Two problems with the STS however, made it difficult to evaluate.

First, the STS is very general. The diversity of the career field, due to the many different egress systems, makes it necessary to keep the STS items general; however, subject-matter specialists may need to consider making subparagraphs relating to egress systems, canopy systems, ejection seats, escape hatches, and module systems more specific. Most of the technical tasks can be matched to these items, yet only a little over one page of the STS is devoted to these items. The STS does cover nearly every task in the inventory, but the STS items are of such a general nature as to be of questionable practical

utility. Subject-matter specialists should review the STS items to determine if they should be more specific and detailed.

Another difficulty with evaluating the STS is the coding for many of the technical items. These items are often given a proficiency code of 2b for the 3-skill level column, indicating that airmen are trained to this level of proficiency in the basic course. While many tasks related to these items are, in fact, trained to this level of proficiency in the basic course, several such tasks are not covered in the ABR course, but rather are taught either in an AZR course or through FTD instruction. For example, the ABR course covers orientation to the module and escape hatch systems, while an AZR course for SAC personnel gives instruction on maintenance of those systems and FTDs cover each system in greater depth. Yet, the STS code for 3-level personnel assigned to F/FB-111 and B-52 aircraft indicates these personnel are trained to the 2b proficiency level in the basic course. In terms of the orientation received in the basic course, the coding should probably be 2b/B. A similar problem is evident in the codes which cover other egress systems. The basic course teaches orientation and component operation, basic maintenance, and ejection seat removal and installation, while FTDs provide more extensive instruction in seat teardown and repair for each egress system. Subject-matter specialists should review the STS to determine if the codes should be adjusted to better reflect training in the basic course or if training should be revised. Currently, there is no mechanism to reflect FTD training and required proficiency in the present STS format.

Plan of Instruction (POI)

A similar match of survey data to the POI for Course 3ABR42332 shows that most blocks are well supported, but here too, there are a few problems. Based on previously mentioned assistance from subject-matter specialists in matching inventory tasks to the POI, computer products were generated displaying the results of the matching process. Information on these products includes TE and TD ratings, as well as percent members performing the tasks for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel.

One block that did not have tasks matched to it (Block IV.3., Aerospace Ground Equipment) is supported by high percentages responding in a background question that required respondents to identify the AGE with which they work. Two blocks, (III.2., Module Egress System and IV.3., Escape Hatch System), however, are not supported by survey data. The few tasks matched to items in these blocks are rated very low in TE and are performed by less than 10 percent of the first-enlistment personnel. Examination of data for just F/FB-111 and B-52 personnel shows higher TE ratings and percent performing, indicating these two blocks are appropriate for personnel who work on these aircraft egress systems. Further, training on these systems is provided in an AZR course and in FTDs, as mentioned in the previous discussion. The question, then, is whether the total of 20 hours of instruction in these two blocks is appropriate for the basic course when only the small numbers working on F-111 and B-52 systems will use such training. Perhaps all such Module Egress System and Escape Hatch training should be moved into the AZR or FTD training phase.

Training personnel should review these two blocks to determine if they should be excluded from the basic course. If general familiarization to these two systems is important, training personnel should review the blocks to determine if the time devoted to this training should be shortened.

Another area of concern with the POI is related to tasks not referenced to any blocks. Those tasks high in overall TE are candidates for inclusion in the basic course, especially when many first-term personnel are performing them. Of the 467 tasks not referenced, 33 are high in TE. Some of these, such as conduct OJT or supervise apprentice aircrew egress systems mechanics, are not appropriate for resident school instruction. Others are specific to a particular system and may not be appropriate for all personnel. Many of the unmatched tasks, however, are general aircrew egress tasks that apply to many egress systems and can be taught through formal training. Sixteen unmatched tasks with high TE ratings are performed by at least 50 percent of the first-term personnel in the sample, and an additional 11 are performed by between 30 and 50 percent of the first-termers. See Table 18 for a list of all unmatched tasks that have high TE ratings.

Of the remaining tasks not referenced--those not rated high in TE--most relate to specific systems. None of these tasks are performed by 50 percent or more of the total first-enlistment personnel group, indicating they are not common across egress systems, but are performed mainly by those personnel maintaining that particular system. Much of the training specific to each egress system is given through FTD instruction, and most tasks not referenced to the POI are quite possibly covered by individual FTD courses. However, due to the general nature of many FTD course training standards (CTS), the lack of standardization in FTD documentation, and the large number of FTDs, this training cannot be evaluated. While it is possible to identify from the inventory those tasks that should be taught, based on survey data specific to each system (such as TE and percent members performing), FTD documentation does not allow comparison of what should be taught to what actually is taught. Appendix B provides a list of those tasks important for training for each system, which may be helpful in bringing about needed improvement in standardization and specificity of documentation for FTD courses.

By way of summary, it is important to note that, in general, training on egress systems seems to be effective. Interviews indicate that personnel in the field are well trained for their job by the time they finish the resident FTD courses. The fact that very high percentages of personnel report they feel their training is used fairly well to perfectly also supports the impression that training generally is effective. The problem seems to be primarily one of documentation. Somewhere in the process, egress system trainers are giving the training that is needed, but it is difficult to evaluate how cost-efficient the training is in terms of factors such as time spent giving the training and possible duplication of training between the resident course and FTDs. Survey data should provide a useful basis for improvement of training documentation, as well as evaluation of FTD training by personnel familiar with the particulars of those FTD courses.

TABLE 17

EXAMPLES OF TASKS IMPORTANT FOR TRAINING

TASKS	TNG EMP*	FIRST- JOB (N=114)	FIRST- ENL (N=344)	TASK DIFF**
F138 ARM OR DEARM EJECTION SEATS	6.95	87%	88%	4.51
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	6.84	84%	84%	3.35
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	6.67	86%	86%	3.83
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	6.38	74%	78%	5.51
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	6.30	81%	85%	4.46
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	6.29	89%	86%	3.68
F141 INSPECT BALLISTIC HOSES	6.17	81%	84%	4.18
F160 INSPECT EJECTION SEAT STRUCTURES	6.08	67%	76%	5.12
F170 PERFORM COCKPIT FOD CHECKS	6.01	77%	85%	3.34
F150 INSPECT EJECTION SEAT CATAPULTS	5.95	73%	80%	4.72
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	5.90	61%	69%	4.33
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	5.82	81%	87%	3.83
F149 INSPECT EJECTION SEAT BALLISTIC LINKAGES	5.74	53%	58%	4.94
F179 PERFORM SAFETY WIRING	5.66	90%	90%	2.73
F156 INSPECT EJECTION SEAT LAP BELTS	5.65	75%	82%	3.41
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.65	79%	85%	5.17
F190 REMOVE OR INSTALL EJECTION CATAPULTS	5.49	78%	83%	4.19
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	5.45	71%	70%	4.77
B21 CONTROL HANDLING, SEGEGATION, OR STORAGE OF BALLISTIC OR EXPLOSIVE DEVICES	5.44	33%	39%	5.01
F171 PERFORM CORROSION CONTROL ON EJECTION SEAT SYSTEMS, SUCH AS SCRAPING, PAINTING OR ANTI-CORROSION TREATMENT	5.40	69%	74%	4.07

* Average training emphasis is 1.78; high TE is 3.33

** Average task difficulty is 5.00

TABLE 18

TASKS HIGH IN TRAINING EMPHASIS NOT REFERENCED TO POI 3ABR42332

TASKS	TNG EMP*	FIRST- JOB (N=114)	FIRST- ENL (N=344)	TASK DIFF**
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.65	79%	85%	5.17
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	5.45	71%	69%	4.77
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	5.27	49%	54%	4.20
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	5.24	33%	47%	3.69
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	5.09	52%	64%	3.09
F193 REMOVE OR INSTALL EJECTION SEAT DROGUE GUNS	5.08	56%	64%	4.07
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	4.89	48%	58%	3.33
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	4.82	47%	58%	3.44
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	4.79	54%	68%	4.81
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	4.71	51%	60%	5.00
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	4.55	47%	55%	3.52
F175 PERFORM OPERATIONAL CHECKS OF LAP BELT AUTOMATIC RELEASE MECHANISMS	4.46	39%	50%	4.57
F188 REMOVE OR INSTALL CANOPY THRUSTERS	4.46	44%	50%	5.28
F182 PERFORM TC TO MODIFICATIONS TO EJECTION SEATS	4.45	62%	73%	5.81
E102 MAKE ENTRIES ON AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	4.30	18%	22%	5.19
F195 REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	4.25	56%	64%	3.61
F194 REMOVE OR INSTALL EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	4.24	40%	52%	5.08
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	4.21	26%	37%	6.09
E84 MAKE ENTRIES ON AF FORMS 1000 (SUGGESTION)	4.21	18%	28%	4.73
D62 CONDUCT OJT	4.13	11%	17%	5.36
F187 REMOVE OR INSTALL CANOPY EXTERNAL OR INTERNAL JETTISON CABLES	4.06	31%	37%	5.46

