

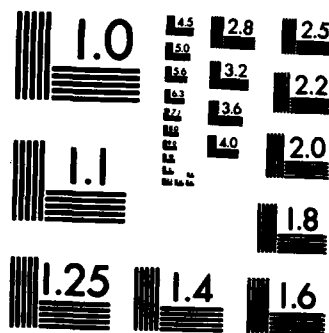
AD-A143 019 AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC CAREER LADDER
AFSC 423X4(U) AIR FORCE OCCUPATIONAL MEASUREMENT CENTER
RANDOLPH AFB TX JUN 84

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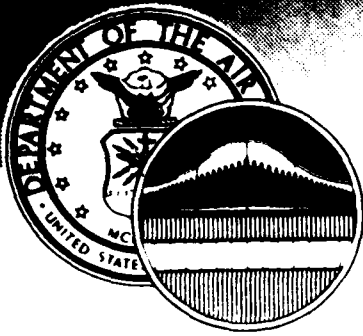
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UNITED STATES AIR FORCE

AD-A143 019

OCCUPATIONAL SURVEY REPORT

AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC
CAREER LADDER

AFSC 423X4

AFPT 90-423-505

JUNE 1984

DTIC FILE COPY

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

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PREFACE

This report presents the results of an Air Force occupational survey of the Aircraft Pneudraulic Systems Mechanic career ladder (AFSC 423X4). Authority for conducting occupational surveys is contained in AFR 35-2. Computer printouts from which this report was produced are available for use by operating and training officials upon request.

The survey instrument was developed by Chief Master Sergeant Donald J. Cochran, Inventory Development Specialist. Ms Faye Shenk, Occupational Analyst, analyzed the data and wrote the final report. Ms Elvira Frechel provided computer programming support for the project. 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 Air Force Base, Texas 78150.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies may be obtained upon request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Branch (OMY), Randolph Air Force Base, Texas 78150.

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SUMMARY OF RESULTS

1. Survey Coverage: The Aircraft Pneudraulic Systems career ladder was surveyed to obtain current data for use in training management decisions. The inventory was administered worldwide to 1,751 respondents. All major commands were well represented in the survey sample.
2. Specialty Jobs (Career Ladder Structure): Two clusters and 10 independent job types were identified in the 423X4 career ladder. Sixty-one percent of the incumbents were included in the Flightline Pneudraulics Personnel cluster, which represents the main job of the career field. Within this cluster, job groups based on type of aircraft were identified. A second cluster was composed of predominantly in-shop supervisors. Independent job types consisted of personnel grouped as: Pneudraulic Flightline Supervisors, General Pneudraulic Mechanics, Pneudraulic In-Flight Refueling Equipment Mechanics, In-Shop Pneudraulic Repairmen, CUT Personnel, Training Supervisors and FTD Instructors, Technical School Instructors, In-Flight Refueling Equipment Instructors, MAC Inspectors, and SAC Quality Control Personnel.
3. Career Ladder Progression: The 423X4 career ladder follows a typical pattern of progression through the skill levels. Three- and 5-skill level personnel are performing basically technical tasks. Seven-skill level personnel perform technical tasks, as well as supervisory and management roles.
4. Career Ladder Documents: The AFR 39-1 Specialty Descriptions provide an accurate overview of the 423X4 career ladder. Both the STS and POI were well supported by data but should be reviewed since a number of tasks performed by first-enlistment personnel were not matched to these documents. The unmatched tasks should be reviewed to determine their applicability to these documents.
5. Implications: The 423X4 career ladder does not appear to have changed significantly since the 1976 survey. The added inflight refueling responsibilities have been absorbed by the using commands without any apparent difficulty. Training managers should review the items not matched to the STS or POI for relevancy. Consideration for training must be made on which factors are representative of basic pneudraulic functions and which are aircraft-specific and more feasibly taught through follow-on training on members' first assignment. In career fields such as the 423X4, it is important to retain a sufficient number of experienced personnel for effective follow-on training.

OCCUPATIONAL SURVEY REPORT
AIRCRAFT PNEUDRAULIC SYSTEMS CAREER LADDER
(AFSC 423X4)

INTRODUCTION

This is a report of an occupational survey of the Aircraft Pneudraulic Systems career ladder (AFSC 423X4) conducted by the Occupational Analysis Branch, USAF Occupational Measurement Center. The present survey was requested by the 3330 TCHTW/TTGKS, Chanute AFB IL. This specialty was last analyzed in 1976.

Background

The historical progression of the 423X4 career ladder dates from 1951, when AFSC 425X0, Aircraft Hydraulic Mechanics, was created. In 1954, the career ladder was changed to AFSC 421X2, Aircraft Hydraulic Repairman. In 1959, the career field title changed to Aircraft and Missile Hydraulic Repairman, and in 1960, it was renamed Aircraft and Missile Pneudraulic Repairman. In 1976, AFSC 421X2 became AFSC 423X4, Aircraft Pneudraulic Systems (the present AFSC). During 1977, the In-Flight Refueling System Mechanics from AFSC 423X6 were incorporated into the 423X4 career ladder. (In-Flight Refueling Operators became AFSC 11230 career ladder in 1975.)

As described in AFR 39-1 Specialty Descriptions, Aircraft Pneudraulic Systems personnel are responsible for inspecting, troubleshooting, installing, repairing, overhauling, and modifying aircraft pneumatic, hydraulic, and in-flight refueling systems and associated aerospace ground equipment.

Primary entry into the career ladder is through a 9-week, 4-day course (C3ABR42334 000) consolidated at Chanute AFB IL. A supplemental course (C3AZR42334 000), In-Flight Refueling Systems, is designed for personnel assigned to SAC. This is a 2-week, 1-day course at Chanute AFB IL.

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-423-505, dated July 1982. This inventory booklet was composed of two parts: a background section in which job incumbents provided information such as grade, duty title, time in service, job satisfaction, and equipment used, and a duty-task list section in which incumbents indicate the tasks they perform and the relative amount of time spent on those tasks. There were 730 tasks grouped under 12 duty headings.

Survey Administration

Consolidated Base Personnel Offices (CBPO) in operational units worldwide administered the inventory to personnel holding AFS 423X4. These job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual completed the background information section and checked each task performed on their current job. After checking the tasks performed, the incumbent rated each task on a 9-point scale showing relative time spent on that task compared to other tasks performed. The ratings ranged from one (very small amount of time spent) through five (above average time spent) to nine (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of incumbent's time spent on the job and are summed. Each task rating is then divided by the total task ratings and then multiplied by 100. This procedure provides a basis for comparison of tasks in terms of percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across major commands (MAJCOM) and paygrade groups. All eligible AFSC 423X4 personnel were mailed inventory booklets in November 1982. Approximately 880 booklets from this initial administration were lost when the car of the sergeant who was performing a quality review of returned booklets was stolen. With the concurrence of personnel at the technical school at Chanute Technical Training Center and technical training personnel at HQ ATC, it was decided to readminister the inventory to those 880 personnel to try to recover as many of these respondents as possible. The mailing list was screened to ensure airmen who had previously completed a booklet and in the possession of OMC would not be asked to do so again.

The final sample included 1,751 respondents, representing 59 percent of the 423X4 career field. Although a 59 percent return rate is lower than normally accepted (desirable return rate is 75 percent), it was decided to go ahead with the sample available rather than to delay this project further.

Table 1 shows the percentage distribution, by major command, of assigned personnel in the career ladder as of 29 June 1983. Also listed in this table is the percent distribution, by major command, of respondents in the final survey sample. As can be seen from this data, the sample generally parallels assigned strength. The 1,751 respondents included in the final sample represent 59 percent of the 423X4 career field eligible for the survey.

Table 2 reflects the paygrade group distribution, while Table 3 lists the sample distribution by TAFMS. As reflected in these tables, the survey sample provides a good representation of the career ladder population.

These tables also provide an overview of the individuals in the career field. As shown in Table 1, the operational commands are the prime utilizers of 423X4 career field personnel. The tactical forces (TAC, PACAF, and USAFE) represent 45 percent of the career ladder assignments.

The Aircraft Pneudraulic Systems career field is a relatively junior force. Sixty-two percent are in paygrades E-4 and below; 56 percent of those assigned are in their first enlistment. In addition, only 25 percent (see Table 3) are in career status (third enlistment or beyond). In maintenance career fields, such as 423X4 which service a very diverse range of systems, maintaining a core of experienced personnel is very important to provide continuity in the career field.

TABLE 1

COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
TAC	30	23
MAC	24	26
SAC	20	24
USAFE	11	10
ATC	7	9
PACAF	4	3
AFSC	2	2
AFLC	1	2
AAC	1	1

* As of April 1983

Total Assigned: 3,630
 Total Number Eligible: 2,991
 Total in Sample: 1,751
 Percent of Assigned in Sample: 48%
 Percent of Eligible in Sample: 59%

TABLE 2

PAYGRADE REPRESENTATION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
E-1, 2, or 3	40	40
E-4	23	22
E-5	22	22
E-6	10	11
E-7	5	5

* As of April 1983

TABLE 3
TAFMS DISTRIBUTION OF SURVEY SAMPLE

	MONTHS IN SERVICE					
	1-48	49-96	97-144	145-192	193-240	241+
NUMBER IN AFS 423X4 SAMPLE	866	384	216	151	85	26
PERCENT OF AFS 423X4 SAMPLE	50%	22%	12%	9%	5%	2%
PERCENT OF AFS 423X4 ASSIGNED*	56%	19%	10%	9%	5%	1%

* As of April 1983

Task Factor Administration

In addition to completing the job inventory, selected senior 423X4 personnel were also asked to complete a second booklet for either task difficulty (TD) or training emphasis (TE). The TD and TE booklets are processed separately from the job inventories. The rating information is used in several analyses discussed in this report. Table 4 reflects the command represented for the TD and TE raters. There is a reasonable distribution of raters across command; thus, the ratings seem acceptable as a representative sample.

