

**LEVEL II**

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UNITED STATES AIR FORCE

**9**

# OCCUPATIONAL SURVEY REPORT



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FABRICATION AND PARACHUTE CAREER LADDER

AFS 427X3

AFPT 90-427-403

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## PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Fabrication and Parachute (AFS 427X3) career ladder. The report was prepared at the request of the OPR for training, TTGXM, Chanute AFB, Illinois to examine the impact of merging Parachute Rigger (AFS 582X1) with Fabric and Rubber Products (AFS 582X0) in April 1977 to become AFS 427X3. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

Computer programs for analyzing the occupational data were designed by Dr. Raymond E. Christal, Manpower and Personnel Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Computer Programming Branch, Technical Services Division, AFHRL.

The Air Force occupational analysis program has been in existence since 1956 when initial research was undertaken by AFHRL (Air Force Systems Command) to develop a methodology for gathering and analyzing occupational information. In 1967, an operational occupational analysis program was established within the Air Training Command and surveys were produced annually for 12 enlisted specialties. In 1972, the program was expanded to conduct occupational surveys covering 51 career fields annually. In late 1976, the program was again expanded to include the survey of officer utilization fields, to permit special management applications projects, and to support inter-service or joint service occupational analysis.

The survey instrument used in the present project was developed by Captain Gary K. Patterson, Inventory Development Specialist. Mr. Reginald G. Nolte and Ms. M. Gayle Kadura analyzed the survey 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, Randolph AFB Texas 78148.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB Texas 78148.

This report has been reviewed and is approved.

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## SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to Fabrication and Parachute (AFSC 427X3) personnel worldwide. Survey results are based on the responses from 872 AFS 427X3 incumbents (74 percent of assigned). A majority of the incumbents surveyed were assigned to MAC, TAC, and SAC.
2. Career Ladder Structure: Personnel in this career ladder were found to be performing basically four types of jobs--those which involve servicing and repairing parachutes; those which involve inspecting, maintaining, and repairing liferafts; those which involve inspecting, maintaining, and repairing life preservers; and those which involve a combination of these functions. Overall, the picture presented by the job structure analysis was one of high homogeneity across job groups. Thus, merging the Fabric and Parachute ladders in 1977 appears to be supported by the survey data.
3. Career Ladder Progression: As with most trade-related occupations, there was a high degree of homogeneity across the various skill level groups. While more senior 7-skill level personnel did spend a higher proportion of their job time on supervision, they still spent a relatively high percentage (45 percent) on technical tasks. This trend tends to indicate a rather substantial number of working supervisors at this level.
4. TAFMS Groups: The typical trend of increasing percentage of time spent on supervisory tasks with increasing months TAFMS was noted. Technical tasks continue to make up a majority of the job time for those incumbents with less than 192 months in the career field; therefore, many of the senior incumbents appear to be working supervisors. Reenlistment intentions for first enlistment personnel were somewhat higher than for first enlistment incumbents in other mission equipment maintenance career ladders.
5. Analysis of CONUS Versus Overseas Groups: Essentially, very little differences were noted between the two groups. Overseas respondents spend more time performing parachute inspections and repairing protective clothing, and are more satisfied with their jobs. Both groups perform essentially the same number of tasks.
6. Discussion: This career ladder consists primary of technically oriented personnel. Sixty-nine percent of the survey respondents were 3- or 5-skill level personnel who spend a high percentage of their time in three technical areas. This is indicative of a highly homogeneous career ladder. The survey results support the decision to merge AFS 582X0, Fabric and Rubber Products, and AFS 582X1, Parachute Rigger into a single ladder, Fabrication and Parachute (AFS 427X3). There was some indication that specialization along former work lines has occurred in several of the groups; however, 70 percent of the survey respondents have integrated very well into the new ladder. Individuals also appear in some specialized test squadrons but their jobs did not differ enough to cause them to group separately. First enlistment personnel have a low job interest; however, their perception of the use of their training and rather high reenlistment intentions are encouraging.

OCCUPATIONAL SURVEY REPORT  
FABRICATION AND PARACHUTE CAREER LADDER  
AFSC 427X3

INTRODUCTION

This is a report of an occupational survey of the Fabrication and Parachute career ladder (AFS 427X3) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in October 1980.

In April 1977, the Parachute Rigger career ladder (AFSC 582X1) was merged with the Fabric and Rubber Products career ladder (AFSC 582X0). The merger of these two ladders resulted in a new AFSC, 427X3, titled Fabrication and Parachute. A previous survey for the Fabric and Rubber Products career ladder, (AFS 582X0) was completed in December 1974. No previous survey has been conducted on the Parachute Rigger career ladder (AFS 582X1).

The basic job of 427X3 personnel, as described by AFR 39-1, is to inspect, repair, and fabricate items of fabric, dope aircraft control surfaces, and perform shop repair of rubberized items; assemble, inspect, clean, repair, and pack deceleration, cargo and aerial delivery, and personnel parachutes, and flotation equipment. In order to properly perform these services, all personnel in this career ladder must attend the basic Fabrication and Parachute course taught at Chanute AFB, Illinois. The course is approximately 12 weeks in length.

Objectives

The current project was requested by TTGXM, Chanute AFB, Illinois, in order to measure the impact of merging the two ladders. In the past, the parachute shop and the fabric shop were often located close to each other, and often shared work. They are now under a single shop organization with sections defining much the same separation of work as before, particularly in the larger shops. The current survey will reflect the results of the merger. Topics discussed in this report include: (1) survey methodology; (2) job structure within the ladder; (3) an analysis of skill level groups; and (4) a comparison of the results of the current survey with previous surveys.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-427-403. As a starting point, tasks from the previous Fabric and Rubber Products inventory and an earlier draft inventory for the Parachute Rigger ladder were reviewed for inclusion in the new AFS 427X3 task list. A new tentative task list was then formulated which included useable tasks from these prior inventories as well as new tasks obtained from

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a thorough research of current specialty publications and directives. This tentative task list was then validated by 28 subject matter specialists working in operational units at six bases as well as by personnel at the Technical Training School located at Chanute AFB. From this review process, a final inventory was developed consisting of 730 tasks grouped under 22 duty headings.

### Survey Administration

During the period January to June 1980, job inventories were administered to all DAFSC 427X3 personnel at operational units both in CONUS and overseas by local consolidated base personnel offices. Personnel were selected from Uniform Airman Record (UAR) data tapes generated by the Air Force Manpower and Personnel Center (AFMPC) and maintained by the Air Force Human Resources Laboratory (AFHRL).

The 427X3 job inventory consisted of two sections: (1) a background section which included questions about such items as job satisfaction, equipment used, or the reenlistment intentions of the survey respondents, and (2) a task section listing all tasks which could be performed by career ladder personnel. Incumbents first checked the tasks they performed and then rated each task on a nine-point scale showing time spent on that task as compared to all other tasks checked. The rating scale ranged from one (very small amount of time spent) to nine (very large amount of time spent), with a rating of five representing an average amount of time spent performing a task.

To determine the relative amount of time an incumbent spends on each task, all of the incumbents ratings are assumed to account for 100 percent of his or her time spent on the job. The ratings are then summed and each task rating is then divided by the total number of task responses and the quotient is multiplied by 100. This procedure provides a basis for comparing tasks not only in terms of percent members performing, but also in terms of average percent time spent.

### Survey Sample

Personnel were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. Seventy-four percent (872) of the 1,173 incumbents assigned to the 427X3 career ladder were sampled. Table 1 reflects the distribution of both the career ladder members and the survey sample across commands. Table 2 lists paygrade group distribution, while Table 3 lists the sample distribution of Total Active Federal Military Service (TAFMS) groups. As shown in these tables, the survey sample had a balanced distribution across MAJCOMs, paygrade groups, and TAFMS groups, and provided adequate representation of the career ladder population as a whole.

Nine-skill level and CEM Code personnel were not included in the survey because they derive from six relatively unrelated career ladders and thus would not reflect the duties and tasks performed in the Fabrication and Parachute career ladder.

TABLE 1  
COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
MAC	24	27
TAC	24	25
SAC	20	21
USAFE	10	9
PACAF	7	6
ATC	6	6
AFSC	4	3
AFLC	1	2
AAC	1	1
OTHER	<u>3</u>	<u>0</u>
TOTAL	100	100

\*AS OF JUNE 1979

TABLE 2  
PAYGRADE REPRESENTATION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	33	29
E-4	23	24
E-5	25	26
E-6	13	15
E-7	<u>6</u>	<u>6</u>
TOTAL	100	100

\*AS OF JUNE 1979

TABLE 3  
TAFMS DISTRIBUTION OF SURVEY SAMPLE

	<u>MONTHS IN THE SERVICE</u>					
	<u>1-48</u>	<u>49-96</u>	<u>97-144</u>	<u>145-192</u>	<u>193-240</u>	<u>241+</u>
NUMBER IN AFS 427X3 SAMPLE	357	147	161	95	75	37
PERCENT OF AFS 427X3 SAMPLE	41%	17%	18%	11%	9%	4%

### Task Factor Administration

In addition to completing a job inventory booklet, selected senior 427X3 personnel were also asked to complete a second booklet for either training emphasis or task difficulty. The task difficulty and training emphasis rating booklets are processed separately from the job inventories and these ratings may be used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each individual completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale from extremely low to extremely high difficulty, with difficulty defined as the length of time it takes an average incumbent to learn to do the task. Ratings were then adjusted so that tasks of average difficulty have a rating of 5.00.

Task difficulty ratings were independently collected from 46 experienced 7-skill level personnel stationed worldwide in various MAJCOMS (see Table 4). The interrater reliability (as assessed through components of variance of standardized group means) of .93 for these 427X3 raters suggests very good agreement as to which tasks were the most or least difficult. These data provide a relative ordering of tasks indicating the relative degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After computing a task difficulty value for each item, it is then possible to compute a Job Difficulty Index (JDI) for the job groups identified in the survey analysis. This index provides a relative measure of which jobs, when compared to other jobs identified, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent as variables are the basis for the JDI. The index ranges from one for very easy jobs to 25 for very difficult jobs. The indices are adjusted so that the average job difficulty index is 13.00. Thus, the more time a group spends performing difficult tasks, and the more tasks they perform, the higher will be their job difficulty index. The JDI ratings for the 427X3 career ladder can be found in the ANALYSIS OF TASK DIFFICULTY section of this report.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate all of the tasks on a ten-point scale ranging from no training required to extremely heavy training. Training emphasis is a rating of tasks indicating where emphasis should be placed in structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, Field Training Detachments (FTD), Mobile Training Teams (MTT), formal OJT, or any other organized training method. Training emphasis data was independently collected from 65 experienced 7-skill level personnel stationed worldwide in various commands (see Table 4). The interrater reliability (as assessed through components of variance of standardized group means) for these 427X3 raters was extremely good (.95), indicating there was very high agreement among raters as to which tasks require some form of structured training and which did not. In this specialty, tasks rated highest in training emphasis have ratings of 4.1 or above, the average training emphasis rating is 2.6, and those tasks with ratings below 1.1 can be considered as recommended for no or very little emphasis in training.

When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can help provide an insight into the appropriate method of training. This may help validate the lengthening or shortening of specific units of instruction in various training programs.

TABLE 4  
 COMMAND REPRESENTATION OF 427X3 TASK DIFFICULTY AND  
 TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
MAC	24	23	16
TAC	24	14	30
SAC	20	32	31
USAFE	10	11	11
PACAF	7	4	3
ATC	6	11	8
AFSC	4	2	*
AFLC	1	*	1
MAC	1	3	*
OTHER	<u>3</u>	<u>*</u>	<u>*</u>
TOTAL	100	100	100

\*DENOTES LESS THAN ONE PERCENT

## CAREER LADDER STRUCTURE

A key aspect of the occupational analysis program is to examine the job structure of the career ladder on the basis of what people are actually doing in the field, rather than on the basis of how official career ladder documents say they are structured. The analysis of actual job structure is made possible by the use of the Comprehensive Occupational Data Analysis programs (CODAP). By using CODAP, job functions are identified on the basis of similarity in tasks performed and relative time spent performing the tasks.

The specialty structure analysis process consists of determining the functional job structure of career field personnel in terms of job types, clusters, and independent job types. A job type is a group of individuals who perform many of the same tasks and also spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. Finally, there are often cases of specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled independent job types.