TABLE 18 (Continued)

TASKS HIGH IN TRAINING EMPHASIS NOT REFERENCED TO POI 3ABR42332

TASKS	TNG EMP*	FIRST- JOB (N=114)	FIRST- ENL (N=344)	TASK DIFF**
F186 REMOVE OR INSTALL CANOPY EGRESS SYSTEM CHECK VALVES	4.05	31%	34%	4.68
F199 REMOVE OR INSTALL EJECTION SEAT LEG RESTRAINT MECHANISMS	3.71	36%	40%	3.70
I309 INSPECT F-4 EJECTION SEAT STRUCTURES	3.58	31%	34%	4.85
I304 INSPECT F-4 EJECTION SEAT DROGUE GUNS	3.57	33%	36%	4.28
I332 PERFORM EMERGENCY PNEUMATIC SYSTEM FUNCTIONAL CHECKS	3.53	13%	22%	6.43
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	3.49	34%	36%	4.70
I306 INSPECT F-4 EJECTION SEAT MAIN BEAMS	3.47	35%	37%	4.75
A1 ADVISE MAINTENANCE PERSONNEL ON EGRESS SYSTEMS MAINTENANCE	3.44	37%	46%	5.64
I296 CLEAN AND LUBRICATE F-4 EJECTION SEAT CATAPULT GUNS	3.44	35%	35%	3.66
F196 REMOVE OR INSTALL EJECTION SEAT HEAD RESTS, LEG RESTS, OR ARM REST PADS	3.38	51%	55%	2.89
I330 PERFORM CLEANING OR REPAIR AFTER FIRING GUILLOTINE MECHANISMS	3.36	19%	24%	4.77
I331 PERFORM EMERGENCY ESCAPE SEQUENCING SYSTEM CHECKOUTS	3.35	12%	21%	6.46

* Average training emphasis is 1.78; high TE is 3.33

** Average task difficulty is 5.00

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

Of the AFSC 42352 personnel in the sample, 366 (73 percent) are assigned within the continental United States (CONUS) and 134 (27 percent) are assigned overseas. A comparison of the survey data of these groups shows very little difference between them. The average grade for both groups is E-4 and the percentage of first-enlistment personnel is nearly the same: 57 percent of the CONUS group and 55 percent of the overseas group. Duty and task performance data also showed only minor differences, though a slightly greater percentage of CONUS than overseas personnel performed maintenance on T-37 or T-38 egress systems. The only large difference between the two groups is expected: most CONUS personnel (65 percent) are in TAC and most overseas personnel (63 percent) are in USAFE.

MAJCOM ANALYSIS

Another area of analysis involves examining duty and task performance across major commands (MAJCOM). Table 19 shows the percentages of members performing duties by MAJCOMs represented in the sample, which include TAC, USAFE, ATC, SAC, PACAF, AFSC, AFLC, and AAC.

As the table shows, differences between the MAJCOMs occur primarily by egress system. The supervisory and general duties are performed by over 50 percent of all groups, while the different system-specific duties are performed by different MAJCOMs. The boxes in the table indicate the systems that personnel in each MAJCOM maintain. For example, TAC, USAFE, and PACAF concentrate on ACES II and F-4 egress systems, while ATC concentrates on T-37 and T-38 egress systems. SAC primarily maintains B-52 egress systems, and AAC primarily maintains ACES II (specifically, the F-15 system) and T-33 egress systems. AFSC and AFLC personnel maintain many systems. AFSC personnel (see discussion of this variation of the F-4 Egress System Personnel cluster in SPECIALTY JOBS section) perform maintenance on ACES II, F-4, module, T-38/F-5, T-37/A-37, and A-7 egress systems. AFLC personnel perform maintenance on ACES II, F-4, and module systems primarily.

A comparison of survey information for first-term personnel shows similar findings. Task and duty performance varies across first-term MAJCOM groups by egress system maintained, in the same way as for total sample MAJCOM groups, explained above.

TABLE 19

PERCENT MEMBERS PERFORMING DUTIES BY MAJCOM GROUPS

DUTIES	TAC (N=391)	USAFE (N=148)	PACAF (N=54)	ATC (N=90)	SAC (N=94)	AFSC (N=23)	AFLC (N=24)	AAC (N=13)
A ORGANIZING AND PLANNING	77	74	85	78	78	78	75	69
B DIRECTING AND IMPLEMENTING	89	89	93	89	96	91	88	85
C INSPECTING AND EVALUATING	55	59	61	64	63	61	58	69
D TRAINING	58	59	63	74	68	52	71	62
E PREPARING FORMS, RECORDS, OR REPORTS	97	97	96	93	97	91	88	100
F PERFORMING GENERAL AIRCREW EGRESS TASKS	98	93	96	90	97	96	96	100
G MAINTAINING AIRCREW EGRESS NON-POWERED AGE AND SUPPORT EQUIPMENT	83	84	89	72	85	74	71	100
H MAINTAINING ADVANCED CONCEPT EJECTION SEAT (ACES II) SYSTEMS	49	44	48	16	6	87	71	100
I MAINTAINING F-4 EGRESS SYSTEMS	48	45	72	9	3	87	54	0
J MAINTAINING F/EF-111, FB-111 MODULE EGRESS SYSTEMS	8	15	0	2	11	70	46	0
K MAINTAINING F-101 EGRESS SYSTEMS	0	0	0	1	1	4	4	0
L MAINTAINING F-106 EGRESS SYSTEMS	5	1	0	1	1	0	13	0
M MAINTAINING B-52 EGRESS SYSTEMS	0	1	0	2	67	26	8	0
N MAINTAINING T-33 EGRESS SYSTEMS	10	1	31	2	1	0	0	54
O MAINTAINING T-38 OR F-5 EGRESS SYSTEMS	8	9	28	64	21	83	17	0
P MAINTAINING T-37 OR A-37 EGRESS SYSTEMS	5	3	11	68	14	52	8	0
Q MAINTAINING A-7 EGRESS SYSTEMS	4	1	0	1	0	57	8	0
R PERFORMING CROSS UTILIZATION TRAINING (CUT) DUTIES	39	43	41	33	44	22	63	46

COMPARISON TO PREVIOUS SURVEYS

To identify general changes or trends in the career field, results of this survey were compared to the results of the last survey, reported in OSR AFPT 90-423-268, dated January 1978. Figure 3 compares the career ladder structure of the 1978 report to that of the current analysis, while Table 20 compares the job satisfaction indicators for each sample by TAFMS group.

A comparison of the job structure findings for the 1978 and the 1984 surveys shows many similarities in the job groups. As in the current survey, the 1978 analysis resulted in job groupings according to egress systems maintained. Figure 3 shows how groups from the 1984 analysis relate to groups from the 1978 analysis. For example, all 1978 groups of F-4 egress system personnel are contained in the 1984 F-4 Egress System Personnel cluster. Also, the 1978 cluster of T-33, T-37, T-38, and F-106 Egress System Repairmen grouped into two independent job types in the 1984 analysis, probably due to location of the aircraft (i.e., T-37s and T-38s located together on the same base and T-33s and F-106s located together on the same base).

An especially important difference in the job structure of the 1984 analysis is the ACES II Personnel cluster. The ACES II system was introduced after the 1978 survey, resulting in F-15 personnel clustering together with A-10 and F-16 personnel instead of clustering with OV-10 personnel as in the 1978 survey. This cluster of ACES II personnel represents 20 percent of the sample--the second largest group in the career field (F-4 Egress System Personnel account for 35 percent of the sample), and subject-matter specialists at Chanute Technical Training Center expect the percentage of ACES II personnel to increase to the largest group with the introduction of this seat in the B-1 and T-46. Also, subject-matter specialists indicate that ACES II maintenance will greatly increase as the phase requirements are due; the ACES II system is so new that most 3-year phase requirements are not yet due.

Other differences between the 1978 and 1984 job structures include those found in supervisory personnel groups. The 1978 survey included 9-skill levels, and most of these personnel occupied branch chief positions, focusing almost exclusively on supervisory tasks. These jobs composed a subgroup of the 1978 Supervisory Personnel group. Although the current survey did not include 9-skill level personnel, a small group of 7-skill level personnel were found performing this same type job; they were identified in the independent job type of Superintendents. The other subgroup of the 1978 Supervisory Personnel was composed of NCOICs or Assistant NCOICs, identified in the 1984 analysis as Egress System NCOICs.