Task Difficulty. Each person completing a task difficulty booklet was asked to rate all inventory tasks on a 9-point scale (from extremely low to extremely high) as to relative difficulty of each task. Difficulty is defined as the length of time required by an average incumbent to learn to do the task. Task difficulty data were independently collected from 66 experienced 423X4 NCOs stationed worldwide. The interrater reliability (as assessed through components of variance of standard group means) was .95, which reflects high agreement among raters. Ratings were adjusted so tasks of average difficulty would have a 5.00 rating and a standard deviation of 1.0. The resulting data are essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After determining the task difficulty index for each task item, a Job Difficulty Index (JDI) was computed for the job groups identified in the survey analysis. The JDI provides a relative measure of which jobs, in comparison to other jobs, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent (ADPUTS) as variables are the basis for the JDI. Thus, the more time a group spends on difficult tasks and the more tasks they perform, the higher JDI. The index ranges from 1.0 for very easy jobs to 25.0 for

very difficult jobs. The measurements are adjusted so the average JDI is 13.0.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate tasks on a 10-point scale from no training required to extremely heavy training required. Training emphasis is a rating of which tasks require 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 were independently collected from 65 experienced 423X4 personnel stationed worldwide. The interrater reliability (as assessed through components of variance of standard group means) was .96, which indicates a high degree of agreement. Tasks rated highest in training emphasis had ratings of 4.09 and above, with an average emphasis rating of 2.50.

When used in conjunction with other factors, such as percent members performing, task difficulty and training emphasis ratings can provide insight into training requirements. Such information helps in evaluating efficiency of training programs.

TABLE 4

COMMAND REPRESENTATION OF 423X4 TASK DIFFICULTY
AND TRAINING EMPHASIS RATINGS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
TAC	30	26	30
MAC	24	15	22
SAC	20	26	24
USAFE	11	12	8
ATC	7	14	2
PACAF	4	1	6
AFSC	2	-	3
AFLC	1	1	3
AAC	1	5	2

* As of April 1983

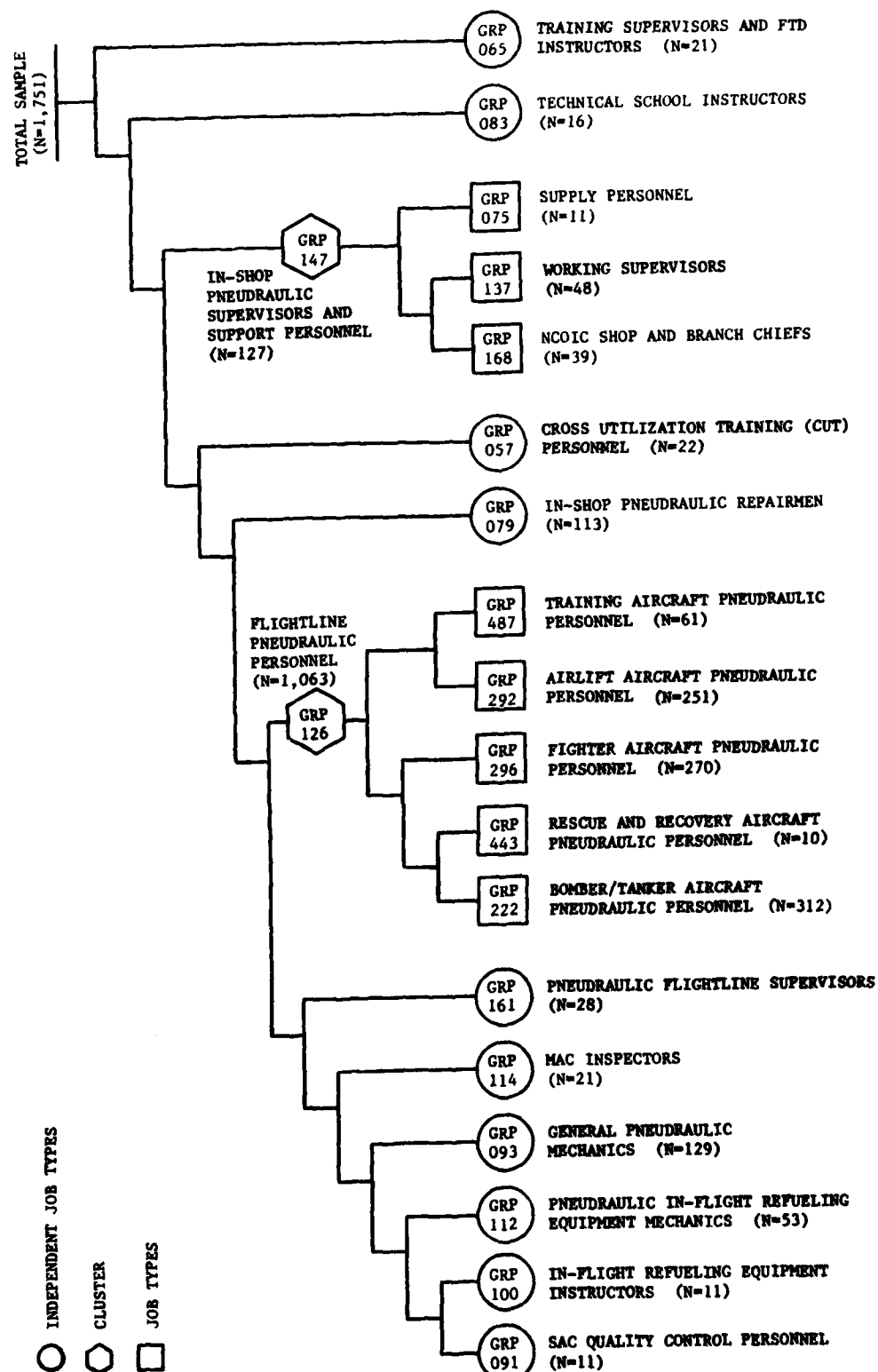
SPECIALTY JOBS (Career Ladder Structure)

The USAF Occupational Analysis Program includes an examination of the career ladder structure. This analysis is based on what incumbents indicate they are doing in the field, determined from task responses. Each person in the survey performs a set of tasks called their position. A group of positions where many similar tasks are performed and incumbents spend similar amounts of time performing them is called a job type. Job types having a substantial degree of commonality are grouped and called a cluster. Specialized job types too dissimilar to fit within a cluster are labeled independent job types.

The career ladder division is based on tasks performed and the amount of time spent on those tasks. The grouping of jobs performed in the 423X4 career ladder is illustrated in Figure 1. The cluster, job types, and independent job types are listed below. The group (GRP) number is a reference to computer printed information. The letter "N" stands for the number of personnel in the group.

- I. FLIGHTLINE PNEUDRAULIC PERSONNEL (GRP126, N=1,063)
 - A. Training Aircraft Pneudraulic Personnel (GRP487, N=61)
 - B. Airlift Aircraft Pneudraulic Personnel (GRP292, N=251)
 - C. Fighter Aircraft Pneudraulic Personnel (GRP296, N=270)
 - D. Rescue and Recovery Aircraft Pneudraulic Personnel (GRP443, N=10)
 - E. Bomber/Tanker Aircraft Pneudraulic Personnel (GRP222, N=312)
- II. PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161, N=28)
- III. GENERAL PNEUDRAULIC MECHANICS (GRP93, N=129)
- IV. PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112, N=53)
- V. IN-SHOP PNEUDRAULIC SUPERVISORS AND SUPPORT PERSONNEL (GRP47, N=127)
 - A. Supply Personnel (GRP75, N=11)
 - B. Working Supervisors (GRP137, N=48)
 - C. NCOIC Shop and Branch Chiefs (GRP168, N=39)
- VI. IN-SHOP PNEUDRAULIC REPAIRMEN (GRP79, N=113)
- VII. CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22)
- VIII. TRAINING SUPERVISORS AND FTD INSTRUCTORS (GRP65, N=21)

FIGURE 1
423X4 CAREER LADDER STRUCTURE



- IX. TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16)
- X. IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11)
- XI. MAC INSPECTORS (GRP114, N=21)
- XII. SAC QUALITY CONTROL PERSONNEL (GRP91, N=11)

Ninety-two percent of the survey respondents were performing the jobs grouped within the 2 clusters and the 10 independent job types. The remaining 8 percent performed tasks or a series of tasks that did not group with any of the defined job types. Some of the job titles given by respondents which were representative of these personnel include: Maintenance Job Controller, ISO Dock Supervisor, Resource Advisor, Engine Time Change Monitor, and TO Monitor.