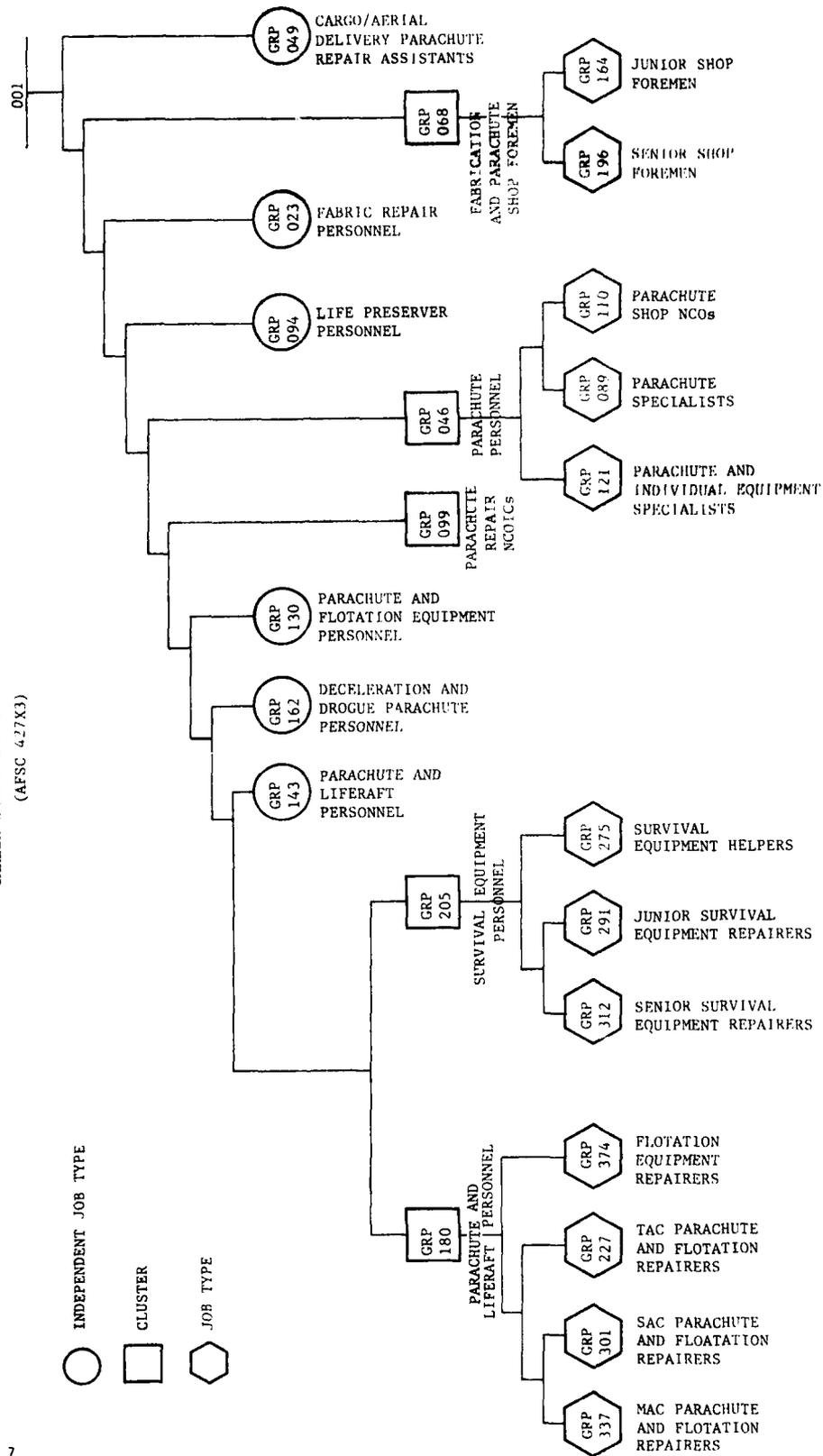
### Specialty Structure Overview

The job structure for the Fabrication and Parachute career ladder was determined by performing a job type analysis of the 872 survey respondents. Personnel in this career ladder basically fall into four categories of jobs, those which involve servicing and repairing parachutes; those which involve inspecting, maintaining, and repairing liferafts; those involved with inspecting, maintaining, and repairing life preservers, and those involving a combination of these functions.

Based on task similarity and the amount of time spent performing each task, the jobs performed by 427X3 respondents are listed below and illustrated in Figure 1. (Group numbers are shown with each group as a cross-reference to computer printed summaries used in the analysis of the survey data.) The respondents forming these job types and clusters account for 89 percent of the survey sample. The remaining 11 percent of the sample consists of unique cases which did not group with any of the job types or clusters described above. Some of the titles reported by these incumbents were: TCTO Monitor, Unit Safety NCO, Worker E-3, Dorm Manager, and CDC Writer.

- I. PARACHUTE AND LIFERAFT PERSONNEL, (GRP180, N=228)
  - a. MAC Parachute and Flotation Repairers, (GRP337, N=39)
  - b. SAC Parachute and Flotation Repairers, (GRP301, N=69)
  - c. TAC Parachute and Flotation Repairers, (GRP227, N=15)
  - d. Flotation Equipment Repairers (GRP374, N=99)

FIGURE 1  
CAREER LADDER STRUCTURE DIAGRAM  
(AFSC 4.77X3)



- II. SURVIVAL EQUIPMENT PERSONNEL, (GRP205 N=53)
  - a. Senior Survival Equipment Repairers, (GRP312, N=17)
  - b. Junior Survival Equipment Repairers, (GRP291, N=16)
  - c. Survival Equipment Helpers, (GRP275, N=14)
- III. PARACHUTE AND LIFERAFT NCOICs (GRP143, N=20)
- IV. DECELERATION AND DROGUE PARACHUTE PERSONNEL (GRP162, N=13)
- V. PARACHUTE AND FLOATION EQUIPMENT PERSONNEL (GRP130, N=21)
- VI. PARACHUTE REPAIR NCOICs (GRP099, N=114)
- VII. PARACHUTE PERSONNEL (GRP046, N=127)
  - a. Parachute and Individual Equipment Specialists (GRP121, N=24)
  - b. Parachute Specialists (GRP089, N=44)
  - c. Parachute Shop NCOs (GRP110, N=30)
- VIII. LIFE PRESERVER PERSONNEL (GRP094, N=15)
- IX. FABRIC REPAIR PERSONNEL (GRP023, N=43)
- X. FABRICATION AND PARACHUTE SHOP FOREMEN (GRP068, N=102)
  - a. Senior Shop Foremen (GRP196, N=66)
  - b. Junior Shop Foremen (GRP164, N=15)
- XI. CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (GRP049, N=37)

#### Cluster and Independent Job Type Descriptions

Brief descriptions of each cluster and independent job type are presented below. The three tables at the end of this section reveal additional information about the groups identified. Table 5 reveals the relative percent time spent on duties, and helps to identify which functional areas personnel in the clusters and independent job types concentrate on. For example, Survival Equipment Personnel spend 54 percent of their time inspecting, maintaining, and repairing liferafts and life preservers while parachute personnel only spend three percent of their time on these tasks. Table 6 yields various background information about the groups identified, such as average paygrade, DAFSC, and percent in first enlistment. For example, 86 percent of the Fabrication and Parachute Shop Foremen hold DAFSC 42773, and have an average paygrade of 6.1. Finally, Table 7 reveals job satisfaction data for the groups identified. For example, 74 percent of the Parachute Repair NCOICs plan to reenlist, and 73 percent find their job interesting.

Also included in this report is an appendix which reflects more detailed information on the Fabrication and Parachute career ladder job types within each cluster, such as job satisfaction and a brief summary of differentiating tasks (see Appendix A).

I. PARACHUTE AND LIFERAFT PERSONNEL (GRP180). This group of 228 incumbents is the largest group identified in the analysis. They also perform the second largest average number of tasks (214) of the reported groups. Fifty-six percent of their time is spent servicing and repairing parachutes; inspecting, maintaining, and repairing liferafts; and inspecting, maintaining, and repairing life preservers. Typical tasks include:

- pack life preservers
- inflate life preservers
- inflate liferafts
- perform leak inspections on life preservers
- weigh CO2 cartridges
- apply talcum powder to liferafts
- pack aircraft deceleration parachutes

The average grade of these incumbents is 3.8, and 76 percent of them hold the 5-skill level. The incumbents within this large group spend over 90 percent of their time on technical tasks, and are represented in eight of the major air commands with the majority assigned to SAC, TAC, and MAC.

There are four identifiable job types within the cluster, of which three are command oriented (SAC, TAC, and MAC) and one job type which relates to all three commands. The four job types are MAC Parachute and Flotation Repairers, SAC Parachute and Flotation Repairers, TAC Parachute and Flotation Repairers, and Flotation Equipment Repairers. The differences between the four job types are a matter of degree, with extreme overlap in tasks performed across all four job types. Personnel in this cluster were well satisfied with the utilization of their training, but expressed somewhat less satisfaction with their jobs and utilization of their talents (see Table 7).

II. SURVIVAL EQUIPMENT PERSONNEL (GRP205). This cluster of 53 respondents perform an average of 134 tasks, of which over 70 percent are directly related to survival equipment items. Eighty-one percent of the incumbents are 5- and 7-skill level airmen. Typical tasks performed by this group include:

- pack life preservers
- deflate life preservers
- inflate life preservers
- perform functional checks of life preservers
- visually inspect life preservers
- inspect liferaft accessory survival kits
- locate leaks on liferafts

The average grade of the group members is 3.7 and average time in the career field is 50 months. Sixty-four percent of the incumbents are in their first enlistment. Only 42 percent of the members found their job interesting; however, their perception as to the use of their talents and training was good.

Three job types make up the cluster. The Senior Survival Equipment Repairers have an average grade of 4.6 and average 81 months in the career field. They supervise an average of one person, and perform an average of 155 tasks. Junior Survival Equipment Repairers perform an average of 117

tasks, have 34 months in the career field, and hold an average grade of 3.3. Seventy-five percent of this group are first enlistment personnel. Finally, Survival Equipment Helpers average 28 months in the career field, perform an average of 130 tasks, and hold a grade of 3.4. Eighty-six percent are in their first enlistment.

III. PARACHUTE AND LIFERAFT NCOICs (GRP143). This rather small independent job type of 20 incumbents consists of 5- and 7-skill level incumbents who spend 49 percent of their time exclusively working with parachutes, life preservers, and liferafts. They supervise an average of three persons and have an average grade of 5.2. Typical tasks include:

- maintain parachute log forms (AFTO Form 391)
- inflate liferafts
- direct liferaft section functions
- annotate Repairable Item Processing Tag Forms (AFTO Form 350)
- demonstrate how to locate or interpret technical information
- pack aircraft declaration parachutes
- direct personnel parachute section functions

Sixty percent of these incumbents find their jobs interesting, 50 percent feel their talents are well utilized, and 65 percent feel that their training is well utilized.

IV. DECELERATION AND DROGUE PARACHUTE PERSONNEL (GRP162). The incumbents of this small independent job type (N=13) spend 49 percent of their time servicing and repairing parachutes, and inspecting, maintaining, and repairing life preservers. They perform an average of 139 tasks, have an average grade of 3.8 and average 55 months in the career field. Typical tasks include:

- remove or install locator beacons
- cut stencils
- remove or install pack locking loops
- remove or install minor hardware, such as snaps, grommets, eyelets, or interlocking fasteners
- remove or install main canopies
- remove or install connector links
- clean or lubricate serving machines

Incumbents in this small group do not find their jobs very interesting nor do they perceive that their talents are being well utilized. However, similar to preceding groups, they feel that their training is being well utilized (See Table 7).

V. PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL (GRP130). This is another small independent job type (N=21) which consists primarily of first-term incumbents performing simple tasks related to parachutes, liferafts, and life preservers. Twenty-nine percent are assigned to PACAF and the Alaskan Air Command. Eighty-six percent of the members are 3- and 5-skill level airmen. Average time in the career field is 38 months, and their average grade is 3.4. Typical tasks include:

- inflate liferafts
- deflate liferafts
- deflate life preservers
- weigh CO<sub>2</sub> cylinders
- inflate life preservers
- pack life preservers
- break down life preservers for inspection
- hang parachutes

Sixty-two percent of the incumbents find their jobs interesting, 57 percent feel that their talents are well utilized, and 86 percent feel that their training is well utilized.

VI. PARACHUTE REPAIR NCOICs (GRP099). The incumbents in this cluster comprise the third largest group in the survey sample (N=114). Ninety-seven percent of the personnel are 5- and 7-skill level airmen who perform the largest average number of tasks of all the groups represented (298). One-fourth or more of their job time is devoted to supervisory duties. However, despite the high amount of supervision, members spend a lot of their job time sewing, lubricating and repairing sewing machines, and storing sewing supplies, such as thread, cordage, and lamps. Their average grade is 5.3, and they average 121 months in the career field which is the second highest experienced group in the survey sample. Typical tasks include:

- maintain Parachute Log Forms (AFTO Form 391)
- perform completed work inspections
- maintain Maintenance Data Collection Record Forms (AFTO Form 349)
- determine repair requirements for damaged parachutes
- adjust timing of sewing machines
- supervise Fabrication and Parachute Specialists (AFSC 42753)
- prepare APRs

Sixty-nine percent of these incumbents are in TAC, SAC, or MAC. They have the highest job interest in the survey sample (73 percent), and their perceptions of the utilization of their talents and training are also the highest of any of the groups. Overall, this rather large group of middle level supervisors has the highest morale indicators in the career ladder (See Table 7).

VII. PARACHUTE PERSONNEL (GRP046). This cluster represents the second largest group in the survey sample (N=127). Members devote over half of their time to servicing and repairing parachutes in seven major air commands. Seventy-five percent of the incumbents are 5-skill level airmen who average 77 months in the career field. They have an average grade of 4.2 and 41 percent are in their first enlistment. Nearly one-third serve in PACAF or USAFE units. Typical tasks include:

- inspect personnel parachutes or personnel recovery subsystems
- pack personnel parachutes or personnel recovery subsystems
- remove or install main canopies
- remove or install visors
- remove or install pilot chutes
- perform functional tests of canopy releases
- pack aircraft deceleration parachutes

Only 44 percent of these members find their jobs interesting while 61 percent feel that their talents are being well utilized. Interestingly, 82 percent feel that their training is well utilized and 58 percent indicate that they intend to reenlist.

Within the main cluster, three job types are identified. The first group, Parachute and Individual Equipment Specialists, consists of 24 incumbents principally assigned to TAC and USAFE who perform 94 tasks mainly involving parachute and individual equipment. The second job type, Parachute Specialists, are a larger group of 44 individuals who spend 75 percent of their time servicing and repairing parachutes. They appear across many major air commands. The third group, Parachute Shop NCOs, also appear in various air commands and perform middle level supervision in parachute shops. These NCOs have an average grade of 4.8 and are all 5- and 7-skill level airmen. They supervise an average of three subordinates (see Appendix A for representative tasks and other facts regarding these job types).

VIII. LIFE PRESERVER PERSONNEL (GRP094). This small independent job type consists of 15 incumbents who devote 66 percent of their time to inspecting, maintaining, and repairing life preservers. Seventy-three percent of the members are in their first enlistment and have an average grade of 3.2, the lowest average grade in the survey sample. Typical tasks include:

- pack life preservers
- inflate life preservers
- visually inspect life preservers
- weight CO2 cartridges
- perform leak inspections on life preservers
- remove or replace life preserver cells
- patch life preservers

These incumbents have the lowest job interest in the survey sample (13 percent). They also have very low perceptions as to the use of their talents and training. Not surprisingly, their reenlistment intentions are also the lowest of all groups.