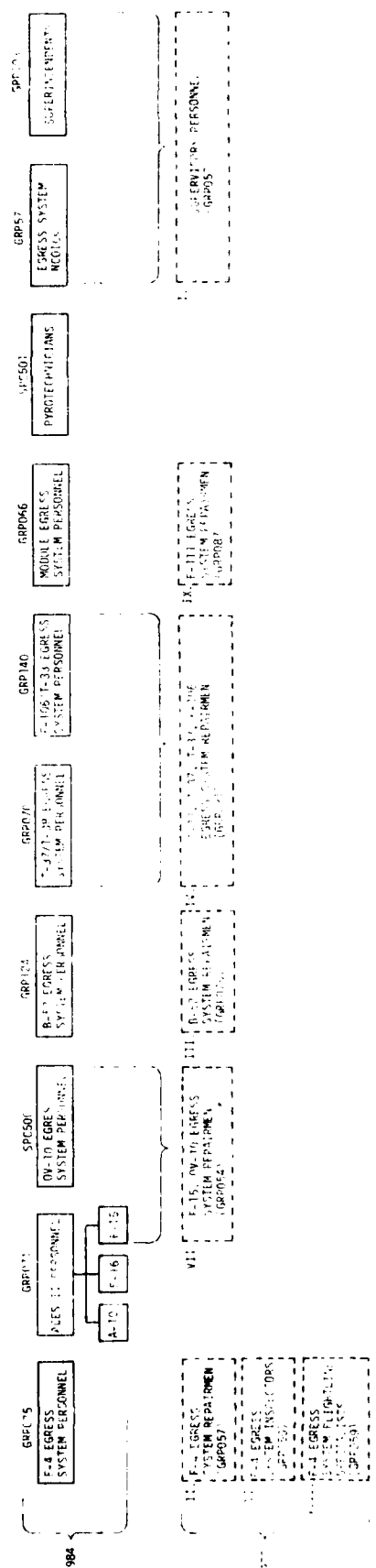
Two other job structure differences merit attention. First, the 1978 analysis identified a separate group of Training Instructors who grouped together due to the large amount of time they spent on similar training-related tasks. In the 1984 analysis, instructors spent more time performing system-specific tasks and, therefore, grouped with many different job groups due to the large number of aircraft-specific FTD initial training courses. A second job structure difference is shown in the 1984 group of Pyrotechnicians, who formed a separate group due to the unique job they perform and the large

degree of similarity among the numbers in terms of tasks they perform. The 1978 analysis, however, did not separate this group.

In spite of these differences, the overall structure of the career field, with job groups forming by aircraft egress system, remains the same. The Aircrew Egress specialty is a very stable career field, as noted in the last OSR as well, and adapts well to new technology such as that introduced in the ACES II system.

In terms of job satisfaction, all indicators are much higher for first-enlistment personnel than in 1978, a trend noted in most specialties in recent years. Other TAFMS groups show nearly the same or, in many cases, slightly higher job satisfaction indicators than in 1978. For both 1978 and 1984 samples, very high percentages responded positively to perceived use of training, in all TAFMS groups.

FIGURE 3
CAREER LADDER COMPARISON



1984

TABLE 20

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

	1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	1978 (N=324)	1984 (N=344)	1978 (N=121)	1984 (N=228)	1978 (N=269)	1984 (N=278)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	26	14	23	18	18	13
SO-SO	23	26	28	23	14	18
INTERESTING	43	60	46	58	61	68
<u>PERCEIVED USE OF TALENTS:</u>						
LITTLE OR NOT AT ALL	41	31	26	30	21	22
FAIRLY WELL TO PERFECTLY	56	69	73	70	76	78
<u>PERCEIVED USE OF TRAINING:</u>						
LITTLE OR NOT AT ALL	10	7	10	12	12	11
FAIRLY WELL TO PERFECTLY	87	93	88	88	84	88
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>						
DISSATISFIED	29	17	28	28	24	22
NEUTRAL	18	18	12	17	8	12
SATISFIED	49	66	57	56	62	68
<u>REENLISTMENT INTENTIONS:</u>						
WILL NOT/PROBABLY WILL NOT REENLIST	54	34	28	22	25	9
WILL/PROBABLY WILL REENLIST	36	64	64	78	64	78

* Columns may not add up to 100 percent due to nonresponse and rounding

SURVEY COMMENTS

In addition to answering background questions and rating tasks performed, survey respondents may also write in comments or add information at the end of the inventory. These survey comments may address many different issues, but it is helpful to consider multiple comments on an issue to identify those of importance.

General Comments

Few personal opinion comments were received for this occupational survey. There were some comments giving additional information to background questions, such as equipment used, but not included in the inventory. The most notable of these were seat slings and cradles, which were mentioned by only 13 respondents.

Strength and Stamina

In the task difficulty rating booklets, raters were asked to identify those tasks which first-enlistment personnel they supervise have difficulty performing due to excessive physical strength or stamina requirements inherent in the tasks. Less than one-third of the raters identified any such tasks. A total of 41 tasks were mentioned by respondents, but only 4, listed below, were identified by 5 or more raters:

- I348 Remove or install F-4 aft ejection seat buckets
(10 responses)
- I349 Remove or install F-4 aft ejection seat main beams
(11 responses)
- I369 Remove or install F-4 forward ejection seat buckets
(5 responses)
- I370 Remove or install F-4 forward ejection seat main beams
(7 responses)

Other tasks, identified by less than five raters, related to removing and installing canopies on various systems. In short, strength and stamina does not appear to be a major issue of concern in this specialty.

Training Considerations

When completing training emphasis booklets, some senior NCOs wrote in comments regarding training for first-enlistment personnel. Some raters commented that cross-utilization training "will seriously detract from training and proficiency required." A few raters also addressed the issue of training in the resident course versus FTD instruction. All of these suggested that the technical school teach only general areas, such as explosive handling, safety wiring, forms, and any areas common to all systems, leaving system-specific

training to the FTDs. One rater even suggested the basic course be shortened and teach only common training to airmen before they attend the FTD course. He stated that "this could get the troops in the field faster with actually better training, because they will not be confused with information on a system they will not be working on for years, if at all." Because all personnel must attend formal FTD training on the particular aircraft system to which they are assigned, even if they have been working on another system previously, the rater stated that everything taught in the tech school other than general egress knowledge "is actually just time wasted." Two other raters wrote similar comments. While the suggestion to shorten the course to between 10 and 15 days is probably an extreme, such comments, considered with the discussion in the TRAINING ANALYSIS section of this report, do support the need to determine, in some way, the amount of overlap in training between the resident course and each FTD course.

IMPLICATIONS

As mentioned in the INTRODUCTION, the purpose of the survey was to provide updated career field data and to aid in determining the need to possibly subdivide the specialty by seat technology and in making training decisions. The question of subdividing the specialty is a complex one, but the commonality of general egress tasks among the different egress systems suggests that such a division is not entirely appropriate, in spite of the differences between systems. (If system specializations or shredouts are needed for other reasons, then the potential shredouts would parallel the job groups identified in Figure 1.) The differences between egress systems, however, do have an impact on the second consideration, that of training.

Considering both the commonality between the various egress systems and the diversity due to system-specific tasks, the nature of the career field suggests that common training followed by system-specific training is appropriate. The question, then, is where that training should take place. There are many possibilities, such as channelizing training after a core of common training in the basic course or conducting the system-specific training in FTDs. Other considerations, though, include how much orientation to various systems should be given to all airmen entering the Aircrew Egress Systems specialty and which systems should be used for the common core of training.

Data collected in this occupational survey may be helpful in answering these questions, but documentation needs to be improved to evaluate how much duplication in training exists between the resident course and FTD courses and to what level of proficiency airmen are actually training in various courses. Again, the large percentage of personnel who perceive their training is well utilized suggests they are, at some point, receiving the necessary training. That training, however, could be better documented and, perhaps, better integrated.

APPENDIX A
REPRESENTATIVE TASKS
FOR
SPECIALTY JOB GROUPS

TABLE I
F-4 EGRESS SYSTEM CLUSTER
(GRP075)

TASKS	PERCENT PERFORMING (N=300)
I306 INSPECT F-4 EJECTION SEAT MAIN BEAMS	99
I348 REMOVE OR INSTALL F-4 AFT EJECTION SEAT BUCKETS	98
I349 REMOVE OR INSTALL F-4 AFT EJECTION SEAT MAIN BEAMS	98
I304 INSPECT F-4 EJECTION SEAT DROGUE GUNS	98
I305 INSPECT F-4 EJECTION SEAT GUILLOTINES	98
I308 INSPECT F-4 EJECTION SEAT TIME RELEASE MECHANISMS (TRM)	98
I307 INSPECT F-4 EJECTION SEAT SCISSOR MECHANISMS	98
I301 INSPECT F-4 EJECTION SEAT BUCKETS	98
I370 REMOVE OR INSTALL F-4 FORWARD EJECTION SEAT MAIN BEAMS	98
I364 REMOVE OR INSTALL F-4 EJECTION SEAT CATAPULT GUNS	98
I302 INSPECT F-4 EJECTION SEAT CATAPULT GUNS	98
F138 ARM OR DEARM EJECTION SEATS	98
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	98
F201 REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	97
I303 INSPECT F-4 EJECTION SEAT COMPONENTS, SUCH AS SLIDE BLOCKS, ROLLERS, OR LINKAGES	97
I363 REMOVE OR INSTALL F-4 EJECTION SEAT AIRCREW PERSONAL PARACHUTES	97
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	96
F195 REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	96
I369 REMOVE OR INSTALL F-4 FORWARD EJECTION SEAT BUCKETS	96
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	96
F190 REMOVE OR INSTALL EJECTION CATAPULTS	96
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS OR CONTROLS	96
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	95
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	95
F141 INSPECT BALLISTIC HOSES	95