Job Descriptions

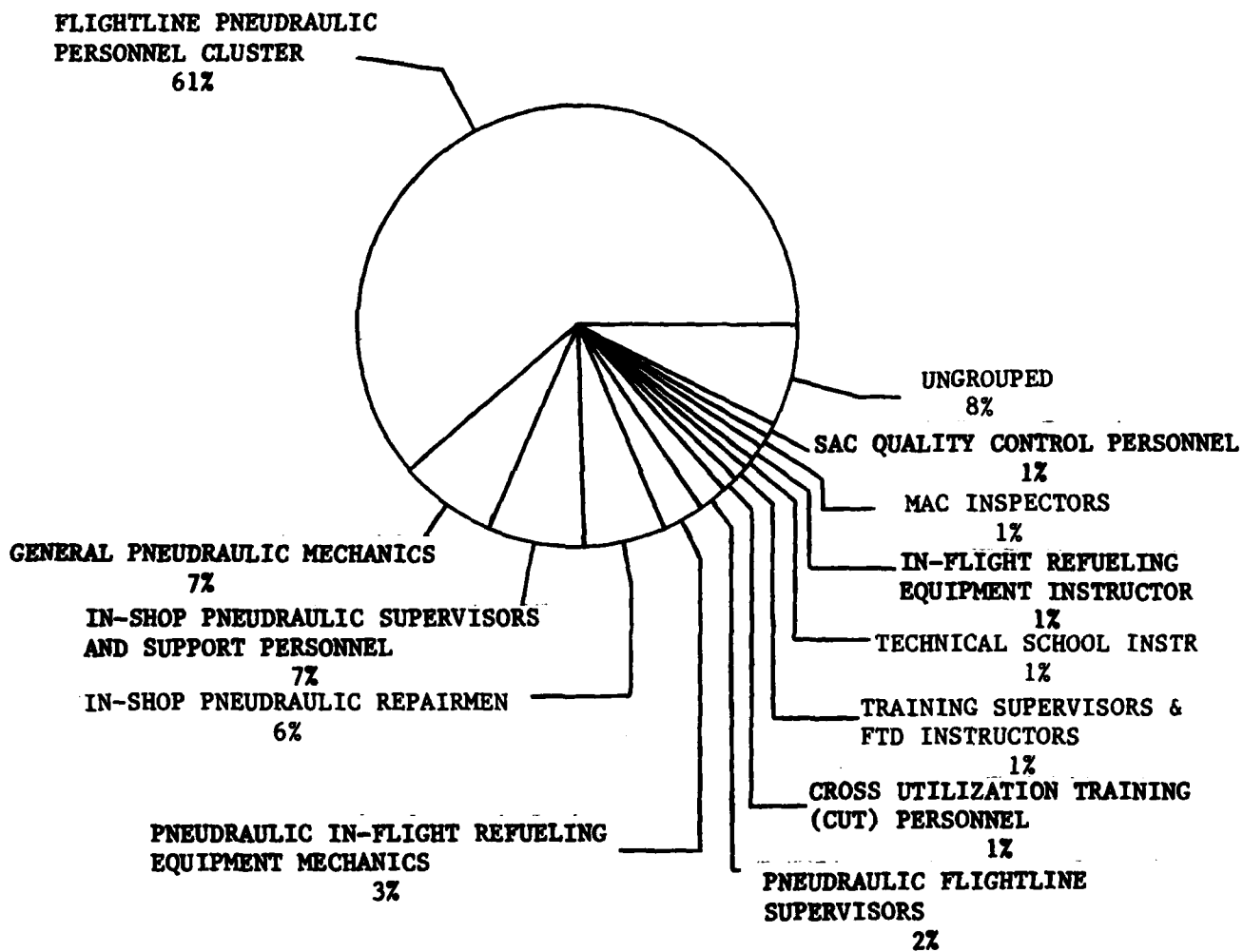
The following paragraphs describe the job groups identified from the computer analysis. Figure 2 illustrates the relative size of each cluster and independent job type within the total sample. Selected background and job satisfaction information is provided for these groups in Tables 5 and 6. Table 7 shows the relative percent time spent on duty areas by job groups. Representative tasks for the clusters and independent job types are given in Appendix A.

I. FLIGHTLINE PNEUDRAULIC PERSONNEL (GRP126, N=1,063). Cluster members, 61 percent of the total sample, represent the core job of this career field. The average grade is E-4; 67 percent hold a 5-skill level DAFSC. Approximately half are in their first enlistment. Average months in the service is 67, with an average of 60 months in the career field. Command membership includes: MAC (29 percent), SAC (28 percent), TAC (21 percent), USAFE (10 percent), ATC (6 percent), PACAF (2 percent), AFSC (2 percent), AAC (1 percent), and AFLC (1 percent). Twenty-four percent of this group are assigned overseas.

Members of this cluster perform an average of 186 tasks. Their time is spent primarily on technical tasks involving:

- removing, installing, and servicing pneudraulic systems (18 percent)
- performing operational checks of aircraft pneudraulic systems (15 percent)
- inspecting aircraft installed pneudraulic systems (13 percent)
- isolate malfunctions within aircraft pneudraulic systems (11 percent)

FIGURE 2
423X4 CAREER LADDER STRUCTURE



The focus of their job is primarily on flightline maintenance (two-thirds indicate they work primarily flightline). Although the job emphasis is centered on flightline duties, they also spend about 10 percent of their time completing in-shop maintenance.

Many tasks are performed in common by members of this cluster regardless of aircraft worked on. Most perform tasks related to brake systems, landing gear systems, nose gear, and steering systems. Specific examples of tasks are:

- perform operational checks of nose wheel steering systems
- perform operational checks of brake systems
- remove or install engine driven hydraulic pumps
- bleed or service brakes
- remove or install components of landing gear retraction or extension systems
- remove or install hydraulic filter assemblies or elements

Within the cluster, five job groups were identified. The primary factor which distinguished these job types is the performance of tasks related to specific types of aircraft. While the separate job groups show unique characteristics, they also have a common bond with other members of the cluster. Job groups are discussed below.

A. Training Aircraft Pneudraulic Personnel (GRP487, N=61). This rather junior group is primarily responsible for flightline maintenance on the T-37B and T-38A. Ninety-two percent are assigned to ATC. Although their average time in the career field is only 33 months, 90 percent have obtained the 5-skill level. Seventy-four percent are in their first enlistment (average grade is between E-3 and E-4).

Members are performing a very technical job involving an average of 138 tasks, with a JDI of 13.2. The tasks listed below illustrate the type of technical undertakings performed specifically by members of this job group.

- bench check brake master cylinders
- remove or install components of horizontal tail or stabilizer systems
- adjust components of nose wheel steering systems
- adjust hydraulic components of aileron systems
- adjust components of speed brake systems
- assemble or disassemble aircraft reservoirs
- adjust landing gear door components

Equipment used more by these incumbents than their counterparts in other groups include brake lining grinders, face gauges, spring compressors, and compression riveter machines. Many parts on the T-37 and T-38 are more easily repaired than on more complex aircraft. This may account for the unique use of these equipment items.

B. Airlift Aircraft Pneudraulic Personnel (GRP292, N=251). Eighty-eight percent of the members are assigned to MAC. They perform basic flightline pneudraulic maintenance on the C-5A, C-130B, C-130E, C-130H, C-141B, and T-39A. Tasks uniquely performed by representatives of this job type are:

- Perform operational checks of elevator systems
- remove or install elevator systems
- remove or install cargo doors
- inspect aircraft installed elevator boost pack assemblies
- isolate malfunctions to elevator systems
- isolate malfunctions to cargo doors

They perform an average of 153 tasks, with a JDI of 14.4.

Most members of this group hold a DAFSC of 42354. Their average time in the career field is 53 months; average time in the service is 58 months. Fifty-eight percent are in their first enlistment. Average grade is E-4.

C. Fighter Aircraft Pneudraulic Personnel (GRP296, N=270). The majority of these personnel are assigned to the tactical commands (TAC, PACAF, and USAFE), with 40 percent serving overseas. Primary aircraft serviced (by 10 percent or more of the group members) are A-10A, F-4E, F-16A, F-16B, and RF-4C.

Members are in their second tour of duty (average TAFMS is 62 months). Sixty-eight percent hold a 5-skill level and 22 percent have attained the 7-skill level. Average grade is E-4.

Performing their flightline duties involves such tasks as:

- walk wings or tails during aircraft towing operations
- jack or level aircraft
- position or remove aircraft chocks or ground safety pins
- tow aircraft

Tasks specific to the aircraft members service include:

perform operational checks of pneudraulic arresting
hook systems
inspect aircraft installed pneudraulic arresting
hook systems

Group members do not perform as many of the common tasks associated with in-shop maintenance or maintaining AGE or shop equipment. This lack of performance of duties in this area is probably a function of the COMO (formerly POMO) organization concept employed by the representative commands.

Members of this group perform an average of 142 tasks, resulting in a JDI of 13.7.

D. Rescue and Recovery Aircraft Pneudraulic Personnel (GRP443, N=10). This small group from MAC specializes in aircraft associated with rescue and recovery missions. They are predominantly associated with the HC-130H, HC-130N, HC-130P, UH-1F, UH-1N, HH-3E, and the HH-53B. They perform an average of 198 tasks (JDI is 16.7) related primarily to helicopter functions, in addition to refueling activities (HC-130). Tasks performed by this group include:

inspect air refueling hydraulic systems
isolate malfunctions within rotor brake systems
isolate malfunctions within rotor wing collective
control systems
remove or install components of air refueling
hydraulic systems
adjust cyclic servo cylinder assemblies
perform operational checks of air refueling
hydraulic systems

This job type represents a more senior group performing pneudraulic maintenance on rescue and recovery aircraft. Their average grade is E-5. Eight of the ten indicate they hold a DAFSC of 42374. Members have an average of 124 months TAFMS. All ten indicate they are supervising. Half of the group are serving in overseas positions.