IX. FABRIC REPAIR PERSONNEL (GRP023). Member of this rather sizeable independent job type (N=43) spend 29 percent of their time inspecting, manufacturing, and repairing aircraft soundproofing and upholstery, and manufacturing, repairing, and modifying aircraft fabric items. Thirty-five percent of these incumbents are in their first enlistment and have an average grade of 4.6. Ninety-five percent are 5- and 7-skill level personnel. They appear in six of the major air commands. Typical tasks include:

- cut fabric for aircraft fabrications
- inspect aircraft fabric items
- sew loose seams, rips, snags, or tears of aircraft fabric items
- cut fabric or insulating material for aircraft soundproofing
- fabricate protective covers
- adjust timing of sewing machines
- design protective cover patterns

Only 39 percent of this group find their job interesting. However, perceived use of their talents and training are 56 and 70 percent respectively, and reenlistment intentions are very high with 72 percent indicating they tend to reenlist.

X. FABRICATION AND PARACHUTE SHOP FOREMEN (GRP068). This is the fourth largest group in the survey sample (N=102) and represents the most experienced incumbents in the career field, both in terms of average grade (6.1) and TAFMS (164 months). Seventy-four percent of their time is devoted to supervising and administrative tasks. On the average, they supervise six individuals. Eighty-six percent of these incumbents are 7-skill level personnel. Typical tasks include:

- coordinate work activities with other units or agencies
- establish work priorities
- prepare APRs
- assign personnel to duty positions
- perform completed work inspections
- develop work methods or procedures
- direct fabrication and parachute shop functions

The members of this group have a good perception of the use of their talents and training and 63 percent find their jobs interesting.

Within the main cluster, two job types were identified, Senior Shop Foremen and Junior Shop Foremen. As the titles suggest, the Senior Shop Foremen are slightly more experienced and have a higher average grade than the junior incumbents (6.3 versus 5.9). Ninety-two percent of the senior personnel are 7-skill level airmen, while 73 percent of the junior group hold the 7-skill level. Senior Shop Foremen perform an average of 132 tasks versus 75 tasks performed by Junior Shop Foremen. In general, the senior members tend to supervise shops of approximately 7 to 15 personnel, while junior incumbents tend to be assistant shop NCOICs of larger shops, administrative section heads, or heads of other sections in large shops. This may indicate that the senior group does not supervise large shops because 9-skill level personnel are placed in these positions of greater responsibility.

XI. CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (GRP049). This independent job type consists of predominantly first-term airmen who perform very few tasks (38) and spend 54 percent of their time servicing and repairing parachutes. They also spend 15 percent of their time maintaining shop facilities and equipment. The vast majority are assigned to MAC and over half, 35 personnel, are female. Typical tasks include:

- pack cargo or aerial delivery parachutes
- hang parachutes
- inspect cargo or aerial delivery parachutes
- clean parachute packing or work tables
- patch or darn holes in deployment bags
- remove or install pilot chutes
- clean and lubricate serving machines

The personnel of this group have an average grade of 3.2 and only 38 percent find their job interesting. Similarly, their perceptions of the use of their talents and training are also low.

### Structure Summary

The picture presented by the analysis of the structure of the Fabrication and Parachute career ladder is one of high homogeneity. All members, except supervisory personnel and Fabric Repair Personnel, spend the majority of their work time in one or more of three duty areas. These duty areas are servicing and repairing parachutes; inspecting, maintaining, and repairing liferafts; and inspecting, maintaining, and repairing life preservers. Although each cluster and independent job type reflects some degree of specialization, there remains a strong degree of job similarity and overlapping commonality of duties and tasks performed. The majority of the incumbents (73 percent) are assigned to MAC, TAC, and SAC. Seventy-eight percent of the career ladder incumbents are E-5 or below, and 44 percent are in their first enlistment.

A review of job interest and related morale indication data (see Table 7) suggests that overall Fabrication and Parachute personnel are not highly interested in their jobs. They also indicate that they do not feel that their talents are being well utilized. Interestingly, they are quite satisfied with their training and their reenlistment intentions are quite high. This apparent incongruity may indicate that although many members are currently dissatisfied with their jobs and use of their talents, they feel that as they progress in their careers they will find greater job satisfaction due to their apparent satisfaction with the training they received. (Table 17 depicts a comparison of 427X3 first-term respondents to a comparative sample of mission equipment maintenance career ladders surveyed in 1979; see TAFMS section of this report.)

Training effectiveness does not appear to have been adversely affected by the merging of AFS 582X1 Parachute Rigger and AFS 582X0 Fabric and Rubber Products in April 1977 to become AFS 427X3 Fabrication and Parachute. Write-in comments concerning the merger were minimal. A small independent job type of fabric repair personnel appears in the Career Ladder Structure who perform few tasks related to parachute or flotation equipment, but the number of personnel is insignificant in light of the general homogeneity existing throughout the ladder.

TABLE 5

RELATIVE PERCENT TIME SPENT ON DUTIES BY JOB CLUSTERS AND INDEPENDENT JOB TYPES

	PARACHUTE AND LIFERAFT PERSONNEL (N=228)		SURVIVAL EQUIPMENT PERSONNEL (N=53)		PARACHUTE AND LIFERAFT NCOs (N=20)		DECELERATION AND DROGUE PARACHUTE PERSONNEL (N=13)		PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL (N=21)		PARACHUTE REPAIR NCOs (N=114)		PARACHUTE PERSONNEL (N=127)		LIFE PRESERVER PERSONNEL (N=15)		FABRIC REPAIR PERSONNEL (N=43)		FABRICATION AND PARACHUTE SHOP FOREMEN (N=102)		CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (N=37)	
A ORGANIZING AND PLANNING	1	1	6	1	1	1	1	1	1	1	6	2	2	4	18	2						
B DIRECTING AND IMPLEMENTING	1	1	9	1	1	1	1	1	1	1	8	3	3	4	20	2						
C INSPECTING AND EVALUATING	2	2	6	2	2	2	2	2	2	2	8	4	4	5	19	2						
D TRAINING	1	1	5	1	1	1	1	1	1	1	4	3	3	2	9	1						
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	4	4	11	7	7	7	7	7	7	7	9	8	8	8	17	8						
F SERVICING AND REPAIRING PARACHUTES	22	10	20	36	36	36	36	36	24	24	16	52	52	3	4	54						
G TESTING AND DEVELOPING PARACHUTES	*	*	*	1	1	1	1	1	1	1	*	1	1	*	*	1						
H INSPECTING, MAINTAINING, AND REPAIRING LIFERAFTS	20	31	18	3	3	3	3	3	24	24	7	1	1	2	1	1						
I INSPECTING, MAINTAINING, AND REPAIRING LIFE PRESERVERS	14	23	11	13	13	13	13	13	21	21	7	2	2	*	1	*						
J INSPECTING, MAINTAINING, AND REPAIRING ESCAPE SLIDES	1	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*						
K INSPECTING, MAINTAINING, AND REPAIRING PROTECTIVE CLOTHING	7	7	5	7	7	7	7	7	7	7	7	5	5	3	1	1						
L MODIFYING AND REPAIRING INDIVIDUAL EQUIPMENT	3	1	1	3	3	3	3	3	3	3	3	3	3	3	1	1						
M MANUFACTURING, REPAIRING, AND MODIFYING AIRCRAFT FABRIC ITEMS	2	2	1	2	2	2	2	2	2	2	3	1	1	*	*	*						
N INSPECTING, MANUFACTURING, AND REPAIRING AIRCRAFT SOUNDPROOFING AND UPHOLSTERY	3	2	*	1	1	1	1	1	*	*	2	*	*	16	1	*						
O INSPECTING, REPAIRING, AND MANUFACTURING PROTECTIVE COVERS AND BOMB OR STRAFING TARGETS	2	2	1	3	3	3	3	3	3	3	3	1	1	*	*	10						
P INSPECTING, MANUFACTURING, AND REPAIRING RESTRAINING EQUIPMENT	1	1	*	1	1	1	1	1	*	*	1	*	*	2	*	2						

TABLE 5 (CONTINUED)  
RELATIVE PERCENT TIME SPENT ON DUTIES BY JOB CLUSTERS AND INDEPENDENT JOB TYPES

	PARACHUTE AND LIFERAFT PERSONNEL (N=228)	SURVIVAL EQUIPMENT PERSONNEL (N=53)	PARACHUTE AND LIFERAFT NCOICs (N=20)	DECELERATION AND DROGUE PARACHUTE PERSONNEL (N=13)	PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL (N=21)	PARACHUTE REPAIR NCOICs (N=114)	PARACHUTE PERSONNEL (N=127)	LIFE PRESERVER PERSONNEL (N=15)	FABRIC REPAIR PERSONNEL (N=43)	FABRICATION AND SHOP FOREMEN (N=102)	CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (N=37)
Q INSPECTING, REPAIRING, AND MANUFACTURING THERMAL CURTAINS	3	1	*	3	*	2	*	1	2	1	*
R MAINTAINING AND REPAIRING AIRCRAFT FABRIC SURFACES	1	1	*	1	*	1	1	1	2	*	*
S MAINTAINING EXPLOSIVE AND HAZARDOUS DEVICES	1	1	*	2	1	1	2	*	*	1	2
T MAINTAINING MOBILE EQUIPMENT AND FACILITIES	*	*	*	*	*	*	*	*	1	*	*
U MAINTAINING SHOP FACILITIES AND EQUIPMENT	7	4	5	9	5	7	7	4	11	4	15
V PERFORMING GENERAL MAINTENANCE FUNCTIONS	4	3	1	3	4	5	4	1	11	1	5

\*DENOTES LESS THAN ONE PERCENT

TABLE 6  
BACKGROUND INFORMATION BY CLUSTERS AND INDEPENDENT JOB TYPES

	PARACHUTE AND LIFERAFT PERSONNEL (N=228)		SURVIVAL EQUIPMENT PERSONNEL (N=53)		PARACHUTE AND LIFERAFT PERSONNEL (N=20)		DECELERATION AND DROGUE PARACHUTE PERSONNEL (N=13)		PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL (N=21)		PARACHUTE REPAIR SQUADS (N=11)		PARACHUTE PERSONNEL (N=127)		LIFE PRESERVER PERSONNEL (N=15)		FABRIC REPAIR PERSONNEL (N=43)		FABRICATION AND PARACHUTE SHOP FOREMEN (N=102)		CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (N=37)		
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
AVERAGE NUMBER OF TASKS PERFORMED	214		134		181		139		97		98		83		38		74		118		38		
AVERAGE PAY GRADE	3.8		3.7		5.2		3.8		3.4		5.5		4.2		3.2		4.6		6.1		3.2		
AVERAGE NUMBER OF PERSONNEL SUPERVISED	1		1		3		0		0		3		1		1		1		6		0		
JOB DIFFICULTY INDEX (JDI)	15.1		11.3		15.4		12.0		9.0		18.5		9.8		4.3		10.0		15.9		5.9		
DAFSC:																							
42733	12%		15%		-		15%		24%		3%		6%		27%		84%		1%		30%		
42753	76%		72%		50%		69%		62%		38%		75%		73%		16%		11%		65%		
42773	11%		9%		50%		8%		10%		59%		19%		-		-		86%		-		
OTHER	1%		4%		-		8%		4%		-		-		-		-		2%		5%		
AVERAGE MONTHS IN CAREER LADDER																							
52		50		117		55		35		127		127		77		23		86		164		33	
56		55		127		62		39		126		126		81		38		95		172		34	
PERCENT IN FIRST ENLISTMENT																							
65%		64%		10%		62%		71%		11%		11%		41%		73%		35%		1%		89%	
17%		28%		5%		15%		33%		11%		11%		16%		20%		14%		8%		35%	

TABLE 7  
JOB INTEREST AND RELATED DATA BY CLUSTERS AND INDEPENDENT JOB TYPES

I FIND MY JOB:	PARACHUTE AND LIFERAFT PERSONNEL (N=228)		SURVIVAL EQUIPMENT PERSONNEL (N=53)		PARACHUTE AND LIFERAFT NCOICs (N=20)		PARACHUTE DECELERATION AND DROGUE PARACHUTE PERSONNEL (N=13)		PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL (N=21)		PARACHUTE REPAIR NCOICs (N=114)		PARACHUTE PERSONNEL (N=127)		LIFE PRESERVER PERSONNEL (N=15)		FABRIC REPAIR PERSONNEL (N=43)		FABRICATION AND PARACHUTE SHOP FOREMEN (N=102)		CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS (N=37)	
DULL	27%	26%	15%	23%	19%	11%	25%	35%	18%	38%	67%	35%	18%	38%	67%	35%	18%	38%	18%	38%	35%	18%
SO-SO	32%	32%	25%	39%	19%	16%	31%	26%	20%	26%	13%	26%	19%	24%	20%	26%	19%	24%	19%	24%	26%	19%
INTERESTING	51%	42%	60%	38%	62%	73%	44%	39%	62%	73%	44%	39%	63%	38%	13%	39%	63%	38%	63%	39%	38%	38%
MY JOB UTILIZES MY TALENTS:																						
NO RESPONSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOT AT ALL TO VERY LITTLE	40%	30%	50%	46%	43%	18%	39%	44%	43%	18%	39%	44%	22%	49%	73%	44%	22%	49%	22%	49%	73%	44%
FAIRLY WELL TO PERFECTLY	60%	70%	50%	54%	57%	82%	61%	56%	57%	82%	61%	56%	78%	51%	27%	56%	78%	51%	78%	56%	27%	51%
MY JOB UTILIZES MY TRAINING:																						
NO RESPONSE	-	4%	10%	-	-	-	-	-	-	-	-	-	16%	-	-	-	1%	-	-	-	-	-
NOT AT ALL TO VERY LITTLE	10%	4%	25%	8%	14%	7%	82%	30%	14%	7%	82%	30%	21%	41%	47%	30%	21%	41%	21%	41%	47%	30%
FAIRLY WELL TO PERFECTLY	90%	92%	65%	92%	86%	93%	2%	70%	86%	93%	2%	70%	78%	59%	53%	70%	78%	59%	78%	70%	53%	59%
I PLAN TO REENLIST:																						
NO	39%	45%	10%	39%	67%	26%	42%	28%	67%	26%	42%	28%	39%	32%	73%	28%	39%	32%	39%	32%	73%	28%
YES	61%	55%	90%	61%	28%	74%	58%	61%	28%	74%	58%	61%	60%	68%	27%	72%	60%	68%	60%	68%	27%	72%
NO RESPONSE	-	-	-	-	5%	-	-	-	5%	-	-	-	1%	-	-	-	1%	-	1%	-	-	-

## ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups forms a part of each occupational analysis. The DAFSC analysis helps to identify differences among skill level groups within the 427X3 specialty. It also aids in the analysis of career ladder documents, such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

The DAFSC analysis of the 427X3 career ladder will discuss the duties and tasks common to each skill level group, as well as tasks which best differentiate the 3-, 5-, and 7-skill level. The 9-skill level and CEM Code 42700 were not included in the current survey because they may derive from one of six career ladders and thus are not addressed in this survey.