TABLE II
ACES II CLUSTER
(GRP071)

TASKS	PERCENT PERFORMING (N=167)	
F179	PERFORM SAFETY WIRING	96
F156	INSPECT EJECTION SEAT LAP BELTS	96
F141	INSPECT BALLISTIC HOSES	95
F155	INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	95
F153	INSPECT EJECTION SEAT EMERGENCY OXYGEN BOTTLES	95
H269	REMOVE OR INSTALL ENVIRONMENTAL SENSORS	93
F160	INSPECT EJECTION SEAT STRUCTURES	92
F177	PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	92
F197	REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	92
F195	REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	92
F154	INSPECT EJECTION SEAT HEADRESTS	91
F198	REMOVE OR INSTALL EJECTION SEAT LAP BELTS	91
F170	PERFORM COCKPIT FOD CHECKS	90
F138	ARM OR DEARM EJECTION SEATS	90
F150	INSPECT EJECTION SEAT CATAPULTS	90
E108	MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	90
E109	MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	89
E110	MAKE ENTRIES ON AFTO FORM 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	89
H265	REMOVE OR INSTALL ACES II EJECTION SEAT RECOVERY PARACHUTES	86
F201	REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	86
F182	PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	86
H233	INSPECT ENVIRONMENTAL SENSORS	84
H231	INSPECT EJECTION CONTROL SAFETY LEVERS	83
F190	REMOVE OR INSTALL EJECTION CATAPULTS	83
H252	PERFORM OPERATIONAL CHECKS OF EJECTION CONTROL SAFETY LEVERS	83

TABLE IIA
A-10 EGRESS SYSTEM PERSONNEL
(GRP216)

TASKS	PERCENT PERFORMING (N=26)
H261 RAISE OR LOWER A-10 EJECTION SEATS TO OR FROM MAINTENANCE POSITION	100
H264 REMOVE OR INSTALL A-10 EJECTION SEATS	100
H263 REMOVE OR INSTALL A-10 CANOPY HOLD-OPEN FIXTURES	100
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	100
F141 INSPECT BALLISTIC HOSES	100
F138 ARM OR DEARM EJECTION SEATS	100
F154 INSPECT EJECTION SEAT HEADRESTS	100
H231 INSPECT EJECTION CONTROL SAFETY LEVERS	100
H269 REMOVE OR INSTALL ENVIRONMENTAL SENSORS	100
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	100
F195 REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	100
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	96
F179 PERFORM SAFETY WIRING	96
F160 INSPECT EJECTION SEAT STRUCTURES	96
F156 INSPECT EJECTION SEAT LAP BELTS	96
F153 INSPECT EJECTION SEAT EMERGENCY OXYGEN BOTTLES	96
H247 INSPECT PITCH STABILIZATION CONTROL ASSEMBLIES (STA-PAC)	96
H233 INSPECT ENVIRONMENTAL SENSORS	96
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	92
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	92
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	92
H248 INSPECT RAPID DEFLAGRATION CORDS (RDC)	92
F152 INSPECT EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	92
H232 INSPECT ELECTRO-EXPLOSIVE DEVICES (EED)	92
F190 REMOVE OR INSTALL EJECTION CATAPULTS	92

TABLE IIB
F-15 EGRESS SYSTEM PERSONNEL
(GRP153)

TASKS	PERCENT PERFORMING (N=52)
H272 REMOVE OR INSTALL F-15 EJECTION SEATS	98
F156 INSPECT EJECTION SEAT LAP BELTS	98
F153 INSPECT EJECTION SEAT EMERGENCY OXYGEN BOTTLES	98
F150 INSPECT EJECTION SEAT CATAPULTS	98
H265 REMOVE OR INSTALL ACES II EJECTION SEAT RECOVERY PARACHUTES	98
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	98
F195 REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	98
F170 PERFORM COCKPIT FOD CHECKS	96
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	96
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	96
F160 INSPECT EJECTION SEAT STRUCTURES	96
F141 INSPECT BALLISTIC HOSES	96
H273 REMOVE OR INSTALL F-15 SMDC	96
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	96
F179 PERFORM SAFETY WIRING	94
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	94
G214 INSPECT F-15 CANOPY HINGE BELLCRANK RESTRAINTS	94
F201 REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	94
H269 REMOVE OR INSTALL ENVIRONMENTAL SENSORS	94
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	92
H236 INSPECT F-15 SHIELDED MILD DETONATING CORD (SMDC)	92
F138 ARM OR DEARM EJECTION SEATS	92
H287 REMOVE OR INSTALL RECOVERY PARACHUTES	92
H275 REMOVE OR INSTALL F-15B/D PYROTECHNIC MODULES	92
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	92

TABLE IIC
F-16 EGRESS SYSTEM PERSONNEL
(GRP072)

TASKS	PERCENT PERFORMING (N=72)
H282 REMOVE OR INSTALL F-16 EJECTION SEATS	100
H279 REMOVE OR INSTALL F-16 CANOPY ROCKETS	100
F185 REMOVE OR INSTALL CANOPIES	99
H291 RIG OR ADJUST F-16 CANOPIES	99
H276 REMOVE OR INSTALL F-16 CANOPY ACTUATOR RELEASE BOLTS	97
F179 PERFORM SAFETY WIRING	96
H244 INSPECT F-16 DETONATION TRANSFER ASSEMBLIES (DTA)	96
H280 REMOVE OR INSTALL F-16 DTA	96
H269 REMOVE OR INSTALL ENVIRONMENTAL SENSORS	96
H262 RAISE OR LOWER F-16 EJECTION SEATS TO OR FROM MAINTENANCE POSITION	94
F205 RIG OR ADJUST CANOPIES	94
F141 INSPECT BALLISTIC HOSES	94
H243 INSPECT F-16 CANOPY ROCKETS	94
H260 PIVOT F-16 EJECTION SEATS FORWARD AND AFT	93
H284 REMOVE OR INSTALL F-16 SEAT SUPPORTS OR INITIATORS	93
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	93
F156 INSPECT EJECTION SEAT LAP BELTS	93
H240 INSPECT F-16 CANOPY ACTUATOR RELEASE BOLTS (CARB)	93
H242 INSPECT F-16 CANOPY LOCKING CAMS	93
H241 INSPECT F-16 CANOPY LOCK HANDLES	93
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	92
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	92
F170 PERFORM COCKPIT FOD CHECKS	90
F153 INSPECT EJECTION SEAT EMERGENCY OXYGEN BOTTLES	90
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	90

TABLE III
T-37/T-38 EGRESS SYSTEM PERSONNEL
(GRPO70)

TASKS	PERCENT PERFORMING (N=89)
F138 ARM OR DEARM EJECTION SEATS	99
F141 INSPECT BALLISTIC HOSES	99
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	99
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	99
F159 INSPECT EJECTION SEAT ROTARY ACTUATORS	98
F156 INSPECT EJECTION SEAT LAP BELTS	97
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	97
F173 PERFORM OPERATIONAL CHECK OF LAP BELT MANUAL RELEASE MECHANISMS	96
F150 INSPECT EJECTION SEAT CATAPULTS	96
F154 INSPECT EJECTION SEAT HEADRESTS	96
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	94
F170 PERFORM COCKPIT FOD CHECKS	94
F179 PERFORM SAFETY WIRING	94
F171 PERFORM CORROSION CONTROL ON EJECTION SEAT SYSTEMS SUCH AS SCRAPING, PAINTING OR ANTI-CORROSION TREATMENT	94
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	94
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	94
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	93
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	93
F188 REMOVE OR INSTALL CANOPY THRUSTERS	93
F157 INSPECT EJECTION SEAT LEG GUARDS, BRACES, OR RESTRAINT MECHANISMS	92
F190 REMOVE OR INSTALL EJECTION CATAPULTS	92
F196 REMOVE OR INSTALL EJECTION SEAT HEAD RESTS, LEG RESTS, OR ARM REST PADS	92
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	91
F160 INSPECT EJECTION SEAT STRUCTURES	90
F175 PERFORM OPERATIONAL CHECKS OF LAP BELT AUTOMATIC RELEASE MECHANISMS	90

TABLE IV
F-106/T-33 EGRESS SYSTEM PERSONNEL
(GRP140)