E. Bomber/Tanker Aircraft Pneudraulic Personnel (GRP222, N=312). This job type achieves uniqueness through the performance of in-flight refueling tasks. Ninety-four percent of the respondents are assigned to SAC and service the B-52G, B-52H, KC-135A, and KC-135Q.

Accomplishing an average of 209 tasks, they perform a broader range of tasks than any other job group. Their JDI is 18.1, which is also the highest for any group in the sample. Tasks unique to this group include:

- perform operational checks of air refueling signal systems
- perform operational checks of air refueling indicating systems
- perform operational checks of air refueling electrical systems
- remove or install components of air refueling hydraulic systems
- rig air refueling boom control cables

The majority of the members have achieved the 5-skill level (68 percent). Their average grade is E-4. Most are in their second enlistment (average TAFMS is 77 months) and have served an average of 67 months in the career field. Forty-three percent of these incumbents are in their first enlistment.

II. PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161, N=28). Eighty-two percent of these incumbents indicate they direct flightline repair operations. In addition to supervising (82 percent), they spend 17 percent of their time inspecting pneudraulic systems and 12 percent of their time performing operational checks. Additional duties performed by this group are tool kit monitor, dispatch monitor, and OJT training monitor. They perform an average of 128 tasks (JDI is 13.3) related to the following basic aircraft: C-5A, C-141B, T-37B, and T-38A. Representative tasks include areas such as:

- inspecting aircraft installed brake, nose wheel, landing gear, shock struts, and hydraulic power systems
- supervising 5-skill level personnel
- reviewing maintenance data collection forms
- clearing Red X conditions
- writing APRs

Seventy-five percent of this senior group of personnel (average grade is E-6) hold a 7-skill level. Average time in the service is 156 months; 141 months average time in the career field.

III. GENERAL PNEUDRAULIC MECHANICS (GRP93, N=129). This independent job type represents a group of predominantly (77 percent) first-enlistment personnel completing fundamental tasks associated with pneudraulic systems and components. For instance, they perform such basic tasks as:

- service aircraft hydraulic systems
- bleed or service brake systems
- remove or install engine driven hydraulic pumps
- perform operational checks of nose wheel steering systems

They spend 25 percent of their time removing, installing, and servicing pneudraulic systems and components. An additional 20 percent of their time is spent performing operational checks on these systems. Their job focuses on flightline maintenance, although they do spend a small amount of time on in-shop activities. Representative aircraft (maintained by at least 10 percent of the members) for this group, assigned primarily to MAC, TAC, and USAFE, include: C-5A, C-141B, F-4E, F-15C, F-15D, F-16B, and the T-38A.

Members perform an average of 74 tasks (primarily technical), with a JDI of 9.0. The performance of a relatively small number of tasks is indicative of a junior group of personnel. Most of these individuals are 5-skill level personnel. They have been in the career field an average of 34 months. The average time in service is 41 months and average grade is between E-3 and E-4.

IV. PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112, N=53). This group performs basically the same tasks as members of the General Mechanics job type. In addition, they perform fundamental tasks associated with in-flight refueling equipment. Ninety-eight percent of these respondents are assigned to SAC. They are performing flightline maintenance on the B-52G, B-52H, FB-111A, KC-135A, KC-135Q, and T-38A. They perform an average of 84 tasks (JDI is 10.4) primarily in the areas of removing, installing, servicing, and performing operational checks on pneudraulic systems and components.

This group includes 3- and 5-skill level incumbents, with an average grade between E-3 and E-4. The average time in the career field is 36 months, with 44 months average TAFMS. Tasks which typify this job are:

- remove or install components of air refueling boom assemblies
- rig air refueling boom control cables
- remove or install engine drive hydraulic pumps
- perform operational checks of brake systems
- perform operational checks of air refueling hydraulic systems

V. IN-SHOP PNEUDRAULIC SUPERVISORS AND SUPPORT PERSONNEL (GRP47, N=127). This cluster includes some of the most experienced incumbents in the career field. The majority hold a 42374 skill level (average grade is between E-5 and E-6). They average 152 months TAFMS, with an average of 140 months in the career field. The cluster includes personnel across all commands.

As would be expected of 7-skill level personnel, they are spending approximately 60 percent of their time performing management type functions. Ninety-one percent are supervising. They are engaged in such tasks as:

- writing APRs
- counseling personnel
- clearing Red X conditions
- supervising 5-skill level personnel
- coordinating with base supply in obtaining parts

Operating primarily in a shop environment, they also assume such additional responsibilities as Bench Stock Monitor, Composite Tool Kit Monitor, Due-in-for Maintenance Monitor, Equipment Monitor, In-Shop PMEL Monitor, and OJT Monitor.

Members of the cluster perform an average of 115 tasks, which are basically administrative. JDI for this sample is 11.0.

Within the cluster, there are three separate job groups.

A. Supply Personnel (GRP75, N=11). These 11 incumbents perform a more restricted supply job. Members perform an average of 49 tasks, with 27 tasks accounting for 50 percent of their work time. The JDI for this group is 3.0, which is the lowest among the job types. The group includes 5- and 7-skill level personnel (average grade is E-5). The average time in the career field is 98 months, with 109 months average TAFMS.

Their job is centered on performance of supply and administrative-related duties. Over half of their work time is spent on these two areas. Six of the 11 members hold supervisory positions. Examples of tasks performed by this job type are:

- maintain consolidated tool kits
- coordinate with base supply on obtaining parts
- inventory equipment, tools, or supplies
- clean tools
- paint facilities or equipment

B. Working Supervisors (GRP137, N=48). Members of this job group combine administrative and supervisory duties with the performance of in-shop maintenance functions. Tasks which typify this group include:

- inspect shop hydraulic test equipment
- fabricate high pressure rubber hose assemblies
- fabricate medium pressure rubber hose assemblies
- certify status of parts
- supervise 5-skill level personnel
- inventory equipment, tools, or supplies
- direct in-shop pneudraulic repair operations
- conduct OJT

Members of this group are all 5- and 7-skill level incumbents. Their average grade is E-5. They are in their third enlistment. Eighty-eight percent are in supervisory positions. They accomplish an average of 139 tasks, with a JDI of 11.6.

C. NCOIC Shop and Branch Chiefs (GRP168, N=39). These DAFSC 42374 personnel comprise the most senior group (average TAFMS 197 months) in this sample. Their average grade is E-6, with an average of 178 months in the career field.

As would be expected of a group of predominantly 7-skill level personnel (87 percent), they are spending approximately 75 percent of their work time on non-technical tasks. Performing an average of 147 tasks (JDI is 14.2), they complete such activities as:

- write APRs
- indorse APRs
- participate in staff meetings
- interpret policies
- plan work assignments
- maintain maintenance management information and control

Ninety-seven percent are engaged in supervisory activities. Over half are conducting OJT.

VI. IN-SHOP PNEUDRAULIC REPAIRMEN (GRP79, N=113). This fairly large group of 113 incumbents performs in-shop maintenance for a variety of aircraft. At least 10 percent of the members perform maintenance on the following aircraft: A-10A, C-5, C-130E and H, KC-135A, C-141B, F-4C, F-4E, F-15 series, F-16A, F-16B, T-38A, and T-39. Thirty-three percent of their time is spent performing basic shop maintenance tasks such as:

- fabricate rubber hose assemblies
- assemble or disassemble brake assemblies
- assemble or disassemble accumulators
- bench check hydraulic actuators

Most (76 percent) of the members in this job type are in their first enlistment. Their average time in the career field is 31 months; average time in service is 40 months. The majority are assigned to TAC and MAC. These junior incumbents perform an average of 78 tasks, which yields a JDI of 6.8.

VII. CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22). Members of this independent job type spend 39 percent of their time on cross-utilization training (CUT) tasks. Tasks involving removing, installing, and servicing aircraft pneudraulic systems and components accounts for 14

percent of their time. An additional 11 percent of their time is spent inspecting aircraft-installed pneudraulic systems. They perform an average of 72 tasks (JDI is 5.1), which involve such activities as:

- service aircraft hydraulic systems
- tow aircraft
- walk wings
- launch or recover aircraft
- operate AGE equipment

Associated aircraft this group services (at least 10 percent members performing maintenance) include: F-D, F-4E, F-5E, F-106A, F-106B, and RF-4C.

Most of these incumbents are 5-skill level (73 percent). They have been in the career field an average of 57 months, although 55 percent indicate they are in their first enlistment. The average time in service is 65 months, with an average grade of E-4. Assigned primarily to TAC, USAFE, and AFLC, 50 percent of this group are serving overseas.

VIII. TRAINING SUPERVISORS AND FTD INSTRUCTORS (GRP65, N=21). These incumbents represent one of the most senior groups (average grade is E-6) in the sample. Their average time in the career field is 149 months, with 157 months average TAFMS. Their career knowledge is being utilized in training less experienced personnel through FTD programs. In addition, five of the members indicate they are instructor/supervisors.