### DAFSC 427X3 Skill Level Comparisons

Three- and 5-skill level personnel were examined both on the basis of tasks and duties performed. In general, the jobs performed by personnel in both skill levels were essentially the same, primarily involving servicing and repairing parachutes; inspecting, maintaining, and repairing liferafts; and inspecting, maintaining, and repairing life preservers. These incumbents account for 69 percent of the career ladder. Table 8 reveals that 3- and 5-skill level incumbents spend 51 percent of their job time on these three duties. Supervision duties account for 10 percent or less of their time. Tables 9 and 10 lists the most common tasks performed by 42733/53 personnel such as remove or install connector links, clean or lubricate sewing machines, hang parachutes, and clean parachute packing or work tables. Most of these common tasks involve servicing and repairing parachutes, and inspecting, maintaining, and repairing liferafts or life preservers.

Seven-skill level incumbents spend 55 percent of their job time performing supervisory duties or performing administrative and supply functions. Only 45 percent of their time is spent on the technical aspects of the job, compared to 84 percent at the 3- and 5-skill levels. Table 11 reveals the most common tasks performed by 42773 personnel. Tables 12 and 13 portray tasks which best distinguish differences between skill level groups, while Table 14 show DAFSC distribution across the major job groups identified in the survey sample.

### Summary

In the analysis of skill level groups, we see a rather typical progression of increasing supervision as the skill level increases. However, 7-skill level personnel continue to perform a rather high percentage of technical tasks (45 percent of their job time), indicating a rather substantial number of working supervisors. This is indicative of a fairly high degree of homogeneity within the career ladder, which is common among trade-related occupations.

TABLE 8

## RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	42733 AND 42753 PERSONNEL (N=594)	42773 PERSONNEL (N=268)
A ORGANIZING AND PLANNING	3	11
B DIRECTING AND IMPLEMENTING	3	13
C INSPECTING AND EVALUATING	3	12
D TRAINING	1	6
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	6	13
F SERVICING AND REPAIRING PARACHUTES	26	12
G TESTING AND DEVELOPING PARACHUTES	1	*
H INSPECTING, MAINTAINING, AND REPAIRING LIFERAFTS	14	6
I INSPECTING, MAINTAINING, AND REPAIRING LIFE PRESERVERS	11	4
J INSPECTING, MAINTAINING, AND REPAIRING ESCAPE SLIDES	1	*
K INSPECTING, MAINTAINING, AND REPAIRING PROTECTIVE CLOTHING	6	4
L MODIFYING AND REPAIRING INDIVIDUAL EQUIPMENT	2	1
M MANUFACTURING, REPAIRING, AND MODIFYING AIRCRAFT FABRIC ITEMS	3	2
N INSPECTING, MANUFACTURING, AND REPAIRING AIRCRAFT SOUNDPROOFING AND UPHOLSTERY	2	2
O INSPECTING, REPAIRING, AND MANUFACTURING PROTECTIVE COVERS AND BOMB OR STRAFING TARGETS	2	2
P INSPECTING, MANUFACTURING, AND REPAIRING RESTRAINING EQUIPMENT	1	1
Q INSPECTING, REPAIRING, AND MANUFACTURING THERMAL CURTAINS	2	1
R MAINTAINING AND REPAIRING AIRCRAFT FABRIC SURFACES	1	*
S MAINTAINING EXPLOSIVE AND HAZARDOUS DEVICES	1	1
T MAINTAINING MOBILE EQUIPMENT AND FACILITIES	*	*
U MAINTAINING SHOP FACILITIES AND EQUIPMENT	7	6
V PERFORMING GENERAL MAINTENANCE FUNCTIONS	4	3

\* DENOTES LESS THAN ONE PERCENT

TABLE 9  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 42733 PERSONNEL  
 (N=87)

TASKS	PERCENTAGE OF 3-SKILL LEVEL MEMBERS PERFORMING
F222 REMOVE OR INSTALL CONNECTOR LINKS	71
U649 CLEAN AND LUBRICATE SEWING MACHINES	70
F187 HANG PARACHUTES	68
F194 MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	68
J356 PACK LIFE PRESERVERS	68
J359 PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	68
J376 VISUALLY INSPECT LIFE PRESERVERS	67
J351 DEFLATE LIFE PRESERVERS	67
F250 REMOVE OR INSTALL PILOT CHUTES	67
F246 REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	64
I353 INFLATE LIFE PRESERVERS	64
J364 REMOVE OR INSTALL CARBON DIOXIDE (CO2) CARTRIDGES	64
I348 BREAK DOWN LIFE PRESERVERS FOR INSPECTION	64
V692 CUT STENCILS	64
I372 STENCIL INFORMATION ON LIFE PRESERVERS	63
I360 PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	63
F203 PATCH OR DARN HOLES IN DEPLOYMENT BAGS	63
H303 INFLATE LIFERAFTS	62
F257 REMOVE OR INSTALL RISERS	61
I377 WEIGH CO2 CARTRIDGES	61
U652 CLEAN FACILITIES	60
U653 CLEAN PARACHUTE PACKING OR WORK TABLES	60
H299 DEFLATE LIFERAFTS	60
F193 MAINTAIN AUTOMATIC RIPCORD RELEASE LOG FORMS (AFTO FORM 393)	56
K447 SEW ITEMS SUCH AS NAME TAGS, UNIT PATCHES, OR VELCRO TAPE ONTO PROTECTIVE OR ORGANIZATIONAL CLOTHING	56

TABLE 10  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 42753 PERSONNEL  
 (N=507)

TASKS	PERCENTAGE OF 5-SKILL LEVEL MEMBERS PERFORMING
U649 CLEAN AND LUBRICATE SEWING MACHINES	75
F194 MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	72
F222 REMOVE OR INSTALL CONNECTOR LINKS	71
V692 CUT STENCILS	70
U652 CLEAN FACILITIES	69
U250 REMOVE OR INSTALL PILOT CHUTES	69
F244 REMOVE OR INSTALL MINOR HARDWARE, SUCH AS SNAPS, GROMMETS, EYELETS, OR INTERLOCKING FASTENERS	69
U653 CLEAN PARACHUTE PACKING OR WORK TABLES	67
F257 REMOVE OR INSTALL RISERS	66
F272 WAX THREADS OR CORDS	66
F187 HANG PARACHUTES	65
F246 REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	65
F238 REMOVE OR INSTALL MAIN CANOPIES	64
I353 INFLATE LIFE PRESERVERS	64
F200 PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	63
F269 STENCIL INFORMATION ON PARACHUTE COMPONENTS	63
I356 PACK LIFE PRESERVERS	62
F191 INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	62
I359 PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	62
I351 DEFLATE LIFE PRESERVERS	61
U644 ADJUST TIMING OF SEWING MACHINES	60
I360 PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	60
U671 PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, LAMPS, OR PRESSURE FEET	60
I376 VISUALLY INSPECT LIFE PRESERVERS	59
J365 REMOVE OR INSTALL LIFE PRESERVER CELLS	59

TABLE 11  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 42773 PERSONNEL  
 (N=268)

TASKS	PERCENTAGE OF 7-SKILL LEVEL MEMBERS PERFORMING
C109 PREPARE APRs	79
D129 ORIENT NEWLY ASSIGNED PERSONNEL	76
C103 INSPECT PERSONNEL	73
A4 COORDINATE WORK ACTIVITIES WITH OTHER UNITS OR AGENCIES	73
B40 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	73
D128 INITIATE OR MAINTAIN ON-THE-JOB TRAINING RECORD FORMS (AF FORM 623)	72
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	72
D130 REVIEW TRAINING PROGRESS OF INDIVIDUALS	71
E169 PREPARE UNSERVICEABLE (CONDEMNED) TAG MATERIEL FORMS (DD FORM 1577)	71
E157 ORDER PARTS OR SUPPLIES	70
C77 CERTIFY PROFICIENCY OF SUBORDINATES	69
C105 PERFORM COMPLETED WORK INSPECTIONS	68
E177 STORE THREAD AND CORDAGE	67
B72 SUPERVISE FABRICATION AND PARACHUTE SPECIALISTS (AFSC 42753)	67
B67 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	66
E163 PREPARE SERVICEABLE TAG-MATERIEL FORMS (DD FORM 1574)	66
E151 MAINTAIN MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	66
E141 ANNOTATE REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	65
B49 DIRECT FABRICATION AND PARACHUTE SHOP FUNCTIONS	65
A14 ESTABLISH EQUIPMENT OR SUPPLY REQUIREMENTS	64
A22 ESTABLISH WORK PRIORITIES	63
E176 STORE TEXTILES	63
C110 PREPARE INDIVIDUAL RECOMMENDATIONS FOR PROMOTION, UPGRADING, DEMOTION, OR DOWNGRADING	62
E173 RESEARCH INFORMATION IN PUBLICATIONS	62
D119 CONDUCT OJT OR QUALIFICATION TRAINING	62

TABLE 12

TASKS WHICH BEST DISTINGUISH DAFSCs 42733 VERSUS 42753 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42733	DAFSC 42753	DIFFERENCE
F261 REMOVE OR INSTALL SUSPENSION LINES	33	22	+11
G283 MEASURE PARACHUTE COMPONENT DIMENSIONS	19	8	+11
N499 PATCH AIRCRAFT BATTING INSULATION	24	14	+10
F270 WASH CANOPIES	29	19	+10
F219 REMOVE OR INSTALL CANOPY PANELS	28	18	+10
B72 SUPERVISE FABRICATION AND PARACHUTE SPECIALISTS (AFSC 42753)	2	24	-22
B40 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	2	23	-21
D129 ORIENT NEWLY ASSIGNED PERSONNEL	8	29	-21
C109 PREPARE APRs	2	22	-20
E157 ORDER PARTS OR SUPPLIES	10	30	-20
C77 CERTIFY PROFICIENCY OF SUBORDINATES	2	21	-19
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	5	24	-19
U664 INSPECT STENCIL MACHINES	22	41	-19
D119 CONDUCT OJT OR QUALIFICATION TRAINING	7	25	-18
A22 ESTABLISH WORK PRIORITIES	7	25	-18

TABLE 13

TASKS WHICH BEST DISTINGUISH DAFSC 42753 VERSUS 42773 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42753	DAFSC 42773	DIFFERENCE
C109 PREPARE APRs	22	79	-57
C103 INSPECT PERSONNEL	18	73	-55
D128 INITIATE OR MAINTAIN ON-THE-JOB TRAINING RECORD FORMS (AF FORM 623)	17	72	-55
D130 REVIEW TRAINING PROGRESS OF INDIVIDUALS	18	71	-53
B40 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	23	73	-50
C110 PREPARE INDIVIDUAL RECOMMENDATIONS FOR PROMOTION, UPGRADING, DEMOTION, OR DOWNGRADING	13	62	-49
B67 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	17	66	-49
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	24	72	-48
A14 ESTABLISH EQUIPMENT OR SUPPLY REQUIREMENTS	16	64	-48
A3 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	9	57	-48
A4 COORDINATE WORK ACTIVITIES WITH OTHER UNITS OR AGENCIES	25	73	-48
C77 CERTIFY PROFICIENCY OF SUBORDINATES	21	69	-48
D129 ORIENT NEWLY ASSIGNED PERSONNEL	22	76	-48
A35 SCHEDULE LEAVES OR PASSES	7	53	-46
C95 EVALUATE WORK SCHEDULES	11	56	-45

TABLE 14

## DAFSC DISTRIBUTION ACROSS MAJOR JOB GROUPS

JOB GROUPS	DAFSC	DAFSC	OTHER*
	42733 AND 42753 (N=537)	42773 (N=226)	(N=10)
PARACHUTE AND LIFERAFT PERSONNEL	201	25	2
SURVIVAL EQUIPMENT PERSONNEL	46	5	2
PARACHUTE AND LIFERAFT NCOICs	20	-	-
DECELERATION AND DROGUE PARACHUTE PERSONNEL	11	1	1
PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL	18	2	1
PARACHUTE REPAIR NCOICs	47	67	-
PARACHUTE PERSONNEL	103	24	-
LIFE PRESERVER PERSONNEL	15	-	-
FABRIC REPAIR PERSONNEL	29	14	-
FABRICATION AND PARACHUTE SHOP FOREMEN	12	88	2
CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS	35	-	2

\*OTHER INCLUDES AFS 42750, 99007, OR NOT REPORTED

## COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data for the 427X3 career ladder were compared to AFR 39-1 Specialty Descriptions, dated 1 June 1977. These descriptions are intended to give a broad overview of the duties and tasks required to be performed by the various skill level personnel.

Overall the 3-, 5-, and 7-skill level description were found to provide a clear, concise overview of the major duties and tasks performed by these incumbents.

## ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

In order to assess the normal pattern of change in jobs as a function of experience, differences in tasks performed at various points of service in the career ladder can be analyzed. In the Fabrication and Parachute career ladder, no major deviations from the typical pattern of increasing time spent on supervisory tasks with increasing months TAFMS were noted. Junior incumbents reported spending a greater percentage of their time on technical duties, such as servicing and repairing parachutes; inspecting, maintaining, and repairing liferafts; and inspecting, maintaining, and repairing life preservers, while more senior incumbents spent a greater percentage of their time on supervisory duties (see Table 15).