TASKS	PERCENT PERFORMING (N=25)
F138 ARM OR DEARM EJECTION SEATS	100
F170 PERFORM COCKPIT FOD CHECKS	100
F141 INSPECT BALLISTIC HOSES	100
F150 INSPECT EJECTION SEAT CATAPULTS	100
F156 INSPECT EJECTION SEAT LAP BELTS	100
F160 INSPECT EJECTION SEAT STRUCTURES	100
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	100
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	100
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	100
F159 INSPECT EJECTION SEAT ROTARY ACTUATORS	100
N524 REMOVE OR INSTALL T-33 EJECTION SEAT INITIATORS	100
N517 INSPECT T-33 EJECTION SEAT INITIATORS	100
N520 INSPECT T-33 SEAT ROLLERS	100
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	100
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	100
L482 REMOVE OR INSTALL F-106B AFT EJECTION SEATS	96
L485 REMOVE OR INSTALL F-106B FORWARD EJECTION SEATS	96
F173 PERFORM OPERATIONAL CHECK OF LAP BELT MANUAL RELEASE MECHANISMS	96
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCES- SING TAG)	96
L473 REMOVE OR INSTALL F-106 CANOPY ACTUATORS	96
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	96
L477 REMOVE OR INSTALL F-106 EJECTION SEAT SLIDE BLOCKS	96
L484 REMOVE OR INSTALL F-106B CANOPY ACTUATORS	96
F179 PERFORM SAFETY WIRING	96
L476 REMOVE OR INSTALL F-106 EJECTION SEAT INITIATORS	96

TABLE V
B-52 EGRESS SYSTEM PERSONNEL
(GRP124)

TASKS	PERCENT PERFORMING (N=47)
F141 INSPECT BALLISTIC HOSES	100
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	100
F159 INSPECT EJECTION SEAT ROTARY ACTUATORS	100
F158 INSPECT EJECTION SEAT POSITIONING ACTUATORS	98
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	98
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	98
F150 INSPECT EJECTION SEAT CATAPULTS	98
F179 PERFORM SAFETY WIRING	98
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCES- SING TAG)	98
M503 REMOVE OR INSTALL B-52 DOWNWARD EJECTION SEATS	98
M509 REMOVE OR INSTALL ESCAPE HATCHES	96
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	96
F157 INSPECT EJECTION SEAT LEG GUARDS, BRACES, OR RESTRAINT MECHANISMS	96
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	96
F138 ARM OR DEARM EJECTION SEATS	96
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	96
F160 INSPECT EJECTION SEAT STRUCTURES	96
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	94
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	94
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	94
F189 REMOVE OR INSTALL EGRESS SYSTEM BALLISTIC OR PNEUMATIC LINES, TUBES, OR HOSES	94
M504 REMOVE OR INSTALL B-52 UPWARD EJECTION SEATS	94
F151 INSPECT EJECTION SEAT DROGUE CHUTE LINES OR CASES	91
M502 PERFORM OPERATIONAL CHECKS OF HATCH UNLOCK WARNING LIGHT SYSTEMS	91
M498 ISOLATE MALFUNCTIONS OF HATCH WARNING LIGHT SYSTEMS	91

TABLE VI
MODULE EGRESS SYSTEM PERSONNEL
(GRP066)

TASKS	PERCENT PERFORMING (N=50)
J432 REMOVE OR INSTALL SMDC	100
J382 INSPECT EXPLOSIVE PANELS, PYROTECHNIC PANELS, OR ACCESS COVERS	100
J412 REMOVE OR INSTALL MODULE FLOTATION BAGS	100
J392 INSPECT SHIELDED MILD DETONATING CORDS (SMDC)	98
J381 INSPECT BOOSTER TIPS SEVERABLE ACCESS COVERS	98
J385 INSPECT MODULE EXPLOSIVE PANELS OR ACCESS COVERS	98
J415 REMOVE OR INSTALL MODULE IMPACT ATTENUATOR BAGS	96
J425 REMOVE OR INSTALL MODULE SECONDARY CONTROL GUILLOTINES	96
J421 REMOVE OR INSTALL MODULE RECOVERY PARACHUTES	96
J380 INSPECT BILGE PUMPS	96
J404 REMOVE OR INSTALL INERTIA REEL ASSEMBLIES	96
J431 REMOVE OR INSTALL SEVERABLE PANELS, SUCH AS NUMBERS 2420, 2440, 2445 THROUGH 2448	94
J386 INSPECT MODULE FLEXIBLE LINEAR SHAPED CHARGES (FLSC)	94
J407 REMOVE OR INSTALL MODULE BILGE PUMPS	94
J390 INSPECT MODULE RECOVERY PARACHUTE CATAPULTS	94
J417 REMOVE OR INSTALL MODULE INERTIA REEL STRAPS	94
J419 REMOVE OR INSTALL MODULE NITROGEN FLOTATION BOTTLES	92
J422 REMOVE OR INSTALL MODULE RECOVERY PARACHUTE CATAPULTS	92
J400 REMOVE OR INSTALL CREW MODULE EMERGENCY RADIO BEACONS	90
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	90
J387 INSPECT MODULE FLOTATION BAGS	90
F179 PERFORM SAFETY WIRING	88
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	88
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	88
J416 REMOVE OR INSTALL MODULE INERTIA REEL CONTROLS	88

TABLE VII
OV-10 EGRESS SYSTEM PERSONNEL
(SPC500)

TASKS	PERCENT PERFORMING (N=7)
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	100
F141 INSPECT BALLISTIC HOSES	100
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	100
F177 PERFORM OPERATIONAL CHECKS OF SEAT INERTIA REELS	100
F156 INSPECT EJECTION SEAT LAP BELTS	100
F201 REMOVE OR INSTALL EJECTION SEAT SURVIVAL KITS	100
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	100
F179 PERFORM SAFETY WIRING	100
F138 ARM OR DEARM EJECTION SEATS	100
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	100
F202 REMOVE OR INSTALL EJECTION SYSTEM MECHANICAL OR PRESSURE FIRED INITIATORS	100
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	86
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	86
F189 REMOVE OR INSTALL EGRESS SYSTEM BALLISTIC OR PNEUMATIC LINES, TUBES, OR HOSES	86
F170 PERFORM JOCKPIT FOD CHECKS	86
F160 INSPECT EJECTION SEAT STRUCTURES	86
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	86
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	86
B21 CONTROL HANDLING, SEGREGATION, OR STORAGE OF BALLISTIC OR EXPLOSIVE DEVICES	86
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	86
F190 REMOVE OR INSTALL EJECTION CATAPULTS	86
F150 INSPECT EJECTION SEAT CATAPULTS	86
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	71
F198 REMOVE OR INSTALL EJECTION SEAT LAP BELTS	71
F149 INSPECT EJECTION SEAT BALLISTIC LINKAGES	71

TABLE VIII
PYROTECHNICIANS
(SPC501)

TASKS	PERCENT PERFORMING (N=3)
R631 POSITION NONPOWERED OR POWERED AEROSPACE GROUND EQUIPMENT (AGE) TO AIRCRAFT	100
R620 GROUND AIRCRAFT	100
I348 REMOVE OR INSTALL F-4 AFT EJECTION SEAT BUCKETS	100
I349 REMOVE OR INSTALL F-4 AFT EJECTION SEAT MAIN BEAMS	100
I369 REMOVE OR INSTALL F-4 FORWARD EJECTION SEAT BUCKETS	100
I370 REMOVE OR INSTALL F-4 FORWARD EJECTION SEAT MAIN BEAMS	100
R634 REMOVE OR INSTALL AIRCRAFT EXTERNAL FUEL TANKS	100
R635 REMOVE OR INSTALL AIRCRAFT PODS	100
J412 REMOVE OR INSTALL MODULE FLOTATION BAGS	100
J415 REMOVE OR INSTALL MODULE IMPACT ATTENUATOR BAGS	100
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	100
J385 INSPECT MODULE EXPLOSIVE PANELS OR ACCESS COVERS	100
J386 INSPECT MODULE FLEXIBLE LINEAR SHAPED CHARGES (FLSC)	100
J387 INSPECT MODULE FLOTATION BAGS	100
J435 SEAL MODULE EXPLOSIVE PANELS OR ACCESS COVERS	100
F135 ADJUST EJECTION SEAT BUCKET COMPONENTS, SUCH AS SLIPPERS OR LINKAGES	100
F136 ADJUST EMERGENCY HARNESS RELEASE MECHANISMS	100
F137 ADJUST INERTIA REELS, LINKAGES, OR CONTROLS	100
F138 ARM OR DEARM EJECTION SEATS	100
F140 INSPECT AIRCREW PERSONNEL PARACHUTE HARNESS AND CASES	100
F141 INSPECT BALLISTIC HOSES	100
F142 INSPECT BALLISTIC REMOVERS	100
F149 INSPECT EJECTION SEAT BALLISTIC LINKAGES	100
F150 INSPECT EJECTION SEAT CATAPULTS	100
F151 INSPECT EJECTION SEAT DROGUE CHUTE LINES OR CASES	100

TABLE IX
EGRESS SYSTEM NCOICS
(GRPO57)