Twenty-seven percent of their time is spent in the area of training and 17 percent performing operation checks. They perform an average of 110 tasks, with a JDI of 13.8. They spend 50 percent of their time on 79 tasks.

A combination of instructor guidance, on-site instruction, plus performance of technical tasks, characterize this independent job type. Tasks which typify this job are:

- prepare lesson plans
- administer student critiques
- administer tests
- develop training aids
- evaluate instructor performance
- perform operational checks of brake systems
- perform operational checks of rudder systems

IX. TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16). The 16 members of this independent job type represent formal training school instructors. Assigned to ATC, 14 are instructors for the basic ABR course at Chanute AFB; 2 are instructors at Williams AFB. Most of these individuals

are 5-skill level personnel. Their average time in the service is 95 months, with an average grade of E-5.

Fifty-one percent of their time is spent on training. (Representative aircraft for training include the F-5B, F-5E, F-5F, and T-38A.) An additional 28 percent of their time is spent performing administrative functions, inspecting and evaluating, and directing and implementing. They perform an average of 38 tasks, with a JDI of 7.6. When compared to the Training Supervisors and FTD Instructors, members of this independent job type are performing a more restricted job, limited to classroom instruction. Representative tasks for the Technical School Instructor personnel include:

- score tests
- prepare lesson plans
- conduct resident course classroom training
- administer student critiques

X. IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11). This is a mixed group of individuals providing training through classroom instruction or FTD courses for tasks associated specifically with in-flight refueling maintenance. Two members are associated with the follow-on course in in-flight refueling at Chanute AFB. Six are assigned to ATC and five to SAC, representing a combined effort to provide specialized training. Their duty time is divided among tasks involving isolating malfunctions, inspecting, and performing operational checks of pneudraulic systems. Examples of tasks which show the range of responsibilities for this group are:

- perform operational checks of air refueling hydraulic systems
- perform operational checks of air refueling boom hoist
- isolate malfunctions within air refueling signal systems
- inspect air refueling indicating systems
- administer student critiques

They perform an average of 95 tasks. Their JDI is 14.7.

This group includes 5- and 7-skill level personnel (average grade is E-5). Their average months in the career field is 92, with an average of 109 months in the service.

XI. MAC INSPECTORS (GRP114, N=21). Incumbents from this independent job type spend 28 percent of their time inspecting pneudraulic systems. In addition, they spent 15 percent of their time performing operational checks of aircraft pneudraulic systems and 14 percent of their time removing, installing, and servicing aircraft pneudraulic systems and components.

This group is composed of 5- and 7-skill level personnel assigned to MAC (95 percent). Generally in their second enlistment, they have an average of 83 months in the career field.

They perform an average of 91 tasks, with a JDI of 10.3. Their job tasks include inspecting aircraft-installed brake systems, elevators, auxiliary hydraulic systems, cargo doors, etc., and performing operational checks on brakes, elevators, cargo doors, aileron systems, and auxiliary hydraulic systems. System inspections and operational checks are performed (by at least 10 percent of the members of this job group) on AC-130H, C-5A, C-130 series, C-141B, and F-4D aircraft (three of the bases where these members are assigned have TAC detachments).

XII. SAC QUALITY CONTROL PERSONNEL (GRP91, N=11). This small group of 11 members are all assigned to SAC. Their job time is concentrated in the areas of inspecting aircraft installed pneudraulic systems (43 percent) and inspecting and evaluating management functions (16 percent). Eighty-two percent are 7-skill level, with an average grade of E-5. Members of this group are in their third enlistment (125 months average TAFMS).

Incumbents perform an average of 67 tasks, with a resulting JDI of 10.4. Examples of tasks which distinguish this group are:

- review equipment forms
- evaluate quality control procedures
- implement quality control programs
- investigate accidents or incidents

Comparisons Among Job Groups

Analysis of the 423X4 career ladder structure indicates a basic division of in-shop and flightline groups. Within each of these divisions, there were further divisions based on level of experience. In addition, members in the Flightline Personnel cluster were divided into subgroups or job types, based on type of aircraft maintained. In-Shop Personnel perform a less specialized job, working on similar components from a variety of aircraft systems.

The largest group of incumbents (61 percent) were included in the Flightline Personnel cluster. Members of this cluster performed an average of 186 tasks and have the highest JDI (15.7) for this career field.

The In-Shop Supervisor cluster and the independent job types generally represented smaller groups performing more specialized jobs. Their average number of tasks ranged from 38 to 128. The most senior personnel were found within the NCOIC Shop and Branch Chief's job type (197 months TAFMS) and the Pneudraulic Flightline Supervisors independent job type (156 months TAFMS). The greatest concentration of first-termers was found in the In-Shop Pneudraulic Repairmen and General Pneudraulics Mechanics job types.

Job satisfaction among the 423X4 personnel generally was good (see Table 6). Only two of the job types, Flightline Pneudraulic Supervisors and Supply Personnel, indicated a lower job interest. CUT Personnel were less positive in rating use of their talents and training.

Reenlistment intentions among the pneudraulics groups generally are high. Sixty-seven percent of the Flightline Pneudraulic Personnel cluster, which represents the largest group, indicate they plan to reenlist. The most positive reenlistment attitudes were shown by the Technical School Instructors, Training Supervisors, and FTD Instructors. The groups expressing the lowest positive reenlistment intent were the NCOIC Shop and Branch Chiefs, General Pneudraulics Mechanics, and Supply Personnel. Twenty-eight percent of the NCOIC Shop and Branch Chief job type plan to retire. In view of their time in service, this would not be unexpected. The General Pneudraulic Mechanics job type, however, is primarily first-term personnel and this trend may cause some concern.

Career ladder jobs were also compared for difficulty using the Job Difficulty Index (JDI) described in the Task Factor Administration section of this report. The JDI is calculated from the number of tasks performed and the relative difficulty of these tasks. The Flightline Pneudraulic Personnel job cluster represents the highest JDI (15.7). Within this cluster, the Bomber/Tanker Aircraft Pneudraulic Personnel show an even higher JDI of 18.1. These incumbents also perform the largest average number of tasks which reflect a broader and more difficult job.

The group with the lowest JDI (3.0) was the supply job type where incumbents perform only a few specialized tasks. Others with fairly low JDIs were Technical School Instructors, CUT Personnel, and In-Shop Pneudraulic Repairmen. All of these jobs are limited in scope. In addition, the CUT Personnel and In-Shop Pneudraulic Repairmen job types have high percentages of first-enlistment personnel.

Overall, the 423X4 career field displays a satisfactory degree of job satisfaction and reenlistment potential.

TABLE 5
SELECTED BACKGROUND DATA FOR 423X4 CAREER LADDER STRUCTURE GROUPS*

CLUSTER	CLUSTER JOB TYPES				INDEPENDENT JOB TYPES			
	TRAINING AIRCRAFT PNEUDRAULIC PERSONNEL (GRP487)	AIRLIFT AIRCRAFT PNEUDRAULIC PERSONNEL (GRP292)	FIGHTER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP296)	RESCUE & RECOVERY AIRCRAFT PNEUDRAULIC PERSONNEL (GRP443)	BOMBER/ TANKER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP222)	PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161)	GENERAL PNEUDRAULIC MECHANICS (GRP93)	PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112)
NUMBER IN GROUP	61	251	270	10	312	28	129	53
AVERAGE GRADE	E-3/4	E-4	E-4	E-5	E-4	E-6	E-3/4	E-3/4
AVERAGE NUMBER OF TASKS PERFORMED	186	153	142	198	209	128	74	84
DAFSC DISTRIBUTION:								
42334	7	8	10	0	7	-	15	38
42354	67	74	68	20	59	25	77	57
42374	25	20	22	80	33	75	6	4
AVERAGE MONTHS IN CAREER FIELD								
AVERAGE MONTHS IN SERVICE	60	53	55	120	67	141	34	36
PERCENT IN FIRST ENLISTMENT	67	58	62	124	77	156	41	44
PERCENT SUPERVISING	52	58	57	20	43	7	76	58
JOB DIFFICULTY INDEX	46	35	46	100	54	82	21	26
	15.7	14.4	13.7	16.7	18.1	13.3	9.0	10.4

* None in group
* Columns may not add up to 100 percent due to no response or rounding

TABLE 5 (CONTINUED)
SELECTED BACKGROUND DATA FOR 423K4 CAREER LADDER STRUCTURE GROUPS*

CLUSTER	CLUSTER JOB TYPES				INDEPENDENT JOB TYPES						
	IN-SHOP PNEUDRAULIC SUPERVISORS & SUPPORT PERSONNEL (GRP47)	SUPPLY PERS (GRP75)	WORKING SUPV. (GRP137)	MOIC SHOP & BRANCH CHIEFS (GRP168)	IN-SHOP PNEUDRAULIC REPAIRMEN (GRP79)	CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57)	TRAINING SUPERVISORS & FTD INSTRUCTORS (GRP65)	TECHNICAL SCHOOL INSTRUCTORS (GRP83)	IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100)	MAC INSPECTORS (GRP114)	SAC QUALITY CONTROL PERSONNEL (GRP91)
NUMBER IN GROUP	127	11	48	39	113	22	21	16	11	21	11
AVERAGE GRADE	E-5	E-5	E-5	E-6	E-3	E-4	E-6	E-5	E-5	E-4	E-5
AVERAGE NUMBER OF TASKS PERFORMED	115	49	139	147	78	72	110	38	95	91	67