The more senior airmen typically spend more time on supervisory tasks, such as preparing APRs or counseling personnel on personal or military related problems. However, technical tasks involving servicing and repairing parachutes; and inspecting, maintaining, and repairing liferafts and life preservers continue to make up a majority of the job time for those incumbents with less than 192 months in the career ladder. Therefore, many of the senior incumbents in this career ladder seem to be working supervisors, i.e., perform both technical and supervisory tasks.

### First Enlistment Personnel

In addition to the general TAFMS analysis, first enlistment personnel were examined on the basis of tasks performed and various job satisfaction indices. Table 16 lists the most common tasks performed. It is interesting to note that the majority of tasks are relatively simple, but nonetheless, reflect the homogeneity of the career ladder to a great extent.

The 427X3 first enlistment respondents were also examined on various job satisfaction indicators (see Table 17), including perceived job interest, perceived utilization of talents and training, and reenlistment intentions. The 427X3 job satisfaction data were contrasted with a comparative sample of first enlistment personnel from all mission equipment maintenance career ladders (AFS 30XXX, 31XXX, 32XXX, 34XXX, 36XXX, 40XXX, 42XXX, 43XXX, 44XXX, and 46XXX) surveyed in 1979. When compared to that mission equipment maintenance sample group, 427X3 career ladder respondents indicated their job interest and perceived utilization of their talents to be lower. This suggests that first-term Fabrication and Parachute personnel have a somewhat negative perception of their jobs. It should be noted, however, that their perceptions as to the use of their training and their reenlistment intentions are higher than those of the sample group. This may be indicative of the repetitive and boring nature of some of the tasks performed by first termers, such as clean facilities; hang parachutes; remove or install packs, deployment bags, or containers; inspect personnel parachutes or personnel recovery subsystems; and patch or darn holes in deployment bags (see Table 16). The more positive attitudes as to their perceptions of their training and their relative high reenlistment intentions could well indicate that 427X3 first term respondents visualize a more fulfilling job as they progress in their careers.

In addition to the analysis of the common tasks performed and job satisfaction perceptions, first enlistment personnel were examined to determine which jobs they perform in the field. This analysis can aid training personnel in refining areas of instruction. Table 18 shows the first enlistment distribution across all major job groups identified in the CAREER LADDER STRUCTURE section. The majority of first enlistment personnel (76 percent) are concentrated in four groups--Parachute and Liferaft Personnel; Parachute Personnel, Survival Equipment Personnel, and Cargo/Aerial Delivery Parachute Repair Assistants (see Figure 2). The tasks performed and job descriptions of these four groups should be closely examined by training personnel to help determine course curricula.

Finally, Table 19 presents the first enlistment personnel distribution across major air commands. The bulk of the first enlistment personnel in this specialty are assigned to the major operational commands (MAC, TAC, and SAC) with the remainder distributed among a number of other commands and agencies. This distribution suggests that the major OJT burden falls to commands such as MAC, TAC, and SAC.

TABLE 15

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	MONTHS TAFMS					
	1-48 (N=357)	49-96 (N=147)	97-144 (N=161)	145-192 (N=95)	193-240 (N=75)	241+ (N=37)
A ORGANIZING AND PLANNING	1	4	7	10	12	15
B DIRECTING AND IMPLEMENTING	1	4	8	10	16	16
C INSPECTING AND EVALUATING	2	4	7	10	15	17
D TRAINING	1	2	4	5	7	8
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	5	6	9	11	14	16
F SERVICING AND REPAIRING PARACHUTES	29	24	19	14	9	6
G TESTING AND DEVELOPING PARACHUTES	1	1	1	1	*	*
H INSPECTING, MAINTAINING, AND REPAIRING LIFERAFTS	15	14	9	7	5	3
I INSPECTING, MAINTAINING, AND REPAIRING LIFE PRESERVERS	12	11	7	5	3	2
J INSPECTING, MAINTAINING, AND REPAIRING ESCAPE SLIDES	1	1	1	*	*	*
K INSPECTING, MAINTAINING, AND REPAIRING PROTECTIVE CLOTHING	7	5	5	4	2	2
L MODIFYING AND REPAIRING INDIVIDUAL EQUIPMENT	2	2	2	2	1	1
M MANUFACTURING, REPAIRING, AND MODIFYING AIRCRAFT FABRIC ITEMS	3	2	2	2	2	1
N INSPECTING, MANUFACTURING, AND REPAIRING AIRCRAFT SOUNDPROOFING AND UPHOLSTERY	3	2	2	2	1	1
O INSPECTING, REPAIRING, AND MANUFACTURING PROTECTIVE COVERS AND BOMB OR STRAFING TARGETS	2	2	3	2	2	1
P INSPECTING, MANUFACTURING, AND REPAIRING RESTRAINING EQUIPMENT	1	1	1	1	1	*
Q INSPECTING, REPAIRING, AND MANUFACTURING THERMAL CURTAINS	2	2	1	1	1	1
R MAINTAINING AND REPAIRING AIRCRAFT FABRIC SURFACES	1	1	*	*	*	*
S MAINTAINING EXPLOSIVE AND HAZARDOUS DEVICES	1	1	1	1	1	1
T MAINTAINING MOBILE EQUIPMENT AND FACILITIES	*	1	*	*	*	*
U MAINTAINING SHOP FACILITIES AND EQUIPMENT	7	6	7	7	4	6
V PERFORMING GENERAL MAINTENANCE FUNCTIONS	4	4	4	3	2	2

\* DENOTES LESS THAN ONE PERCENT

TABLE 16  
 REPRESENTATIVE TASKS PERFORMED BY 427X3 INCUMBENTS  
 WITH 1-48 MONTHS TAFMS

TASKS	PERCENT MEMBERS PERFORMING (N=357)
F194 MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	100
U652 CLEAN FACILITIES	100
F187 HANG PARACHUTES	96
F246 REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	88
U653 CLEAN PARACHUTE PACKING OR WORK TABLES	88
F191 INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	87
K447 SEW ITEMS SUCH AS NAME TAGS, UNIT PATCHES, OR VELCRO TAPE ONTO PROTECTIVE OR ORGANIZATIONAL CLOTHING	85
F222 REMOVE OR INSTALL CONNECTOR LINKS	84
U649 CLEAN AND LUBRICATE SEWING MACHINES	81
F188 INSPECT AIRCRAFT DECELERATION PARACHUTES	71
F203 PATCH OR DARN HOLES IN DEPLOYMENT BAGS	66
U671 PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, LAMPS, OR PRESSURE FEET	59
F204 PATCH OR DARN HOLES IN MAIN CANOPIES	49
F198 PACK CARGO OR AERIAL DELIVERY PARACHUTES	48
F189 INSPECT CARGO OR AERIAL DELIVERY PARACHUTES	44
B70 SUPERVISE APPRENTICE FABRICATION AND PARACHUTE SPECIALISTS (AFSC 42733)	13
A9 DEVELOP WORK METHODS OR PROCEDURES	11
D119 CONDUCT OJT OR QUALIFICATION TRAINING	9
D121 DEMONSTRATE HOW TO LOCATE OR INTERPRET TECHNICAL INFORMATION	7
A29 PLAN REPACK FLOW PLANS	6
B72 SUPERVISE FABRICATION AND PARACHUTE SPECIALISTS (AFSC 42753)	5
J380 APPLY OUTSIDE PATCHES TO ESCAPE SLIDES	5
B40 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	3
J387 INSPECT ESCAPE SLIDE COMPRESSED AIR CYLINDERS FOR CORRECT PRESSURE	0
C109 PREPARE APRs	

TABLE 17

EXPRESSION OF JOB INTEREST, PERCEIVED UTILIZATION OF TALENTS  
AND TRAINING, AND REENLISTMENT INTENTIONS OF PERSONNEL WITH  
1-48 MONTHS TAFMS

	427X3 FIRST-TERM RESPONDENTS (N=357)	1979 COMPARATIVE SAMPLE MISSION EQUIPMENT MAINTENANCE CAREER LADDERS* (N=6,124)
<u>I FIND MY JOB:</u>		
NOT REPORTED	-	2
DULL	36	19
SO-SO	27	23
INTERESTING	37	56
<u>MY JOB UTILIZES MY TALENTS:</u>		
NOT REPORTED	-	1
NOT AT ALL OR VERY LITTLE	49	34
FAIRLY WELL OR BETTER	51	65
<u>MY JOB UTILIZES MY TRAINING:</u>		
NOT REPORTED	2	1
NOT AT ALL OR VERY LITTLE	18	30
FAIRLY WELL OR BETTER	80	69
<u>DO YOU PLAN TO REENLIST:</u>		
NOT REPORTED	1	2
NO OR PROBABLY NO	56	64
YES OR PROBABLY YES	43	34

\* AFS 30XXX, 31XXX, 32XXX, 34XXX, 36XXX, 40XXX, 42XXX, 43XXX, 44XXX, AND 46XXX

TABLE 18

## FIRST ENLISTMENT PERSONNEL DISTRIBUTION ACROSS MAJOR JOB GROUPS

<u>MAJOR JOB GROUPS</u>	<u>FIRST ENLISTMENT PERSONNEL (N=357)</u>
PARACHUTE AND LIFERAFT PERSONNEL	150
SURVIVAL EQUIPMENT PERSONNEL	36
PARACHUTE AND LIFERAFT NCOICs	2
DECELERATION AND DROGUE PARACHUTE PERSONNEL	8
PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL	14
PARACHUTE REPAIR NCOICs	11
PARACHUTE PERSONNEL	54
LIFE PRESERVER PERSONNEL	11
FABRIC REPAIR PERSONNEL	14
FABRICATION AND PARACHUTE SHOP FOREMEN	1
CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS	32
NOT GROUPED	24

FIGURE 2

DISTRIBUTION OF FIRST ENLISTMENT PERSONNEL ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)  
(N=357)

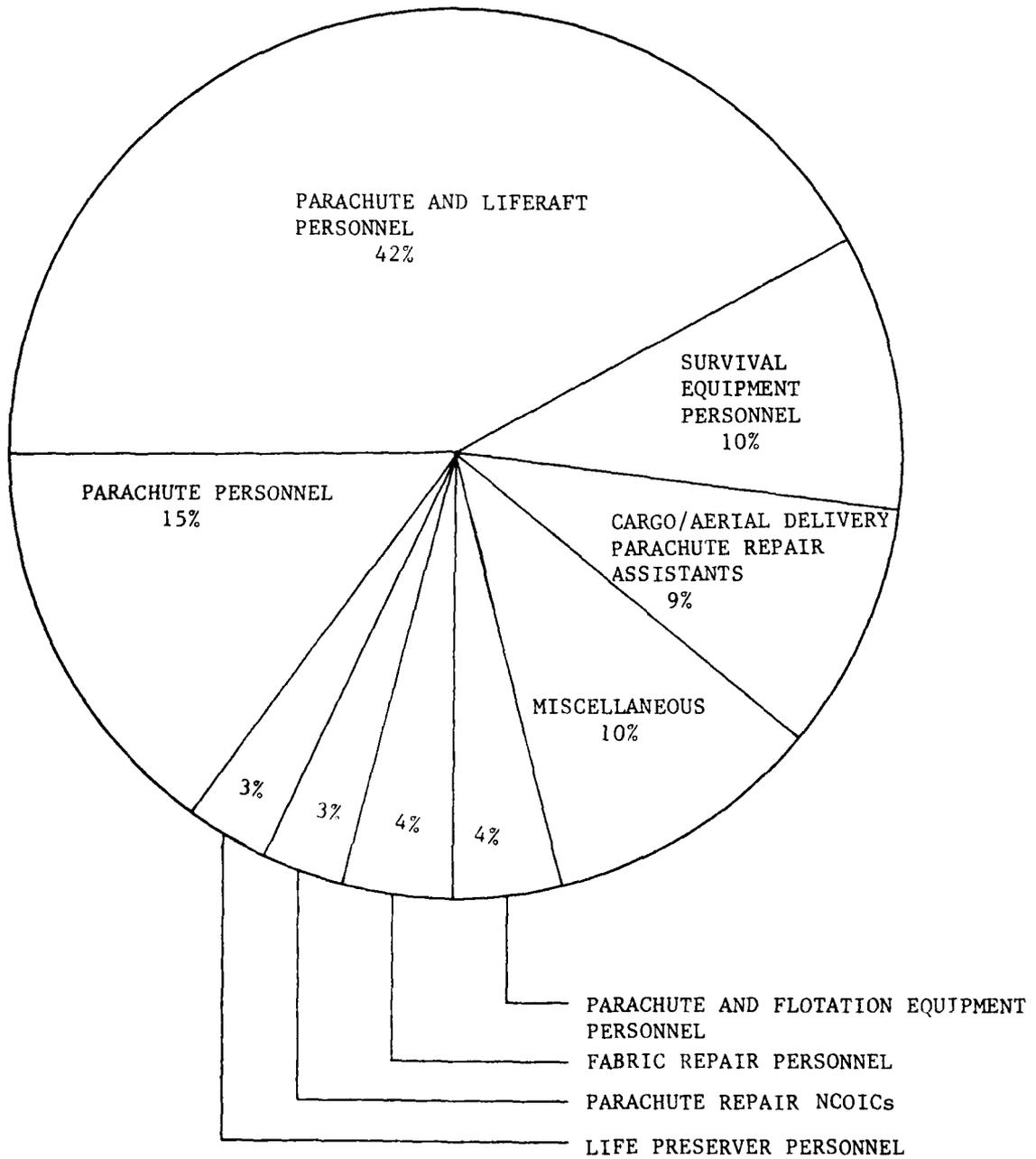


TABLE 19

FIRST ENLISTMENT PERSONNEL DISTRIBUTION  
ACROSS MAJOR AIR COMMANDS

<u>MAJOR AIR COMMAND</u>	<u>FIRST ENLISTMENT PERSONNEL (N=357)</u>
MILITARY AIRLIFT COMMAND	121
TACTICAL AIR COMMAND	79
STRATEGIC AIR COMMAND	75
US AIR FORCE, EUROPE	25
PACIFIC AIR FORCE	21
AIR TRAINING COMMAND	14
AIR FORCE SYSTEMS COMMAND	11
AIR FORCE LOGISTICS COMMAND	7
OTHER	4

## ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison was made of the tasks performed and the background data for DAFSC 427X3 respondents assigned within CONUS versus those assigned to overseas locations. As expected, the jobs performed by these two groups are essentially the same, however, some minor differences are noted. Overseas respondents spend 86 percent of their job time performing parachute inspections, while CONUS personnel spend 58 percent of their job time on the same duty. Likewise, overseas respondents spend 85 percent of their job time performing parachute packing tasks, while CONUS personnel spend 56 percent of their time on the same duty. Also, a larger percentage of overseas personnel performed protective clothing repairing tasks, such as sewing name tags or unit patches onto clothing, than CONUS incumbents (see Table 19).