TASKS	PERCENT PERFORMING (N=86)
A1 ADVISE MAINTENANCE PERSONNEL ON EGRESS SYSTEMS MAINTENANCE	100
B22 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	100
F141 INSPECT BALLISTIC HOSES	98
C56 PREPARE APRs	97
F155 INSPECT EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	95
F160 INSPECT EJECTION SEAT STRUCTURES	94
E110 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	93
B34 SUPERVISE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42352)	92
B21 CONTROL HANDLING, SEGREGATION, OR STORAGE OF BALLISTIC OR EXPLOSIVE DEVICES	92
B32 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	92
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	92
G211 INSPECT EGRESS SHOP SUPPORT EQUIPMENT	92
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG- MATERIEL)	92
F180 PERFORM SECTION OR SHOP SAFETY INSPECTIONS	91
E126 REVIEW MAINTENANCE DATA COLLECTION (MDC) DAILY TRANSACTIONS	91
F150 INSPECT EJECTION SEAT CATAPULTS	91
A5 DETERMINE WORK PRIORITIES	90
F172 PERFORM EGRESS FINAL INSPECTIONS	90
E109 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PRO- CESSING TAG)	90
F162 INSPECT MECHANICAL OR PRESSURE FIRED INITIATORS	90
E108 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	88
E124 REVIEW DUE OUT VALIDATION LISTINGS (M30)	88
F156 INSPECT EJECTION SEAT LAP BELTS	88
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	88
B31 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	87

TABLE X
SUPERINTENDENTS
(GRP103)

TASKS	PERCENT PERFORMING (N=5)
C56 PREPARE APRs	100
B31 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	100
C43 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	100
A10 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	100
C45 EVALUATE INSPECTION REPORTS OR PROCEDURES	100
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	100
C53 EVALUATE WORK SCHEDULES	100
C58 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	100
B30 INITIATE PERSONNEL ACTION REQUESTS	100
E92 MAKE ENTRIES ON AF FORMS 2095 (ASSIGNMENT/PERSONNEL ACTION)	100
A19 SCHEDULE LEAVES OR PASSES	100
B24 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	100
A17 PREPARE JOB DESCRIPTIONS	100
D80 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	100
A3 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	100
B39 WRITE CORRESPONDENCE	80
D71 DIRECT OR IMPLEMENT TRAINING PROGRAMS OTHER THAN OJT	80
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDING OPERATING PROCEDURES (SOP)	80
A15 PLAN STAFF MEETINGS OR BRIEFINGS	80
C51 EVALUATE SUGGESTIONS	80
B22 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	80
C41 ANALYZE WORKLOAD REQUIREMENTS	80
C44 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	80
C54 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	80
C46 EVALUATE JOB DESCRIPTIONS	80

APPENDIX B

TASKS RECOMMENDED FOR SYSTEM-SPECIFIC TRAINING*

* These tasks are not referenced to POI C3ABR42332, but are high in Training Emphasis for the egress system under consideration, and have 30 percent or more of the first-enlistment personnel for that system performing them. They are presented here for training personnel to consider for possible inclusion in FTD courses. (Some may be more appropriately taught in the basic course or in OJT.)

TABLE I
F-4 EGRESS SYSTEM*

TASKS	F-4 TNG EMP	1ST ENL PERCENT PERFORMING (N=106)
I309	INSPECT F-4 EJECTION SEAT STRUCTURES	6.06 91
I304	INSPECT F-4 EJECTION SEAT DROGUE GUNS	6.03 97
F192	REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	5.89 98
F197	REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.86 94
I306	INSPECT F-4 EJECTION SEAT MAIN BEAMS	5.86 98
I332	PERFORM EMERGENCY PNEUMATIC SYSTEM FUNCTIONAL CHECKS	5.71 60
I320	LEAK CHECK CANOPY PNEUMATIC ACTUATORS	5.69 81
F193	REMOVE OR INSTALL EJECTION SEAT DROGUE GUNS	5.63 93
I296	CLEAN AND LUBRICATE F-4 EJECTION SEAT CATAPULT GUNS	5.63 94
I311	ISOLATE CANOPY PNEUMATIC ACTUATOR MALFUNCTIONS	5.60 70
I351	REMOVE OR INSTALL F-4 CANOPY AFT PNEUMATIC ACTUATORS	5.57 80
I340	PERFORM OPERATIONAL CHECKS OF F-4 SCISSOR MECHANISMS	5.51 86
I316	ISOLATE MALFUNCTIONS TO F-4 CANOPY SELECTOR VALVES	5.49 58
I330	PERFORM CLEANING OR REPAIR AFTER FIRING GUILLOTINE MECHANISMS	5.49 65
I341	PERFORM OPERATIONAL CHECKS OF F-4 SEAR OPERATED FIRING MECHANISMS	5.49 80
I310	ISOLATE CANOPY DUMP VALVE MALFUNCTIONS	5.46 63
I318	ISOLATE PNEUMATIC SYSTEM MALFUNCTIONS TO EGRESS OR HYDRAULIC SHOP FUNCTIONAL AREAS	5.46 58
I321	LEAK CHECK CANOPY PRESSURE OPERATED VALVES	5.43 64
I335	PERFORM F-4 ROCKET NOZZLE ALIGNMENT CHECKS	5.43 68
I356	REMOVE OR INSTALL F-4 CANOPY FORWARD PNEUMATIC ACTUATORS	5.40 81
I333	PERFORM F-4 INERTIA REEL QUICK DISCONNECT PULL TESTS	5.37 83
I317	ISOLATE MALFUNCTIONS TO PRESSURE OPERATED VALVES (POV)	5.34 63
I323	LEAK CHECK CANOPY SHUTTLE VALVES	5.34 68
I331	PERFORM EMERGENCY ESCAPE SEQUENCING SYSTEM CHECKOUTS	5.34 55
I343	PERFORM STICKER STRAP SPRING CLIP TESTS	5.34 92
F195	REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	5.29 96
I319	LEAK CHECK CANOPY DUMP VALVES	5.29 68
I366	REMOVE OR INSTALL F-4 EJECTION SEAT GUILLOTINES	5.23 91
I328	PERFORM CANOPY JETTISON THRUSTER FIRING CIRCUIT CHECKS	5.20 61
I352	REMOVE OR INSTALL F-4 CANOPY AFT POVs	5.20 71
I357	REMOVE OR INSTALL F-4 CANOPY FORWARD PRESSURE OPERATED VALVES (POV)	5.20 68
I371	REMOVE OR INSTALL F-4 SCISSOR SHACKLE GUARD	5.20 88
E98	MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	5.14 64
I313	ISOLATE CANOPY SHUTTLE VALVE MALFUNCTIONS	5.11 63
I322	LEAK CHECK CANOPY RELIEF VALVES	5.11 64
E90	MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	5.06 49
F199	REMOVE OR INSTALL EJECTION SEAT LEG RESTRAINT MECHANISMS	5.03 85
I354	REMOVE OR INSTALL F-4 CANOPY AFT SHUTTLE VALVES	5.00 70

TABLE I (CONTINUED)

F-4 EGRESS SYSTEM*

TASKS	F-4 TNG EMP	1ST ENL PERCENT PERFORMING (N=106)
I368 REMOVE OR INSTALL F-4 EJECTION SEAT COMPONENTS, SUCH AS SLIDE BLOCKS, ROLLERS, OR LINKAGES	5.00	87
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	4.97	90
I312 ISOLATE CANOPY RELIEF VALVE MALFUNCTIONS	4.97	60
I353 REMOVE OR INSTALL F-4 CANOPY AFT SELECTOR VALVES	4.97	67
I359 REMOVE OR INSTALL F-4 CANOPY FORWARD SHUTTLE VALVES	4.94	67
F187 REMOVE OR INSTALL CANOPY EXTERNAL OR INTERNAL JETTISON CABLES	4.91	55
I350 REMOVE OR INSTALL F-4 CANOPY AFT DUMP VALVES	4.91	72
I358 REMOVE OR INSTALL F-4 CANOPY FORWARD SELECTOR VALVES	4.89	64
F188 REMOVE OR INSTALL CANOPY THRUSTERS	4.80	75
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	4.77	55
F194 REMOVE OR INSTALL EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	4.74	75
I298 INSPECT EJECTION SEAT COMMAND SELECTOR VALVES	4.74	69
I315 ISOLATE MALFUNCTIONS TO F-4 CANOPY RESTRICTOR VALVES	4.69	55
I355 REMOVE OR INSTALL F-4 CANOPY FORWARD DUMP VALVES	4.66	69
I365 REMOVE OR INSTALL F-4 EJECTION SEAT COMMAND SELECTOR VALVES	4.66	68
I324 PERFORM CANOPY ACTUATOR EXTENDED LENGTH CHECKS AND POSITION OF END CAP CHECKS	4.63	54
I295 BLEED CANOPY PNEUMATIC SYSTEMS	4.60	70
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	4.54	41
I344 PERFORM TCTO MODIFICATIONS TO F-4 EJECTION SEAT SYSTEMS	4.54	75
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	4.51	54
F186 REMOVE OR INSTALL CANOPY EGRESS SYSTEM CHECK VALVES	4.51	56
I334 PERFORM F-4 MANUAL OVERRIDE TESTS (TO 13A5-37-2)	4.51	64
I327 PERFORM CANOPY JETTISON CONTROLS AND RIGGING FUNCTIONAL CHECKS	4.46	56
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	4.43	39
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	4.29	55
I346 REMOVE OR INSTALL CANOPY RELIEF VALVES	4.26	54
I293 ADJUST CANOPY PNEUMATIC ACTUATORS	4.17	45
I361 REMOVE OR INSTALL F-4 CANOPY RESTRICTOR VALVES	4.17	55
E84 MAKE ENTRIES ON AF FORMS 1000 (SUGGESTION)	4.09	29
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	3.94	70