DAFSC DISTRIBUTION:

42334	-	-	-	-	26	9	5	-	-	5	9
42354	32	54	48	10	69	73	19	69	46	57	9
42374	66	46	52	87	4	18	76	31	54	38	82
AVERAGE MONTHS IN CAREER FIELD	140	98	102	178	31	57	149	91	92	83	121
AVERAGE MONTHS IN SERVICE	152	109	111	197	40	65	157	95	109	88	125
PERCENT IN FIRST ENLISTMENT	5	-	8	3	76	55	10	31	9	33	9
PERCENT SUPERVISING	91	54	88	97	33	23	33	12	36	38	27
JOB DIFFICULTY INDEX	11.0	3.0	11.6	14.2	6.8	5.1	13.8	7.6	14.7	10.3	10.4

- None in group

* Columns may not add up to 100 percent due to no response or rounding

TABLE 6

COMPARISONS OF JOB SATISFACTION INDICATORS BY CAREER LADDER STRUCTURE GROUPS
(PERCENT MEMBERS RESPONDING)*

CLUSTER	CLUSTER JOB TYPES						INDEPENDENT JOB TYPES			
	TRAINING AIRCRAFT PNEUDRAULIC PERSONNEL (GRP487, N=61)	AIRLIFT AIRCRAFT PNEUDRAULIC PERSONNEL (GRP292, N=251)	FIGHTER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP296, N=270)	RESCUE & RECOVERY AIRCRAFT PNEUDRAULIC PERSONNEL (GRP443, N=10)	BOMBER/ TANKER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP222, N=312)	PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161, N=28)	GENERAL PNEUDRAULIC MECHANICS (GRP93, N=129)	PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112, N=53)		
EXPRESSED JOB INTEREST:										
	DULL									
	5	2	4	0	8	11	9	7		
PERCEIVED UTILIZATION OF TALENTS:										
	SO-SO									
	11	13	10	0	9	29	16	19		
PERCEIVED UTILIZATION OF TRAINING:										
	INTERESTING									
	82	85	83	100	81	50	74	74		
PERCEIVED UTILIZATION OF TALENTS:										
	LITTLE OR NOT AT ALL									
	10	8	8	0	9	18	16	17		
PERCEIVED UTILIZATION OF TRAINING:										
	FAIRLY WELL TO PERFECTLY									
	89	92	91	100	90	82	83	83		
PERCEIVED UTILIZATION OF TALENTS:										
	LITTLE OR NOT AT ALL									
	8	3	7	0	5	14	12	9		
PERCEIVED UTILIZATION OF TRAINING:										
	FAIRLY WELL TO PERFECTLY									
	90	97	92	100	94	82	86	91		
RECRUITMENT INTENTIONS:										
	PLAN TO RETIRE									
	3	-	2	10	3	11	1	2		
RECRUITMENT INTENTIONS:										
	NO, OR PROBABLY NO									
	25	31	27	0	22	14	34	26		
RECRUITMENT INTENTIONS:										
	YES, OR PROBABLY YES									
	71	67	68	90	74	71	64	72		

* Columns may not add up to 100 percent due to no response or rounding

TABLE 6 (CONTINUED)
COMPARISONS OF JOB SATISFACTION INDICATORS BY CAREER LADDER STRUCTURE GROUPS
(PERCENT MEMBERS RESPONDING)*

CLUSTER	CLUSTER JOB TYPES				INDEPENDENT JOB TYPES						
	IN-SHOP PNEUMATIC SUPERVISORS & SUPPORT PERSONNEL (GRP47, N=127)	SUPPLY PERS (GRP75, N=11)	WORKING SUPV's (GRP137, N=48)	NCOIC SHOP & BRANCH CHIEFS (GRP168, N=39)	IN-SHOP PNEUMATIC REPAIRMEN (GRP79, N=113)	CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22)	TRAINING SUPERVISORS & FTD INSTRUCTORS (GRP65, N=21)	TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16)	IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11)	MAC INSPECTORS (GRP114, N=21)	SAC QUALITY CONTROL PERSONNEL (GRP91, N=11)
EXPRESSED JOB INTEREST:											
DULL	2	-	4	-	6	4	-	-	9	5	-
SO-SO	16	18	25	8	21	23	5	12	18	19	100
INTERESTING	77	64	71	87	71	73	95	88	73	76	
PERCEIVED UTILIZATION OF TALENTS:											
LITTLE OR NOT AT ALL	17	36	15	13	13	36	5	19	18	10	-
FAIRLY WELL TO PERFECTLY	80	64	85	82	82	64	95	81	82	90	100
PERCEIVED UTILIZATION OF TRAINING:											
LITTLE OR NOT AT ALL	18	27	15	15	9	46	5	6	5	14	18
FAIRLY WELL TO PERFECTLY	80	73	85	82	90	54	95	94	91	86	82
REENLISTMENT INTENTIONS:											
PLAN TO RETIRE	18	9	8	28	-	-	4	-	-	5	-
NO, OR PROBABLY NO	13	18	15	13	28	23	5	6	27	19	18
YES, OR PROBABLY YES	68	64	77	59	70	73	90	94	73	76	82

* Columns may not add up to 100 percent due to no response or rounding

TABLE 7

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY CAREER LADDER STRUCTURE GROUPS

DUTIES	CLUSTER	CLUSTER JOB TYPES					INDEPENDENT JOB TYPES				
		FLIGHTLINE PNEUDRAULIC PERSONNEL (GRP126, N=1,063)	TRAINING AIRCRAFT PNEUDRAULIC PERSONNEL (GRP487, N=61)	AIRLIFT AIRCRAFT PNEUDRAULIC PERSONNEL (GRP292, N=251)	FIGHTER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP296, N=270)	RESCUE & RECOVERY AIRCRAFT PNEUDRAULIC PERSONNEL (GRP443, N=10)	BOMBER/ TANKER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP222, N=312)	PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161, N=28)	GENERAL PNEUDRAULIC MECHANICS (GRP93, N=129)	PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112, N=53)	
A ORGANIZING AND PLANNING		2	1	2	2	5	2	9	1	-	
B DIRECTING AND IMPLEMENTING		2	1	2	2	5	2	9	1	1	
C INSPECTING AND EVALUATING		3	1	2	3	7	3	9	1	1	
D TRAINING		1	-	1	1	4	1	5	1	-	
E PERFORMING ADMINISTRATIVE FUNCTIONS		6	6	6	5	9	6	10	5	9	
F PERFORMING SUPPLY FUNCTIONS		2	3	2	1	5	3	4	1	2	
G INSPECTING AIRCRAFT INSTALLED PNEUDRAULIC SYSTEMS		13	12	13	14	11	13	17	10	5	
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUDRAULIC SYSTEMS		15	13	14	17	11	15	12	20	22	
I ADJUSTING PNEUDRAULIC SYSTEMS AND COMPONENTS		6	9	5	7	6	7	5	6	7	
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS		11	9	13	12	9	10	7	10	6	
K REMOVING, INSTALLING, AND SERVICING AIRCRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS		18	17	19	20	15	19	6	25	28	
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEUDRAULIC COMPONENTS		10	17	12	2	5	12	3	4	9	
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)		3	4	3	1	3	3	1	1	3	
N CROSS UTILIZATION TRAINING (CUT)		7	6	6	12	5	4	4	14	6	

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

- Indicates less than 1 percent

TABLE 7 (CONTINUED)
AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY CAREER LADDER STRUCTURE GROUPS

DUTIES	CLUSTER JOB TYPES				INDEPENDENT JOB TYPES						
	IN-SHOP PNEUMATIC SUPERVISORS & SUPPORT PERSONNEL (GRP47, N=127)	SUPPLY PERS (GRP75, N=11)	WORKING SUPV. (GRP137, N=48)	MCOIC SHOP & BRANCH CHIEFS (GRP168, N=39)	IN-SHOP PNEUMATIC REPAIRMEN (GRP79, N=113)	CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22)	TRAINING SUPERVISORS & FTD INSTRUCTORS (GRP65, N=21)	TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16)	IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11)	MAC INSPECTORS (GRP114, N=21)	SAC QUALITY CONTROL PERSONNEL (GRP91, N=11)
A ORGANIZING AND PLANNING	14	8	8	18	1	2	6	4	1	2	5
B DIRECTING AND IMPLEMENTING	12	5	8	15	1	3	5	7	3	3	7
C INSPECTING AND EVALUATING	14	11	9	19	2	2	7	9	3	3	16
D TRAINING	7	6	4	8	-	1	27	51	9	1	3
E PERFORMING ADMINIS- TRATIVE FUNCTIONS	14	23	13	14	9	10	8	12	5	8	9
F PERFORMING SUPPLY FUNCTIONS	9	29	8	8	6	3	3	3	2	4	3
G INSPECTING AIRCRAFT INSTALLED PNEUMATIC SYSTEMS	5	1	5	6	6	11	5	3	15	28	43
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUMATIC SYSTEMS	3	-	4	2	8	6	17	3	16	15	6
I ADJUSTING PNEUMATIC SYSTEMS AND COMPONENTS	1	-	2	-	2	2	2	1	11	3	-

* Columns may not add up to 100 percent due to rounding
- Indicates less than 1 percent