Background differences between CONUS and overseas respondents were also found. Overseas incumbents hold slightly higher average grades (4.1 versus 3.9) but are slightly less experienced in the career field (56 months versus 59 months). Average number of tasks performed were nearly identical (146 for CONUS personnel versus 145 for overseas personnel). Overseas personnel were more satisfied with their jobs, had a slightly higher perception of the use of their talent and training and also indicated a greater reenlistment intention than did their CONUS counterparts (70 percent versus 58 percent).

TABLE 20

REPRESENTATIVE TASKS WHICH BEST DISTINGUISH DAFSC 42753  
CONUS AND OVERSEAS PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	CONUS (N=394)	OVERSEAS (N=112)	DIFFERENCE
K447 SEW ITEMS SUCH AS NAME TAGS, UNIT PATCHES, OR VELCRO TAPE ONTO PROTECTIVE OR ORGANIZATIONAL CLOTHING	60	95	-35
A8 DEVELOP ORGANIZATIONAL CHARTS	2	36	-34
F188 INSPECT AIRCRAFT DECELERATION PARACHUTES	51	84	-33
F197 PACK AIRCRAFT DECELERATION PARACHUTES	49	80	-31
L459 REMOVE OR REPLACE HARDWARE ON SURVIVAL VESTS	12	42	-30
A17 ESTABLISH PERSONNEL REQUIREMENTS	9	38	-29
K441 REMOVE, REPLACE, OR RESTITCH ZIPPERS OR OTHER HARDWARE ON ORGANIZATIONAL CLOTHING	18	45	-27
L464 SEW POCKETS ONTO SURVIVAL VESTS	15	42	-27
L452 ATTACH HOLSTERS TO SURVIVAL VESTS	14	41	-27
K440 REMOVE OR REPLACE WRIST CUFFS, WAISTBANDS, OR COLLARS ON ORGANIZATIONAL CLOTHING	19	45	-26
F200 PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	63	89	-26
U652 CLEAN FACILITIES	76	100	-24
K445 REPLACE PARTS OF CWU-21/P ANTIEXPOSURE SUITS, SUCH AS WRISTLETS OR SOCKS	7	31	-24
K424 PATCH OR DARN ORGANIZATIONAL CLOTHING	21	45	-24
F191 INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	65	88	-23

## ANALYSIS OF TASK DIFFICULTY

The relative difficulty of each task in the task inventory was assessed through independent ratings by 46 experienced 7-skill level Fabrication and Parachute career NCOs. These ratings were processed to produce an ordered listing of all tasks in terms of their relative difficulty and were standardized to have an average difficulty of 5.0 and standard deviation of 1.0. (For a more complete description of these ratings, see the Task Factor Administration section in the INTRODUCTION.)

Table 21 lists those tasks rated the most difficult by 427X3 personnel. These tasks primarily involve supervision, although three tasks were related to testing and developing parachutes. It is interesting to note that only one of the 15 most difficult tasks were performed by more than 30 percent of the sample.

One-fifth of the tasks rated average in difficulty were related to maintaining and repairing aircraft fabric surfaces (see Table 22); however, very few incumbents performed these tasks. Of the 15 tasks rated average in difficulty, none were performed by more than 25 percent of the sample.

Table 23 reveals those tasks rated the least difficult by 427X3 personnel. One-third of these tasks were performed by 40 percent or more of the incumbents. Typical tasks include: apply talcum powder to liferafts, cut stencils, clean parachute packing or work tables, and remove or install drying tower light bulbs. These tasks, performed typically by junior incumbents, probably relate to the low job satisfaction indices of first enlistment personnel reflected in Table 17 in a previous section of this report.

### Job Difficulty Index (JDI)

The Job Difficulty Index for each Cluster and Independent Job Type identified in the CAREER LADDER STRUCTURE section is listed in Table 24. (For a more detailed discussion of JDI, see the Task Factor Administration section in the INTRODUCTION.)

Parachute Repair NCOICs had a JDI of 18.5, the highest job difficulty of all the clusters or independent job types. These incumbents perform the highest average number of tasks (298), and have the second highest average number of months in the career field (121). In addition, they hold the second highest average grade (5.3) of all incumbents in the survey sample (see Table 6 in a previous section of this report).

Fabrication and Parachute Shop Foremen had a JDI of 15.9, the second highest group identified in the CAREER LADDER STRUCTURE section. Many of the supervisory tasks these incumbents perform were rated high in task difficulty. These incumbents also perform a relatively high number of tasks. Interestingly the ATDPUTS (average task difficulty per unit time spent) for the shop foremen was higher (5.7) than for the Parachute Repair NCOICs (5.0), revealing that Fabrication and Parachute Shop Foremen also have an overall quite difficult job.

On the other hand, the Life Preserver personnel job group have the least difficult job. The group performs a very low average number of tasks (38), is the least experienced in the career ladder (23 months), and has an average grade of 3.2. These data presents a picture of relatively junior personnel performing relatively simple and repetitive tasks. Not surprising is that this group has extremely low job interest, low job satisfaction, and an extremely adverse desire to reenlist. Fortunately this is the smallest group in the sample, consisting of only 15 respondents.

TABLE 21

## TASKS RATED THE MOST DIFFICULT BY 427X3 PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=873)
C111 PREPARE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	8.61	20
F219 REMOVE OR INSTALL CANOPY PANELS	8.13	17
A10 DRAFT BUDGET ESTIMATES	7.96	10
D116 ACT AS TRAINING ADVISOR AT STAFF LEVEL	7.75	5
C109 PREPARE APRs	7.71	38
C110 PREPARE INDIVIDUAL RECOMMENDATIONS FOR PROMOTION, UPGRADING, DEMOTION, OR DOWNGRADING	7.67	27
C115 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	7.61	7
G278 DEVELOP NEW PARACHUTE PACKING PROCEDURES	7.54	7
C87 EVALUATE PROCEDURES FOR STORAGE, HANDLING, OR INSPECTION OF EXPLOSIVE DEVICES	7.46	15
D123 DEVELOP OR UPDATE COURSE CURRICULA MATERIALS, OR SPECIALTY TRAINING STADARDS (STS)	7.46	12
G277 DEVELOP MODIFICATIONS TO PARACHUTE PACKING PROCEDURES	7.43	8
G286 PERFORM PARACHUTE JUMPS	7.38	1
C83 EVALUATE BUDGET REQUIREMENTS	7.37	8
B75 WRITE JUSTIFICATIONS FOR EQUIPMENT OR PERSONNEL	7.34	18
D138 WRITE TEST QUESTIONS	7.23	8

TABLE 22

## TASKS RATED AVERAGE IN DIFFICULTY BY 427X3 PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=873)
F248 REMOVE OR INSTALL PERSONNEL LOWERING DEVICES ON BACK STYLE PARACHUTES	5.04	25
K412 INSPECT ANTIEXPOSURE SUITS OTHER THAN CWU-16/P TYPE	5.03	20
A6 DETERMINE SECURITY CLASSIFICATION OF MATERIAL	5.02	8
R581 DOPE PROOF INTERNAL STRUCTURES OF CONTROL SURFACES	5.02	1
H324 PERFORM OPERATIONAL CHECKS OF INLET CHECK VALVES	5.02	25
P537 PERFORM STATIC WEIGHT TESTS ON SLINGS	5.02	2
E150 MAINTAIN HISTORICAL RECORDS	5.01	14
F249 REMOVE OR INSTALL PERSONNEL LOWERING DEVICES ON TORSO HARNESSES	5.01	11
Q553 INSTALL SUNSHADE MATERIAL ON ROLLERS	4.99	4
R597 PATCH OR SEW DAMAGED WING BALANCE SEALS	4.99	3
C107 PERFORM FIRE INSPECTIONS	4.99	24
K411 INSPECT ANTI-G SUITS	4.99	18
R614 STITCH TEARS ON CONTROL SURFACES	4.99	1
N492 INSPECT SOUNDPROOFING UNDER CATWALKS FOR DETERIORATION, HYDRAULIC FLUID, OR OIL SATURATION	4.98	7
1356 PACK LIFE PRESERVERS	4.97	55

TABLE 23

## TASKS RATED THE LEAST DIFFICULT BY 427X3 PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=873)
V720 PERFORM BASE CLEANUP OPERATIONS	2.24	27
L466 STENCIL NAMES ON B-4 BAGS	2.42	10
H294 APPLY TALCUM POWDER TO LIFERAFTS	2.49	51
F260 REMOVE OR INSTALL SURVIVAL USES OF THE PARACHUTE PAMPHLETS (AFP 64-15)	2.53	40
V692 CUT STENCILS	2.64	63
U653 CLEAN PARACHUTE PACKING OR WORK TABLES	2.82	59
H301 DELIVER RADIO AND LOCATOR BEACONS TO RADIO SHOP	2.87	7
F272 WAX THREADS OR CORDS	2.91	60
U680 REMOVE OR INSTALL DRYING TOWER LIGHT BULBS	2.92	14
V691 AUGMENT SECURITY POLICE	2.93	3
F243 REMOVE OR INSTALL MINIMUM SURVIVAL KITS (SRU-16/P)	2.99	27
H300 DELIVER FIRST AID KITS TO MEDICAL MATERIEL FOR TIME CHANGES	3.00	5
U689 TRANSPORT TEST EQUIPMENT TO AND FROM PMEL	3.13	24
K450 STENCIL INFORMATION ON ANTIEXPOSURE SUITS	3.19	16
I373 STENCIL INFORMATION ON LPU 5P OUTER CONTAINERS	3.25	14

TABLE 24

## JOB DIFFICULTY INDICES FOR CLUSTERS AND INDEPENDENT JOB TYPES

<u>CLUSTERS AND INDEPENDENT JOB TYPES</u>	<u>JOB DIFFICULTY INDEX</u>
PARACHUTE REPAIR NCOICs	18.5
FABRICATION AND PARACHUTE SHOP FOREMEN	15.9
PARACHUTE AND LIFERAFT NCOICs	15.4
PARACHUTE AND LIFERAFT PERSONNEL	15.1
DECELERATION AND DROGUE PARACHUTE PERSONNEL	12.0
SURVIVAL EQUIPMENT PERSONNEL	11.3
FABRIC REPAIR PERSONNEL	10.0
PARACHUTE PERSONNEL	9.9
PARACHUTE AND FLOTATION EQUIPMENT PERSONNEL	9.0
CARGO/AERIAL DELIVERY PARACHUTE REPAIR ASSISTANTS	6.0
LIFE PRESERVER PERSONNEL	4.3

## ANALYSIS OF TRAINING EMPHASIS

The relative training emphasis of each task in the inventory were assessed through the ratings of 65 experienced 7-skill level Frabrication and Parachute NCOs. These ratings were processed to produce an ordered listing of all tasks in terms of their recommended emphasis in training of first enlistment personnel. These ratings had an average of 2.6 and a standard deviation of 1.5. (For a more complete description of these ratings, see the section on Task Factor Administration in the INTRODUCTION.) Training emphasis becomes important when evaluating specialty training documents, such as Specialty Training Standard (STS) and Specialty Plan of Instruction (POI). Tasks rated highest in training emphasis by 427X3 personnel appear in Table 25. As expected, many of the tasks are commonly performed by personnel in the Parachute and Liferaft Personnel; Parachute Personnel; Cargo/Aerial Delivery Parachute Repair Assistants; and Survival Equipment Personnel groups in which a majority of first enlistment personnel appear. All of these tasks involve some aspect of servicing and repairing parachutes; inspecting, maintaining, and repairing liferafts; and inspecting, maintaining, and repairing life preservers. It is interesting to note that all of these tasks rated high in training emphasis were performed by more than 50 percent of the 427X3 personnel with less than 48 months TAFMS.

Tasks rated average in training emphasis are listed in Table 26 and cover a fairly broad range of tasks which are more representative of the whole career ladder. These tasks seem to involve modifying and repairing individual equipment; inspecting, maintaining, and repairing protective clothing; and supervision. These tasks are generally performed by less than 30 percent of those personnel with less than 48 months TAFMS, and include modifying organizational clothing, sewing pockets into survival vests, and removing or replacing hardware on survival vests.

Finally, Table 27 reveals those tasks rated the lowest in training emphasis by 427X3 personnel. These tasks were either supervisory or related to performing general maintenance functions. Less than five percent of 427X3 personnel with less than 48 months TAFMS reported performing these tasks. Examples of these tasks rated lowest in training emphasis would include recover wind tetrahedrons, assemble fuel cells, prepare budget or accounting reports, and select parachutes for test projects.

These data reflect that there are a number of tasks which senior technicians in the field would recommend be emphasized in initial training. These involve a variety of servicing and repairing parachute tasks as well as inspecting, maintaining, and repairing life preserver tasks. A more complete listing of tasks and associated training emphasis and difficulty ratings will be forwarded to training managers for review and decisions on which tasks are more appropriate for resident training and OJT systems.