* Average F-4 TE is 1.86; high F-4 TE is 3.89

TABLE II
ACES II SYSTEMS*
(Includes A-10, F-15, and F-16)

TASKS	ACES II TNG EMP	1ST ENL PERCENT PERFORMING (N=94)
H265 REMOVE OR INSTALL ACES II EJECTION SEAT RECOVERY PARACHUTES	5.89	86
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	5.82	61
H251 PERFORM OPERATIONAL CHECKS OF ACES II EJECTION SEAT SEQUENCE START SWITCHES	5.79	53
H252 PERFORM OPERATIONAL CHECKS OF EJECTION CONTROL SAFETY LEVERS	5.64	83
F193 REMOVE OR INSTALL EJECTION SEAT DROGUE GUNS	5.57	72
H253 PERFORM OPERATIONAL CHECKS OF ENVIRONMENTAL SENSORS	5.50	42
H288 REMOVE OR INSTALL RECOVERY SEQUENCERS	5.46	68
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.29	93
H233 INSPECT ENVIRONMENTAL SENSORS	5.18	84
H287 REMOVE OR INSTALL RECOVERY PARACHUTES	5.14	79
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	5.11	46
H268 REMOVE OR INSTALL ELECTRO-EXPLOSIVE DEVICES (EED)	5.11	54
H266 REMOVE OR INSTALL ACES II EJECTION SEAT SEQUENCE START SWITCHES	5.00	36
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	4.96	56
H269 REMOVE OR INSTALL ENVIRONMENTAL SENSORS	4.96	94
H289 REMOVE OR INSTALL STA-PAC ASSEMBLIES	4.86	67
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	4.82	76
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	4.75	60
H250 INSPECT RECOVERY SEQUENCERS	4.68	78
E84 MAKE ENTRIES ON AF FORMS 1000 (SUGGESTION)	4.64	37
F195 REMOVE OR INSTALL EJECTION SEAT EMERGENCY OXYGEN BOTTLES	4.61	89
H249 INSPECT RECOVERY PARACHUTES	4.57	66
F194 REMOVE OR INSTALL EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	4.50	61
H290 REMOVE OR INSTALL STA-PAC ASSEMBLY COMPONENTS	4.46	52
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	4.43	62
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	4.39	59
F175 PERFORM OPERATIONAL CHECKS OF LAP BELT AUTOMATIC RELEASE MECHANISMS	4.39	43
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	4.32	92
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	4.32	73
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	4.29	62
H275 REMOVE OR INSTALL F-15B/D PYROTECHNIC MODULES	4.29	35
H274 REMOVE OR INSTALL F-15A/C PYROTECHNIC MODULES	4.25	33
H272 REMOVE OR INSTALL F-15 EJECTION SEATS	4.21	38
H273 REMOVE OR INSTALL F-15 SMDC	4.18	34

TABLE II (CONTINUED)
 ACES II SYSTEMS*
 (Includes A-10, F-15, and F-16)

TASKS	ACES II TNG EMP	1ST ENL PERCENT PERFORMING (N=94)
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	4.00	40
F196 REMOVE OR INSTALL EJECTION SEAT HEAD RESTS, LEG RESTS, OR ARM REST PADS	3.89	85
H285 REMOVE OR INSTALL RDC RELEASE SYSTEM COMPONENTS	3.89	50
H236 INSPECT F-15 SHIELDED MILD DETONATING CORD (SMDC)	3.82	35
H286 REMOVE OR INSTALL RDC RELEASE SYSTEMS	3.75	47
H267 REMOVE OR INSTALL EJECTION CONTROL SAFETY LEVERS	3.71	48
H237 INSPECT F-15A/C PYROTECHNIC MODULES	3.64	31
H260 PIVOT F-16 EJECTION SEATS FORWARD AND AFT	3.61	38
H239 INSPECT F-15B/D PYROTECHNIC MODULES	3.57	32
F187 REMOVE OR INSTALL CANOPY EXTERNAL OR INTERNAL JETTISON CABLES	3.54	32
H262 RAISE OR LOWER F-16 EJECTION SEATS TO OR FROM MAINTENANCE POSITION	3.43	38

* Average ACES II TE is 1.72; high ACES II TE is 3.36

TABLE III
T-37/T-38 EGRESS SYSTEMS*

TASKS	T-37/ T-38 TNG EMP	1ST ENL PERCENT PERFORMING (N=33)
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	6.05	36
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	5.59	52
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.45	97
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	5.36	88
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	4.95	94
F175 PERFORM OPERATIONAL CHECKS OF LAP BELT AUTOMATIC RELEASE MECHANISMS	4.77	91
F188 REMOVE OR INSTALL CANOPY THRUSTERS	4.77	94
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	4.73	88
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	4.73	91
0560 REMOVE OR INSTALL T-38 OR F-5 EJECTION SEATS	4.55	76
F193 REMOVE OR INSTALL EJECTION SEAT DROGUE GUNS	4.18	82
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	4.09	55
0531 FLOW CHECK T-38 OR F-5 EGRESS SYSTEMS, INCLUDING BALLISTIC LINES, HOSES, OR CHECK VALVES	4.09	58
0543 INSPECT T-38 OR F-5 EJECTION SEATS	4.09	76
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	3.96	46
F187 REMOVE OR INSTALL CANOPY EXTERNAL OR INTERNAL JETTISON CABLES	3.96	58
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	3.91	70
0530 ADJUST T-38 OR F-5 EJECTION SEAT LINKAGES	3.86	70
0528 ADJUST T-38 OR F-5 CANOPY THRUSTERS	3.82	70
0549 REMOVE OR INSTALL T-38 OR F-5 CANOPIES	3.77	79
F196 REMOVE OR INSTALL EJECTION SEAT HEAD RESTS, LEG RESTS, OR ARM REST PADS	3.73	94
0557 REMOVE OR INSTALL T-38 OR F-5 EJECTION SEAT ROTARY ACTUATORS	3.73	79
0547 PERFORM SIMULATOR OPERATIONAL CHECKS ON T-38 OR F-5 EJECTION SEATS	3.68	64
P594 REMOVE OR INSTALL T-37 OR A-37 EJECTION SEATS	3.68	88
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	3.64	36
F186 REMOVE OR INSTALL CANOPY EGRESS SYSTEM CHECK VALVES	3.64	64
0555 REMOVE OR INSTALL T-38 OR F-5 DROGUE CHUTES	3.64	79
0552 REMOVE OR INSTALL T-38 OR F-5 CANOPY THRUSTERS	3.59	73
P571 INSPECT T-37 OR A-37 EJECTION SEAT COMPONENTS, SUCH AS THE "TOOTSIE ROLL," SPRINGS, BUSHINGS, OR CABLES	3.54	82
0554 REMOVE OR INSTALL T-38 OR F-5 DROGUE CHUTE HARNESSSES	3.50	76
0541 INSPECT T-38 OR F-5 EJECTION SEAT SLIDE BLOCKS	3.41	79
0527 ADJUST T-38 OR F-5 CANOPY BALLISTIC COMPONENT LINKAGES	3.32	55
0529 ADJUST T-38 OR F-5 DROGUE CHUTE COVERS	3.32	79

TABLE III (CONTINUED)
T-37/T-38 EGRESS SYSTEMS*

TASKS	T-37/ T-38 TNG EMP	1ST ENL PERCENT PERFORMING (N=33)
P570 INSPECT T-37 OR A-37 EJECTION SEAT SLIDE BLOCKS OR ROLLER SHAFTS	3.32	82
0534 INSPECT T-38 OR F-5 CANOPY THRUSTERS	3.27	73
0556 REMOVE OR INSTALL T-38 OR F-5 EJECTION SEAT INITIATORS	3.23	79
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	3.18	33
0532 INSPECT T-38 OR F-5 CANOPY BALLISTIC COMPONENT LINKAGES	3.18	49
0540 INSPECT T-38 OR F-5 EJECTION SEAT ROTARY ACTUATORS	3.18	79
0553 REMOVE OR INSTALL T-38 OR F-5 CATAPULTS	3.18	79
0536 INSPECT T-38 OR F-5 DROGUE CHUTE HARNESSSES	3.14	79
0542 INSPECT T-38 OR F-5 EJECTION SEAT TRACKS	3.14	76