TABLE 7 (CONTINUED)
AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY CAREER LADDER STRUCTURE GROUPS

DUTIES	CLUSTER	CLUSTER JOB TYPES				INDEPENDENT JOB TYPES						
		IN-SHOP PNEUDRAULIC SUPERVISORS & SUPPORT PERSONNEL (GRP47, N=127)	SUPPLY PERS (GRP75, N=11)	WORKING SUPV. (GRP137, N=48)	NCIC SHOP & BRANCH CHIEFS (GRP168, N=39)	IN-SHOP PNEUDRAULIC REPAIRMEN (GRP79, N=113)	CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22)	TRAINING SUPERVISORS & FTD INSTRUCTORS (GRP65, N=21)	TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16)	IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11)	MAC INSPECTORS (GRP114, N=21)	SAC QUALITY CONTROL PERSONNEL (GRP91, N=11)
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS	2		-	4	2	2	4	10	1	16	8	1
K REMOVING, INSTALLING, AND SERVICING AIR- CRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS	3		-	6	1	13	14	3	-	14	14	2
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEU- DRAULIC COMPONENTS	9		5	18	3	33	3	1	5	2	3	1
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)	5		8	8	2	11	2	1	1	-	2	2
N CROSS UTILIZATION TRAINING (CUT)	2		3	3	2	5	39	3	1	3	6	-

* Columns may not add up to 100 percent due to rounding
- Indicates less than 1 percent

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the identification and analysis of the job structure of the 423X4 career ladder, is an important part of each occupational analysis. The DAFSC analysis reveals similarities and differences between the various skill levels in relation to the tasks they perform and the relative percentage of time spent on particular duties. This information is used to evaluate the accuracy of career ladder documents, such as the AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS), as well as to determine potential training needs.

The distribution of skill level groups across the career ladder clusters and independent job types is displayed in Table 8. The largest portion of each skill level is found in the Flightline Pneudraulics Personnel cluster, which represents the mainstream of the career ladder. Table 9 shows examples of tasks performed in common by all skill levels. Many of these tasks are included in the above cluster.

Table 10 presents the relative percent time spent on each duty area across skill-level groups. This table illustrates the pattern of progression for this career field. Three- and 5-skill level personnel are performing basically technical tasks. The main focus of their job involves removing, installing, and servicing pneudraulic systems and components, as well as performing operational checks, inspecting, and performing maintenance on pneudraulic systems. The 7-skill level personnel still perform technical tasks; however, they now spend approximately 43 percent of their time on supervisory and administrative tasks (Duty areas A through F). In addition, as skill level increases so does the breadth of the job and the number of personnel supervising (see below).

<u>SKILL LEVEL</u>	<u>PERCENT OF SAMPLE</u>	<u>AVERAGE # TASKS PERFORMED</u>	<u>PERCENT SUPERVISING</u>
3 (N=178)	10	104	2
5 (N=1,085)	62	141	25
7 (N=467)	27	167	80

Specific skill level groups are discussed below.

Skill Level Descriptions

DAFSC 42334. Three-skill level personnel, representing 10 percent of the survey sample, indicated that approximately 79 tasks accounted for 50 percent of their job time. Table 11 presents representative examples of tasks for this group. They spend 72 percent of their time performing basic pneudraulic maintenance. The greatest concentration of their time is spent removing,

installing, and servicing aircraft pneudraulic systems and components (21 percent), performing operational checks of aircraft pneudraulic systems (15 percent), and performing in-shop maintenance (15 percent).

DAFSC 42354. The 5-skill level incumbents (1,085) comprise 62 percent of the survey sample. They perform a somewhat broader job than their 3-skill level counterparts. One hundred and five tasks account for 50 percent of their job time. They spend their job time basically in the same areas as the 3-skill level personnel: removing, installing, and servicing pneudraulics systems and components (18 percent) and performing operational checks (15 percent). Their job, as shown in Table 12, is still primarily technical. Tasks which differentiate between 3- and 5-skill level personnel are shown in Table 13. The tasks which separate the two skill levels illustrate the initial assumption of some supervisory duties (such as conduct OJT and supervise 3-skill level personnel). In addition, they also further their technical advancement to more "troubleshooting" type tasks.

DAFSC 42374. The 467 7-skill level personnel (27 percent of the sample) perform more administrative and supervisory duties. Approximately 127 tasks account for 50 percent of their job time. Representative tasks for this skill level are given in Table 14. The 7-skill level position is divided between technical areas involving maintenance functions and a more supervisory and administrative role. Tasks which differentiate between the 5- and 7-skill level personnel are shown in Table 15. These differences further illustrate the assumption of a higher role within management of the career field.

TABLE 8

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS CAREER
LADDER CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS)*

JOB GROUPS	DAFSC 42334 (N=178)	DAFSC 42354 (N=1,085)	DAFSC 42374 (N=467)
I. FLIGHTLINE PNEUDRAULIC PERSONNEL (GRP126, N=1,063)	43	65	57
A. TRAINING AIRCRAFT PNEUDRAULIC PERSONNEL (GRP487, (N=61))	3	5	-
B. AIRLIFT AIRCRAFT PNEUDRAULIC PERSONNEL (GRP292, N=251)	6	17	11
C. FIGHTER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP296, N=270)	15	17	13
D. RESCUE AND RECOVERY AIRCRAFT PNEUDRAULIC PERSONNEL (GRP443, N=10)	-	-	2
E. BOMBER/TANKER AIRCRAFT PNEUDRAULIC PERSONNEL (GRP222, N=312)	12	17	22
II. PNEUDRAULIC FLIGHTLINE SUPERVISORS (GRP161, N=28)	-	1	4
III. GENERAL PNEUDRAULIC MECHANICS (GRP93, N=129)	11	9	2
IV. PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS (GRP112, N=53)	11	3	-
V. IN-SHOP PNEUDRAULIC SUPERVISORS AND SUPPORT PERSONNEL (GRP47, N=127)	-	4	18
A. SUPPLY PERSONNEL (GRP75, N=11)	-	2	1
B. WORKING SUPERVISORS (GRP137, N=48)	-	2	5
C. NCOIC SHOP AND BRANCH CHIEFS (GRP168, N=39)	-	-	7
VI. IN-SHOP PNEUDRAULIC REPAIRMEN (GRP79, N=113)	17	7	1
VII. CROSS UTILIZATION TRAINING (CUT) PERSONNEL (GRP57, N=22)	1	1	-
VIII. TRAINING SUPERVISORS AND FTD INSTRUCTORS (GRP65, N=21)	-	-	3

TABLE 8 (CONTINUED)

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS CAREER
LADDER CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS)*

JOB GROUPS	DAFSC 42334 (N=178)	DAFSC 42354 (N=1,085)	DAFSC 42374 (N=467)
IX. TECHNICAL SCHOOL INSTRUCTORS (GRP83, N=16)	-	1	1
X. IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS (GRP100, N=11)	-	-	1
XI. MAC INSPECTORS (GRP114, N=21)	-	1	2
XII. SAC QUALITY CONTROL PERSONNEL (GRP91, N=11)	-	-	2
OTHER (N=130)**	15	7	7

- Denotes less than one percent
 * Columns may not add up to 100 percent due to no response and rounding
 ** 92 percent of the incumbents were identified by job types

TABLE 9
EXAMPLES OF TASKS COMMON ACROSS 423X4 SKILL LEVELS
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42334 (N=178)	DAFSC 42354 (N=1,085)	DAFSC 42374 (N=467)
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	77	69	75
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENTS)	77	78	82
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	76	83	73
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	75	70	75
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	75	79	65
N702 BLEED OR SERVICE BRAKE SYSTEMS	74	79	65
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	70	76	62
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	67	78	67
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	65	73	61
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	62	77	67
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	61	74	60
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	59	69	59
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	58	68	62
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	58	69	69
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	58	68	63
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	58	70	66
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	53	67	61
H332 PERFORM OPERATIONAL CHECKS OF HYDRAULIC PRESSURE INDICATING SYSTEMS	52	65	63

TABLE 10

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY DAFSC GROUPS*

DUTIES	DAFSC 42334 (N=178)	DAFSC 42354 (N=1,085)	DAFSC 42374 (N=467)
A ORGANIZING AND PLANNING	1	2	8
B DIRECTING AND IMPLEMENTING	-	2	7
C INSPECTING AND EVALUATING	1	2	9
D TRAINING	1	2	6
E PERFORMING ADMINISTRATIVE FUNCTIONS	8	7	9
F PERFORMING SUPPLY FUNCTIONS	3	3	4
G INSPECTING AIRCRAFT INSTALLED PNEUDRAULIC SYSTEMS	10	11	12
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUDRAULIC SYSTEMS	15	15	10
I ADJUSTING PNEUDRAULIC SYSTEMS AND COMPONENTS	6	6	4
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS	6	9	7
K REMOVING, INSTALLING, AND SERVICING AIRCRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS	21	18	10
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEUDRAULIC COMPONENTS	15	11	6
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)	4	4	2
N CROSS UTILIZATION TRAINING (CUT)	9	7	5