TABLE 25

## TASKS RATED THE HIGHEST IN TRAINING EMPHASIS BY 427X3 PERSONNEL

TASKS	TRAINING EMPHASIS	PERCENT MEMBERS PERFORMING (N=357)
F191 INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	6.35	64
F194 MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	6.15	74
F200 PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	6.05	64
I356 PACK LIFE PRESERVERS	6.01	64
H292 APPLY OUTSIDE PATCHES TO LIFERAFTS	5.94	57
H314 LOCATE LEAKS ON LIFERAFTS	5.85	60
F193 MAINTAIN AUTOMATIC RIPCORD RELEASE LOG FORMS (AFTO FORM 393)	5.80	58
F188 INSPECT AIRCRAFT DECELERATION PARACHUTES	5.79	53
F208 PERFORM FUNCTIONAL TESTS OF CANOPY RELEASES	5.75	56
I358 PATCH LIFE PRESERVERS	5.57	53
F238 REMOVE OR INSTALL MAIN CANOPIES	5.69	64
I348 BREAK DOWN LIFE PRESERVERS FOR INSPECTION	5.68	61
I359 PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	5.68	65
I360 PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	5.63	62
F195 MAINTAIN PARACHUTE REPACK, INSPECTION, AND COMPONENT RECORD FORMS (AFTO FORM 392)	5.57	57

TABLE 26

## TASKS RATED AVERAGE IN TRAINING EMPHASIS BY 427X3 PERSONNEL

TASKS	TRAINING EMPHASIS	PERCENT MEMBERS PERFORMING (N=357)
B63 IMPLEMENT SAFETY PROCEDURES OR PROGRAMS	2.46	4
J380 APPLY OUTSIDE PATCHES TO ESCAPE SLIDES	2.46	8
L459 REMOVE OR REPLACE HARDWARE ON SURVIVAL VESTS	2.46	26
B49 DIRECT FABRICATION AND PARACHUTE SHOP FUNCTIONS	2.45	5
C107 PERFORM FIRE INSPECTIONS	2.45	6
J385 INFLATE ESCAPE SLIDES	2.45	9
U646 CHANGE GRINDER STONES	2.45	4
J391 PERFORM FUNCTIONAL CHECKS OF ESCAPE SLIDES	2.43	8
L464 SEW POCKETS ONTO SURVIVAL VESTS	2.40	28
C92 EVALUATE THE MAINTENANCE OR USE OF SUPPLIES	2.38	3
P545 SEW LOOSE SEAMS ON SLINGS	2.38	5
B61 IMPLEMENT FOREIGN OBJECT DAMAGE (FOD) PREVENTION PROGRAMS	2.37	4
F212 REMOVE OR INSTALL AERIAL RECOVERY LOAD LINES	2.37	1
J383 DEFLATE ESCAPE SLIDES	2.37	9
K420 MODIFY ORGANIZATIONAL CLOTHING	2.37	30

TABLE 27

## TASKS RATED THE LOWEST IN TRAINING EMPHASIS BY 427X3 PERSONNEL

TASKS	TRAINING EMPHASIS	PERCENT MEMBERS PERFORMING (N=357)
V725 REMOVE OR REPLACE FUEL CELLS	.08	1
C94 EVALUATE WORK REQUIREMENTS FOR TEST PROJECTS	.12	1
A27 PLAN POSTDROP DAMAGE CHARTING	.14	3
V693 DEICE AIRCRAFT	.15	1
E160 PREPARE BUDGET OR ACCOUNTING REPORTS	.15	1
D132 SCHEDULE INSTRUCTOR TRAINING	.19	1
V690 ASSEMBLE FUEL CELLS	.20	1
A37 SCHEDULE TEMPORARY DUTY (TDY)	.20	3
V694 INSPECT FUEL CELLS	.21	1
D136 SELECT OR ASSIGN INSTRUCTORS OF TRAINERS	.21	1
B41 DIRECT ADMINISTRATIVE FUNCTIONS	.21	3
A10 DRAFT BUDGET ESTIMATES	.21	3
V724 RECOVER WIND TETRAHEDRONS	.23	1
C115 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	.23	1
B69 SELECT PARACHUTES FOR TEST PROJECTS	.23	3

## COMPARISON TO PREVIOUS SURVEYS

A previous Occupational Survey Report, AFPT 90-582-173, was completed for the Fabric and Rubber Products career ladder (AFS 582X0) in December 1974. No previous occupational survey was conducted for the Parachute Rigger career ladder (AFS 582X1). A comparison to the present Fabrication and Parachute career ladder is therefore somewhat difficult; however, there are several recognizable similar groups in the previous Fabric and Rubber Products career ladder survey. These groups include: Branch/ Shop NCOICs who compare very closely to the present Fabrication and Parachute Shop Foremen; Rubber Products Specialists who compare favorable to the present Life Preserver Personnel in terms of duties and tasks performed; and Fabric/Leather Specialists who are similar to the present Fabric Repair Personnel.

The December 1974 Occupational Survey Report for total sample Fabric and Rubber Products career ladder incumbents show that 59 percent found their jobs interesting versus 47 percent for current total sample Fabrication and Parachute career ladder incumbents. Perceived utilization of talents and training portray present incumbents as having slightly lower perceptions than in the earlier study (72 percent versus 74 percent). However, the present incumbents indicate reenlistment intentions of 61 percent versus 58 percent for the earlier incumbents. Overall, a comparison of current job data to the December 1974 survey of Fabric and Rubber Products career ladder indicates some similarities but basically the overall job structures are quite different.

## DISCUSSION

This career ladder consists primarily of technically oriented personnel. Sixty-nine percent of the survey respondents were 3- or 5-skill level personnel. Forty-one percent of the career ladder incumbents were in their first enlistment. All of these personnel spend a high percent of their job time in three technical areas (See Analysis of DAFSC Groups section). This is indicative of a career ladder which is highly homogeneous.

When the merger of AFS 582X0, Fabric and Rubber Products, and AFS 582X1, Parachute Rigger, took place in April 1977, there was some concern that individuals from each of the former career ladder would tend to specialize in areas where they had previously worked. Forty-one percent of the former Parachute Riggers and 33 percent of the former Fabric and Rubber Products personnel appear in the current survey. There is some indication that specialization along former work lines has occurred in several of the groups, such as Parachute Repair NCOICs, Parachute Personnel, Life Preserver Personnel, Fabric Repair Personnel, and Parachute Repair Assistants. However, these individuals represent only 30 percent of the survey sample. The remaining 70 percent appear to have integrated very well into the new Fabrication and Parachute career ladder.

There was also some concern that perhaps Production Oriented Maintenance Organization (POMO) personnel may have somewhat different jobs than others. This did not materialize. Forty-five percent of the survey sample respondents were POMO personnel and they appear in many of the clusters and independent job groups in varying percentages.

Several personnel were assigned to the 6513 Test Squadron and the 6515 Test Support Squadron at Edwards AFB, and appear in the Parachute Personnel cluster and a small independent job type, Life Preserver Personnel. Although they are involved in testing functions, their jobs did not differ to a significant enough degree to cause them to group separately. The 4449th Mobility Support Squadron at Holloman AFB had some personnel who work on prefabricated buildings, but again there was not enough significant difference to cause these personnel to group separately.

The above facts appear to support the decision in 1977 to merge the Fabric and Rubber Products and Parachute Rigger career ladders into one career ladder, Fabric and Parachute. The lack of significant write-ins from field personnel expressing opposition to the merger further substantiates the 1977 decision to merge the two ladders.

An examination of first enlistment personnel, who represent 41 percent of the career field, indicates a rather disturbing picture of career ladder morale. Only 37 percent of the first-term respondents find their job interesting and just 51 percent feel that their talents are being utilized fairly well or better. A 1979 comparative sample of mission equipment maintenance career ladders, representing 6,124 personnel, indicated that 56 percent of these personnel found their jobs to be interesting and 65 percent felt that their talents were well utilized. An encouraging note was that 427X3 first-term personnel had a higher perception of the use of their training and higher reenlistment intentions than did personnel in the 1979 comparative

sample (see Table 17). This apparent incongruity may indicate that first enlistment personnel perform many repetitive and boring tasks, but recognize that as they progress in the career field, they will be performing more meaningful and interesting jobs. This does represent a potential problem for career field managers since job satisfaction tends to be generally low across most of the career ladder groups.

Finally, the overall picture of this career ladder developed in this study is one of fairly homogeneous, technically-oriented specialty where most personnel are not too interested in their work, but feel that their training was quite satisfactory. Their relatively high reenlistment intentions appear to indicate that they are fairly optimistic as to their future.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY PARACHUTE AND LIFERAFT PERSONNEL  
(N=228)

TASK	PERCENT MEMBERS PERFORMING
INFLATE LIFE PRESERVERS	100
INFLATE LIFERAFTS	100
PERFORM LEAK INSPECTIONS ON LIFERAFTS	100
PACK LIFE PRESERVERS	99
MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	99
DEFLATE LIFE PRESERVERS	98
PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	98
PERFORM FUNCTIONAL CHECKS OF LIFERAFTS	98
REMOVE OR INSTALL CARBON DIOXIDE (CO <sub>2</sub> ) CARTRIDGES	97
BREAK DOWN LIFE PRESERVERS FOR INSPECTION	97
WEIGH CO <sub>2</sub> CYLINDERS	97
DEFLATE LIFERAFTS	96
VISUALLY INSPECT LIFE PRESERVERS	96
VISUALLY INSPECT LIFERAFTS	96
PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	95
WEIGH CO <sub>2</sub> CARTRIDGES	95
REMOVE OR INSTALL LIFE PRESERVER CELLS	95
STENCIL INFORMATION ON LIFE PRESERVERS	95
CLEAN FACILITIES	94
APPLY TALCUM POWDER TO LIFERAFTS	93
REMOVE OR REPLACE LIFERAFT CO <sub>2</sub> CYLINDERS	91
STENCIL INFORMATION ON LIFERAFTS	86
VISUALLY INSPECT CO <sub>2</sub> CARTRIDGES	85
PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	80
PACK AIRCRAFT DECELERATION PARACHUTES	73

REPRESENTATIVE TASKS PERFORMED BY SURVIVAL EQUIPMENT PERSONNEL  
(N=53)

TASKS	PERCENT MEMBERS PERFORMING
INSPECTING, MAINTAINING, AND REPAIRING LIFE PRESERVERS	100
DEFLATE LIFE PRESERVERS	100
INFLATE LIFE PRESERVERS	100
INFLATE LIFERAFTS	100
PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	100
DEFLATE LIFERAFTS	100
VISUALLY INSPECT LIFERAFTS	100
REMOVE OR INSTALL CARBON DIOXIDE (CO <sub>2</sub> ) CARTRIDGES	98
VISUALLY INSPECT LIFE PRESERVERS	98
APPLY TALCUM POWDER TO LIFERAFTS	98
WEIGH CO <sub>2</sub> CYLINDERS	96
BREAK DOWN LIFE PRESERVERS FOR INSPECTION	94
PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	94
VISUALLY INSPECT CO <sub>2</sub> CARTRIDGES	94
STENCIL INFORMATION ON LIFERAFTS	94
DETERMINE REPAIR REQUIREMENTS FOR DAMAGED LIFE PRESERVERS	94
PERFORM LEAK INSPECTIONS ON LIFERAFTS	90
LOCATE LEAKS ON LIFERAFTS	90
ANNOTATE LIFE PRESERVER INSPECTION RECORD CARD FORMS (AFTO FORM 336)	89
REMOVE OR REPLACE LIFERAFT CO <sub>2</sub> CYLINDERS	89
INSPECT LIFERAFT CARRYING CASES	89
WEIGH CO <sub>2</sub> CARTRIDGES	89
PERFORM FUNCTIONAL CHECKS OF LIFERAFTS	87
INSPECT LIFERAFT ACCESSORY SURVIVAL KITS	85
INVENTORY ACCESSORY SURVIVAL KITS	83

REPRESENTATIVE TASKS PERFORMED BY PARACHUTE AND LIFERAFT NCOICs  
(N=20)

TASKS	PERCENT MEMBERS PERFORMING
MAINTAIN AUTOMATIC RIPCORD RELEASE LOG FORMS (AFTO FORM 393)	100
INSPECT LIFERAFT CO <sub>2</sub> CYLINDERS FOR PROPER MARKINGS	100
INFLATE LIFERAFTS	95
WEIGH CO <sub>2</sub> CYLINDERS	95
ANNOTATE REPARABLE ITEM PROCESSING TAG FORMS (AFTO Form 350)	95
PERFORM FUNCTIONAL CHECKS OF LIFERAFTS	95
PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	95
INFLATE LIFE PRESERVERS	95
WEIGH CO <sub>2</sub> CARTRIDGES	95
STENCIL INFORMATION ON LIFERAFTS	95
DIRECT LIFERAFT SECTION FUNCTIONS	90
DEFLATE LIFERAFTS	90
DEFLATE LIFE PRESERVERS	90
VISUALLY INSPECT LIFERAFTS	90
PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	90
REMOVE OR REPLACE LIFERAFT CO <sub>2</sub> CYLINDERS	90
INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	85
DEMONSTRATE HOW TO LOCATE OR INTERPRET TECHNICAL INFORMATION	85
PACK LIFE PRESERVERS	85
REMOVE OR INSTALL CARBON DIOXIDE (CO <sub>2</sub> ) CARTRIDGES	80
PACK AIRCRAFT DECELERATION PARACHUTES	80
DIRECT FLOATATION EQUIPMENT SECTION FUNCTIONS	80
DIRECT LIFE PRESERVER SECTION FUNCTIONS	80
DIRECT PERSONNEL PARACHUTE SECTION FUNCTIONS	75
MAINTAIN MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	70

REPRESENTATIVE TASKS PERFORMED BY DECELERATION AND DROGUE PARACHUTE PERSONNEL  
(N=13)

TASKS	PERCENT MEMBERS PERFORMING
REMOVE OR INSTALL LOCATOR BEACONS	100
REMOVE OR INSTALL MINOR HARDWARE, SUCH AS SNAPS, GROMMETS, EYELETS, OR INTERLOCKING FASTENERS	100
REMOVE OR INSTALL MAIN CANOPIES	100
REMOVE OR INSTALL CONNECTOR LINKS	100
CLEAN PARACHUTE PACKING OR WORK TABLES	100
REMOVE OR INSTALL PILOT CHUTES	100
REMOVE OR INSTALL RADIO LOCATOR BEACON ANTENNAS	100
REMOVE OR INSTALL SURVIVAL USES OF THE PARACHUTE PAMPHLETS (AFP 64-15)	100
WAX THREADS OR CORDS	100
CUT STENCILS	92
REMOVE OR INSTALL PACK LOCKING LOOPS	92
MAINTAIN AUTOMATIC RIPCORD RELEASE LOG FORMS (AFTO FORM 393)	92
PERFORM FUNCTIONAL TESTS OF CANOPY RELEASES	92
REMOVE OR INSTALL RISERS	92
REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	92
STENCIL INFORMATION ON PARACHUTE COMPONENTS	92
CLEAN AND LUBRICATE SEWING MACHINES	92
PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCTO) MODIFICATIONS OF PARACHUTES	92
REMOVE OR INSTALL EJECTOR SNAPS	92
ADJUST TIMING OF SEWING MACHINES	92
CLEAN FACILITIES	85
MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	85
ADJUST TENSION ON RIPCORD RELEASE GRIPS	85
PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, LAMPS, OR PRESSURE FEET	85
HANG PARACHUTES	85