* Average T-37/T-38 TE is 1.54; high T-37/T-38 TE is 3.14

TABLE IV
F-106/T-33 EGRESS SYSTEMS*

TASKS	F-106/ T-33 TNG EMP	1ST ENL PERCENT PERFORMING (N=11)
F175 PERFORM OPERATIONAL CHECKS OF LAP BELT AUTOMATIC RELEASE MECHANISMS	5.82	91
N514 FLOW CHECK T-33 EGRESS SYSTEMS, INCLUDING BALLISTIC LINES, HOSES, OR CHECK VALVES	5.73	91
F194 REMOVE OR INSTALL EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	5.27	46
F188 REMOVE OR INSTALL CANOPY THRUSTERS	5.18	100
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	5.18	100
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	5.18	100
N515 FLOW CHECK T-33 SEAT CHECK VALVES	5.00	91
F186 REMOVE OR INSTALL CANOPY EGRESS SYSTEM CHECK VALVES	4.82	55
N517 INSPECT T-33 EJECTION SEAT INITIATORS	4.73	100
N518 INSPECT T-33 INITIATOR PANELS	4.73	82
N524 REMOVE OR INSTALL T-33 EJECTION SEAT INITIATORS	4.73	100
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	4.64	100
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	4.64	100
F196 REMOVE OR INSTALL EJECTION SEAT HEAD RESTS, LEG RESTS, OR ARM REST PADS	4.64	91
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	4.64	100
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	4.55	82
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	4.55	65
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	4.36	55
F187 REMOVE OR INSTALL CANOPY EXTERNAL OR INTERNAL JETTISON CABLES	4.36	36
N520 INSPECT T-33 SEAT ROLLERS	4.36	100
N525 REMOVE OR INSTALL T-33 SEAT CHECK VALVES	4.09	64
N526 REMOVE OR INSTALL T-33 SEAT CHECK ROLLERS	3.91	91
N516 INSPECT T-33 CANOPY BREAKERS	3.73	73

* Average F-106/T-33 TE is 1.79; high TE is 3.59

TABLE V
B-52 EGRESS SYSTEM*

TASKS	B-52 TNG EMP	1ST ENL PERCENT PERFORMING (N=25)
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	6.25	68
M497 ISOLATE MALFUNCTIONS OF HATCH MECHANICAL COMPONENTS	6.25	84
F09 MAKE ENTRIES ON AF FORMS 2410 (SPECIALIST DISPATCH CONTROL LOG)	6.12	68
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	5.12	72
M498 ISOLATE MALFUNCTIONS OF HATCH WARNING LIGHT SYSTEMS	5.00	96
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	4.87	76
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	4.50	88
F192 REMOVE OR INSTALL EJECTION SEAT DROGUE CHUTES	4.50	100
M489 ADJUST SEAT TILT OR HORIZONTAL ACTUATORS	4.50	92
M502 PERFORM OPERATIONAL CHECKS OF HATCH UNLOCK WARNING LIGHT SYSTEMS	4.50	92
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	4.38	84
F200 REMOVE OR INSTALL EJECTION SEAT ROTARY ACTUATORS	4.25	100
A1 ADVISE MAINTENANCE PERSONNEL ON EGRESS SYSTEMS MAINTENANCE	4.00	52
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	4.00	32
F204 REMOVE OR INSTALL SEAT POSITIONING ACTUATORS	3.75	92
M495 INSPECT HATCH LIFTER COMPONENTS	3.75	72
F184 REMOVE OR INSTALL BALLISTIC REMOVERS OR ACTUATORS	3.62	68
M500 PERFORM OPERATIONAL CHECKS OF DOWNWARD EJECTION SEATS	3.62	48
M501 PERFORM OPERATIONAL CHECKS OF HATCH SYSTEMS	3.62	68
E107 MAKE ENTRIES ON AFTO FORMS 244 (SYSTEM/EQUIPMENT STATUS RECORD)	3.50	32
M496 INSPECT INSTALLED HATCH JETTISON THRUSTERS	3.50	96
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	3.37	96
E87 MAKE ENTRIES ON AF FORMS 1492 (DANGER)	2.87	64
E126 REVIEW MAINTENANCE DATA COLLECTION (MDC) DAILY TRANSACTIONS	2.75	36
F182 PERFORM TCTO MODIFICATIONS TO EJECTION SEATS	2.75	84
F194 REMOVE OR INSTALL EJECTION SEAT EMERGENCY HARNESS RELEASE MECHANISMS	2.50	36

* Average B-52 TE is .97; high B-52 TE is 2.47

TABLE VI
MODULE EGRESS SYSTEM*

TASKS	F-111 TNG EMP	1ST ENL PERCENT PERFORMING (N=24)
E117 MAKE ENTRIES ON DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	7.57	83
E119 MAKE ENTRIES ON DD FORMS 1577-2 (UNSERVICEABLE (REPARABLE) TAG MATERIEL)	7.57	88
J392 INSPECT SHIELDED MILD DETONATING CORDS (SMDC)	7.43	96
J415 REMOVE OR INSTALL MODULE IMPACT ATTENUATOR BAGS	7.29	100
J385 INSPECT MODULE EXPLOSIVE PANELS OR ACCESS COVERS	7.14	100
J386 INSPECT MODULE FLEXIBLE LINEAR SHAPED CHARGES (FLSC)	7.14	100
J390 INSPECT MODULE RECOVERY PARACHUTE CATAPULTS	7.14	92
E118 MAKE ENTRIES ON DD FORMS 1577 (UNSERVICEABLE (CONDEMNED) TAG MATERIEL)	7.00	83
J387 INSPECT MODULE FLOTATION BAGS	7.00	88
J421 REMOVE OR INSTALL MODULE RECOVERY PARACHUTES	6.86	100
J422 REMOVE OR INSTALL MODULE RECOVERY PARACHUTE CATAPULTS	6.86	92
J425 REMOVE OR INSTALL MODULE SECONDARY CONTROL GUILLOTINES	6.86	100
J412 REMOVE OR INSTALL MODULE FLOTATION BAGS	6.57	100
J404 REMOVE OR INSTALL INERTIA REEL ASSEMBLIES	6.43	100
J407 REMOVE OR INSTALL MODULE BILGE PUMPS	6.43	100
J380 INSPECT BILGE PUMPS	6.29	100
F197 REMOVE OR INSTALL EJECTION SEAT INERTIA REELS, LINKAGES, STRAPS, OR CONTROLS	6.14	42
J397 PERFORM OPERATIONAL CHECKS OF MODULE COUNTERPOISE CYLINDERS	6.14	79
J417 REMOVE OR INSTALL MODULE INERTIA REEL STRAPS	6.14	96
J399 PERFORM TCTO MODIFICATIONS TO MODULE SYSTEMS	6.00	83
J384 INSPECT MODULE COUNTERPOISE CYLINDERS	5.71	63
J435 SEAL MODULE EXPLOSIVE PANELS OR ACCESS COVERS	5.71	50
J419 REMOVE OR INSTALL MODULE NITROGEN FLOTATION BOTTLES	5.57	96
J426 REMOVE OR INSTALL MODULE STABILIZATION BRAKE PARACHUTES	5.57	75
J436 SERVICE MODULE COUNTERPOISE CYLINDERS	5.57	79
E98 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	5.43	54
J405 REMOVE OR INSTALL MODULE ANTENNA LEAD SEVERANCE GUILLOTINES	5.43	75
J400 REMOVE OR INSTALL CREW MODULE EMERGENCY RADIO BEACONS	5.14	96
J410 REMOVE OR INSTALL MODULE COUNTERPOISE CYLINDERS	5.14	67
J373 ADJUST COUNTERPOISE LINKAGES	5.00	92
J379 IDENTIFY AND USE AIRCRAFT SCREWS AND PANALIGN FASTENERS	5.00	83
E90 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	4.71	79
E96 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	4.71	63
J389 INSPECT MODULE HEAD RESTS	4.71	83
J393 LOWER OR RAISE CREW MODULE PITCH FLAPS	4.57	63
J413 REMOVE OR INSTALL MODULE FLSC	4.57	71

TABLE VI (CONTINUED)

MODULE EGRESS SYSTEM*

TASKS	F-111 TNG EMP	1ST ENL PERCENT PERFORMING (N=24)
J376 CLEAN IMPACT ATTENUATOR FILTERS	4.43	46
B36 SUPERVISE APPRENTICE AIRCREW EGRESS SYSTEMS MECHANICS (AFSC 42332)	4.00	38
J383 INSPECT IMPACT ATTENUATION FILTERS	4.00	58

* Average F-111 TE is 2.21; high F-111 TE is 3.95