REPRESENTATIVES TASKS PERFORMED BY PARACHUTE AND FLOTATION  
EQUIPMENT PERSONNEL  
(N=21)

TASKS	PERCENT MEMBERS PERFORMING
INFLATE LIFERAFTS	100
PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	100
DEFLATE LIFERAFTS	95
DEFLATE LIFE PRESERVERS	95
WEIGH CO <sub>2</sub> CYLINDERS	95
BREAK DOWN LIFE PRESERVERS FOR INSPECTION	95
INFLATE LIFE PRESERVERS	90
PACK LIFE PRESERVERS	90
VISUALLY INSPECT LIFERAFTS	90
VISUALLY INSPECT LIFE PRESERVERS	90
PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	90
STENCIL INFORMATION ON LIFERAFTS	90
REMOVE OR INSTALL CARBON DIOXIDE (CO <sub>2</sub> ) CARTRIDGES	86
LOCATE LEAKS ON LIFERAFTS	86
REMOVE OR INSTALL LIFE PRESERVER CELLS	86
STENCIL INFORMATION ON LIFE PRESERVERS	81
VISUALLY INSPECT CO <sub>2</sub> CARTRIDGES	81
CUT STENCILS	81
APPLY TALCUM POWDER TO LIFERAFTS	81
INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	81
CLEAN AND LUBRICATE SEWING MACHINES	81
HANG PARACHUTES	76
PERFORM FUNCTIONAL CHECKS OF LIFERAFTS	76
WEIGH CO <sub>2</sub> CARTRIDGES	76
REMOVE OR INSTALL MINOR HARDWARE, SUCH AS SNAPS, GROMMETS, EYELETS, OR INTERLOCKING FASTENERS	76

REPRESENTATIVE TASKS PERFORMED BY PARACHUTE REPAIR NCOICs  
(N=114)

TASKS	PERCENT MEMBERS PERFORMING
CLEAN AND LUBRICATE SEWING MACHINES	96
STORE THREAD AND CORDAGE	94
ADJUST TIMING OF SEWING MACHINES	92
DETERMINE REPAIR REQUIREMENTS FOR DAMAGED PARACHUTES	89
ANNOTATE REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	89
CLEAN FACILITIES	88
MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	87
PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, LAMPS, OR PRESSURE FEET	87
STORE SURVIVAL EQUIPMENT COMPONENTS	86
MAINTAIN MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	85
SEW ITEMS SUCH AS NAME TAGS, UNIT PATCHES, OR VELCRO TAPE ONTO PROTECTIVE OR ORGANIZATIONAL CLOTHING	85
PREPARE APRs	84
CLEAN PARACHUTE PACKING OR WORK TABLES	84
MANUFACTURE FOREIGN OBJECT DAMAGE (FOD) BAGS	84
CONDUCT OJT OR QUALIFICATION TRAINING	83
COORDINATE WORK ACTIVITIES WITH OTHER UNITS OR AGENCIES	81
SEW REFLECTIVE TAPE ONTO INDIVIDUAL CLOTHING OR ISSUE ITEMS	81
PERFORM COMPLETED WORK INSPECTIONS	81
ESTABLISH WORK PRIORITIES	79
PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	78
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	78
INSPECT PERSONNEL	78
SUPERVISE FABRICATION AND PARACHUTE SUPERVISORS (AFSC 42773)	78
INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	75
DIRECT FABRICATION AND PARACHUTE SHOP FUNCTIONS	73

REPRESENTATIVE TASKS PERFORMED BY PARACHUTE PERSONNEL  
(N=127)

TASKS	PERCENT MEMBERS PERFORMING
REMOVE OR INSTALL CONNECTOR LINKS	87
INSPECT PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	86
PACK PERSONNEL PARACHUTES OR PERSONNEL RECOVERY SUBSYSTEMS	85
REMOVE OR INSTALL PILOT CHUTES	85
REMOVE OR INSTALL MINOR HARDWARE, SUCH AS SNAPS, GROMMETS, EYELETS, OR INTERLOCKING FASTENERS	84
MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	83
REMOVE OR INSTALL MAIN CANOPIES	81
REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	79
REMOVE OR INSTALL RISERS	79
REMOVE OR INSTALL BRIDLE LINES	78
REMOVE OR INSTALL MANUAL RIPCORDS	75
STENCIL INFORMATION ON PARACHUTE COMPONENTS	75
HAND PARACHUTES	71
CLEAN PARACHUTE PACKING OR WORK TABLES	70
INSPECT AIRCRAFT DECELERATION PARACHUTES	67
DETERMINE REPAIR REQUIREMENTS FOR DAMAGED PARACHUTES	65
CUT STENCILS	64
PACK AIRCRAFT DECELERATION PARACHUTES	64
MAINTAIN PARACHUTE REPACK, INSPECTION, AND COMPONENT RECORD FORMS (AFTO FORM 392)	61
MAINTAIN AUTOMATIC RECORD RELEASE LOG FORMS (AFTO FORM 393)	61
PERFORM FUNCTIONAL TESTS OF CANOPY RELEASES	57
REMOVE OR INSTALL LOCATOR BEACONS	56
REMOVE OR INSTALL PACK LOCKING LOOPS	54
REMOVE OR INSTALL HARNESES	51

REPRESENTATIVE TASKS PERFORMED BY LIFE PRESERVER PERSONNEL  
(N=15)

TASKS	PERCENT MEMBERS PERFORMING
INFLATE LIFE PRESERVERS	100
DEFLATE LIFE PRESERVERS	100
PACK LIFE PRESERVERS	93
VISUALLY INSPECT LIFE PRESERVERS	93
PERFORM LEAK INSPECTIONS ON LIFE PRESERVERS	93
INSPECT LIFE PRESERVER ACCESSORIES	93
REMOVE OR INSTALL CARBON DIOXIDE (CO <sub>2</sub> ) CARTRIDGES	87
BREAK DOWN LIFE PRESERVERS FOR INSPECTION	87
PERFORM FUNCTIONAL CHECKS OF LIFE PRESERVERS	87
REMOVE OR INSTALL LIFE PRESERVER CELLS	87
WEIGH CO <sub>2</sub> CARTRIDGES	80
VISUALLY INSPECT CO <sub>2</sub> CARTRIDGES	80
PATCH LIFE PRESERVERS	80
REMOVE OR REPLACE MISSING, DAMAGED, OR DETERIORATED HARDWARE ON LIFE PRESERVERS	80
STENCIL INFORMATION ON LIFE PRESERVERS	73
VISUALLY INSPECT LIFE PRESERVERS	73
PREPARE LIFE PRESERVER DATA FORMS (AFTO 466)	67
DETERMINE REPAIR REQUIREMENTS FOR DAMAGED LIFE PRESERVERS	67
ANNOTATE LIFE PRESERVER INSPECTION RECORD CARD FORMS (AFTO FORM 336)	67
REMOVE OR INSTALL LIFE PRESERVER CONTAINERS	67
PERFORM OPERATIONAL CHECKS OF ORAL INFLATION VALVES ON LIFE PRESERVERS	60
REMOVE OR INSTALL LIFE PRESERVER INFLATORS	60
RESTITCH LIFE PRESERVER CONTAINERS	53
REMOVE OR REPLACE LANYARDS ON LIFE PRESERVERS	53
MODIFY LIFE PRESERVER CONTAINERS	40

REPRESENTATIVE TASKS PERFORMED BY FABRIC REPAIR PERSONNEL  
(N=43)

TASKS	PERCENT MEMBERS PERFORMING
CLEAN AND LUBRICATE SEWING MACHINES	81
CUT FABRIC FOR AIRCRAFT FABRIC ITEMS	74
FABRICATE PROTECTIVE COVERS	72
INSPECT AIRCRAFT FABRIC ITEMS	70
SEW LOOSE SEAMS, RIPS, SNAGS, OR TEARS OF AIRCRAFT FABRIC ITEMS	70
CLEAN FACILITIES	67
PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, LAMPS, OR PRESSURE FEET	67
DETERMINE REPAIR REQUIREMENTS FOR AIRCRAFT FABRIC ITEMS	67
SEW LOOSE SEAMS OF PROTECTIVE COVERS	67
ADJUST TIMING OF SEWING MACHINES	67
SELECT MATERIALS FOR PROTECTIVE COVERS	67
REPLACE DAMAGED SECTIONS OF PROTECTIVE COVERS	67
SEW FABRIC OR INSULATING MATERIAL FOR AIRCRAFT SOUNDPROOFING	65
MAKE PROTECTIVE COVER PATTERNS	65
DETERMINE REPAIR REQUIREMENTS FOR AIRCRAFT SOUNDPROOFING OR HOLSTERY	63
DETERMINE REPAIR REQUIREMENTS FOR PROTECTIVE COVERS	60
MANUFACTURE AIRCRAFT SEAT COVERS, HEADREST COVERS, OR ARMREST COVERS	60
CUT FOAM RUBBER FOR SEAT CUSHIONS OR MATTRESSES	60
REMOVE OR REPLACE HARDWARE ON AIRCRAFT FABRIC ITEMS	58
LAY OUT PATTERNS FOR PROTECTIVE COVERS	58
INSPECT AIRCRAFT SOUNDPROOFING	56
SEW AIRCRAFT INSULATION	56
PATCH AIRCRAFT ENGINE SEALS	56
REMOVE OR REPLACE HARDWARE OF PROTECTIVE COVERS	56
CLEAN AND LUBRICATE FABRIC CUTTERS	56

REPRESENTATIVE TASKS PERFORMED BY FABRICATION AND  
PARACHUTE SHOP FOREMEN  
(N=102)

TASKS	PERCENT MEMBERS PERFORMING
COORDINATE WORK ACTIVITIES WITH OTHER UNITS OR AGENCIES	95
COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	94
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	93
PREPARE APRs	93
ORIENT NEWLY ASSIGNED PERSONNEL	92
ASSIGN PERSONNEL TO DUTY POSITIONS	90
INSPECT PERSONNEL	88
ESTABLISH WORK PRIORITIES	87
CERTIFY PROFICIENCY OF SUBORDINATES	85
DEVELOP WORK METHODS OR PROCEDURES	84
ESTABLISH EQUIPMENT OR SUPPLY REQUIREMENTS	82
PERFORM COMPLETED WORK INSPECTIONS	81
REVIEW TRAINING PROGRESS OF INDIVIDUALS	80
EVALUATE WORK SCHEDULES	79
ORDER PARTS OR SUPPLIES	79
EVALUATE WORK STANDARDS	78
SUPERVISE FABRICATION AND PARACHUTE SPECIALISTS (AFSC 42753)	77
EVALUATE THE MAINTENANCE OR USE OF SUPPLIES	77
CONDUCT BRIEFINGS	77
INITIATE OR MAINTAIN ON-THE-JOB TRAINING RECORD FORMS (AF FORM 623)	77
IMPLEMENT SAFETY PROCEDURES OR PROGRAMS	76
PARTICIPATE IN STAFF MEETINGS	75
ESTABLISH PERFORMANCE STANDARDS	74
RESEARCH INFORMATION IN PUBLICATIONS	73
DIRECT FABRICATION AND PARACHUTE SHOP FUNCTIONS	70

REPRESENTATIVE TASKS PERFORMED BY CARGO/AERIAL DELIVERY  
PARACHUTE REPAIR ASSISTANTS  
(N=37)

TASKS	PERCENT MEMBERS PERFORMING
REMOVE OR INSTALL CONNECTOR LINKS	84
HANG PARACHUTES	81
MAINTAIN PARACHUTE LOG FORMS (AFTO FORM 391)	78
CLEAN PARACHUTE PACKING OR WORK TABLES	78
PATCH OR DARN HOLES IN DEPLOYMENT BAGS	78
CLEAN FACILITIES	76
REMOVE OR INSTALL PACKS, DEPLOYMENT BAGS, OR CONTAINERS	76
REMOVE OR INSTALL RISERS	67
PACK CARGO OR AERIAL DELIVERY PARACHUTES	65
CLEAN AND LUBRICATE SEWING MACHINES	65
INSPECT CARGO OR AERIAL DELIVERY PARACHUTES	62
PATCH OR DARN HOLES IN MAIN CANOPIES	62
REMOVE OR INSTALL REEFING LINES	57
PERFORM OPERATOR MAINTENANCE ON SEWING MACHINES, SUCH AS CHANGING NEEDLES, FOOT PADS, OR PRESSURE FEET	57
PREPARE UNSERVICEABLE (CONDEMNED) TAG MATERIEL FORMS (DD FORM 1577)	57
RESEQUENCE SUSPENSION LINES	51
REMOVE OR INSTALL BRIDLE LINES	51
REMOVE OR INSTALL BUFFER STRIPS	49
OPERATE GOVERNMENT VEHICLES	49
SEW ITEMS SUCH AS NAME TAGS, UNIT PATCHES, OR VELCRO TAPE ONTO PROTECTIVE OR ORGANIZATIONAL CLOTHING	49
SEW REFLECTIVE TAPE ONTO INDIVIDUAL CLOTHING OR ISSUE ITEMS	49
DETERMINE REPAIR REQUIREMENTS FOR DAMAGED PARACHUTES	46
SHARPEN HAND TOOLS	40
INSPECT AIRCRAFT DECELERATION PARACHUTES	35
PACK AIRCRAFT DECELERATION PARACHUTES	30

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