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

- Indicates less than 1 percent

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY 42334 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=178)
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	77
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	77
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	76
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	75
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	75
N702 BLEED OR SERVICE BRAKE SYSTEMS	74
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	70
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	68
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	67
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	67
M679 CLEAN TOOLS	66
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	65
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	62
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	61
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	61
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	59
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	59
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	58
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	58
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	58
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	58
K542 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR DOOR SYSTEMS	57
K578 REPACK SHOCK STRUTS ON AIRCRAFT	57
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	57
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	56
L664 FABRICATE MEDIUM PRESSURE RUBBER HOSE ASSEMBLIES	56
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	55
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	54
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	54
K586 SERVICE AIRCRAFT ACCUMULATORS	54
K528 REMOVE OR INSTALL COMPONENTS OF AUXILIARY HYDRAULIC SYSTEMS	54
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	53
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	53

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY 42354 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=1,085)
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	83
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	79
N702 BLEED OR SERVICE BRAKE SYSTEMS	79
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	78
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	78
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	77
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	76
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	74
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	73
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	73
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	72
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	70
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	70
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	70
K578 REPACK SHOCK STRUTS ON AIRCRAFT	70
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	70
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	69
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	69
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	69
K586 SERVICE AIRCRAFT ACCUMULATORS	69
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	69
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	68
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	68
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	67
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	67
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	65
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	65
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	65
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	65
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	65

TABLE 13

TASKS WHICH BEST DIFFERENTIATE BETWEEN
3- AND 5-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42334 (N=178)	DAFSC 42354 (N=1,085)	DIFFERENCE
B59 SUPERVISE APPRENTICE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42334) PERSONNEL	8	41	-33
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	35	65	-30
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	41	70	-29
J491 ISOLATE MALFUNCTIONS WITHIN RUDDER SYSTEMS	31	59	-28
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	38	65	-27
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	43	69	-26
J496 ISOLATE MALFUNCTIONS WITHIN WING FLAP SYSTEMS	24	50	-26
D111 CONDUCT OJT	7	33	-26
J457 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC POWER SYSTEMS	39	64	-25
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	37	59	-22
J456 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC INDICATING SYSTEMS	28	50	-22
E170 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	17	39	-22
J458 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING ELECTRICAL SCHEMATICS	17	39	-22
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TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 42374 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=467)
C66 CLEAR RED X CONDITIONS	85
C101 WRITE APRs	84
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	82
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	77
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	76
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	75
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	75
B57 SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42354) PERSONNEL	75
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	74
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	73
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	73
G262 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEM COMPONENTS	73
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	72
G280 INSPECT AIRCRAFT INSTALLED SHOCK STRUTS	72
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	71
A4 COORDINATE WITH MAINTENANCE CONTROL ON MAINTENANCE PROBLEMS	69
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	69
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS	69
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	69
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	67
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	67
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	67
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	66
J457 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC POWER SYSTEMS	66
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	66
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	66
G256 INSPECT AIRCRAFT INSTALLED LANDING GEAR DOOR ACTUATING COMPONENTS	66
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TABLE 15

TASKS WHICH BEST DIFFERENTIATE BETWEEN
5- AND 7-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 42354 (N=1,085)	DAFSC 42374 (N=467)	DIFFERENCE
K536	REMOVE OR INSTALL COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	52	28	+24
H323	PERFORM OPERATIONAL CHECKS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	54	34	+20
J451	ISOLATE MALFUNCTIONS WITHIN HORIZONTAL TAIL OR STABILIZER SYSTEMS	42	26	+16
L591	ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	54	38	+16
K557	REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	73	57	+16
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.	.	.	.	.
.	.	.	.	.
C66	CLEAR RED X CONDITIONS	15	85	-70
C101	WRITE APRs	24	84	-60
C94	INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	18	71	-53
B38	COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	18	71	-53
B57	SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42354) PERSONNEL	27	75	-48
C103	WRITE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	8	50	-42
A4	COORDINATE WITH MAINTENANCE CONTROL ON MAINTENANCE PROBLEMS	28	69	-41
C92	INDORSE AIRMAN PERFORMANCE REPORTS (APR)	11	51	-40
A33	SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	15	54	-39
B54	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	12	51	-39
B58	SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS TECHNICIAN (AFSC 42374) PERSONNEL	4	43	-39

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for the 423X4 career area. These descriptions are intended to give a broad overview of the duties and tasks performed in each skill level of a specialty.

The specialty descriptions appear to reflect the 3-, 5-, and 7-skill level jobs within the Pneudraulic career field. Three- and 5-skill level personnel basically are accomplishing technical tasks, while the 7-skill level assumes a more advisory role in the performance of technical skills.

ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

Reviewing utilization patterns for survey respondents at different Total Active Federal Military Service (TAFMS) points gives an appreciation of how jobs and responsibilities change over time. As is typical in most career ladders, as time in service (and experience) increase, there is a corresponding increase in performance of duties involving supervisory, managerial, and administrative tasks. As Table 16 shows, the changes in relative percentage of time spent on each of the major duty areas occur very gradually as experience level increases. As illustrated in Figure 3, with additional months accumulated in TAFMS, 423X4 airmen show a steady trend toward assumption of supervisory and administrative functions. First-enlistment personnel (1-48 months TAFMS) personnel spend the vast majority of their time on technical tasks (Duties G-N). Personnel in the second through fourth enlistment groups still spend the majority of their time on technical tasks, but also show a definite transition toward the performance of supervisory and administrative tasks. Personnel serving their fifth enlistment or beyond spend the majority of their time performing managerial duties.

First-Enlistment Personnel

First-enlistment personnel (1-48 months TAFMS) spend the vast majority of their time on duties involving maintenance of aircraft pneudraulic systems. They remove, install, and service aircraft pneudraulic systems and components. Incumbents perform operational checks and inspect pneudraulic systems as well as performing in-shop maintenance of components (see Table 16). First-term personnel perform an average of 131 tasks. Typical tasks include performing operational checks on brake systems, bleed or service brake systems, and remove or install engine driven hydraulic pumps. Representative tasks are listed in Table 17. Figure 4 displays the distribution of first-term members across the career ladder jobs. The largest percentage of airmen in their first enlistment were found in the Flightline Pneudraulic Personnel cluster, which represents the technical "mainstream" of the career field.

Equipment

Table 18 contains a list of equipment used or operated by 10 percent or more of incumbents in their first enlistment. The equipment is listed in descending order of the percent of first-term (1-48 months TAFMS) personnel using each item. There were 49 items included in the background equipment list. Of these, 16 pieces of equipment were used by at least 30 percent of all first-term personnel. Consultation with technical school personnel involved with the basic course indicated that all but two of these items were covered in the basic course. Pressure and leak testers and pneudraulic test stands were the items not employed. The use of these items might be reviewed for possible inclusion in the ABR course.

Respondents were also requested to indicate aircraft on which they perform maintenance. Table 19 presents a listing of representative aircraft (5 percent or more) on which first-term airmen perform maintenance. The largest percentage of personnel work on the KC-135A (21 percent), C-141B (18 percent), C-5A (13 percent), and T-38A (12 percent). These relatively small percentages indicate there is no "common" aircraft system maintained by a majority of first-enlistment personnel. While personnel assigned to SAC attend a special course on in-flight refueling, training on other specific aircraft becomes the responsibility of the receiving organization. The diversity of aircraft makes follow-on training critical.

Job Satisfaction

Table 20 presents data reflecting the job interest, perceived utilization of talents and training, and reenlistment intentions of selected TAFMS groups and a comparative sample of all Mission Equipment Maintenance career ladders surveyed in 1983. Overall, 423X4 personnel show good satisfaction across all TAFMS groups. Eighty percent of first-enlistment personnel found their job interesting, 88 percent indicated their talents were well utilized, and 90 percent felt their training was being utilized.

Reenlistment intent (62 percent yes or probably yes) for first-term personnel is significantly higher than for the comparative sample. All TAFMS groups show a higher reenlistment intent than the comparative sample. (Similar trends have been noted in recent studies).

Overall, Pneudraulic Systems Personnel indicate substantial job interest and utilization of training and talents.

TABLE 16

PERCENT TIME SPENT PERFORMING DUTIES BY TAFMS GROUPS
(RELATIVE PERCENT TIME)*

DUTIES	ENLISTMENT GROUPS (MONTHS TAFMS)					
	1-48 (N=866)	49-96 (N=384)	97-144 (N=216)	145-192 (N=151)	193-240 (N=85)	241+ (N=26)
A ORGANIZING AND PLANNING	1	3	6	9	12	16
B DIRECTING AND IMPLEMENTING	1	3	5	7	10	13
C INSPECTING AND EVALUATING	1	4	7	8	12	16
D TRAINING	1	3	5	6	7	9
E PERFORMING ADMINISTRATIVE FUNCTIONS	6	8	8	10	11	10
F PERFORMING SUPPLY FUNCTIONS	3	4	4	3	6	2
G INSPECTING AIRCRAFT INSTALLED PNEUDRAULIC SYSTEMS	11	11	13	11	10	10
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUDRAULIC SYSTEMS	15	13	11	10	7	7
I ADJUSTING PNEUDRAULIC SYSTEMS AND COMPONENTS	6	5	4	4	2	2
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS	9	9	7	7	7	4
K REMOVING, INSTALLING, AND SERVICING AIRCRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS	19	16	13	10	6	5
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEUDRAULIC COMPONENTS	13	10	7	6	4	2
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)	4	4	3	3	2	1
N CROSS UTILIZATION TRAINING (CUT)	8	6	6	6	3	3

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

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY 423X4 FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=866)
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	83
N702 BLEED OR SERVICE BRAKE SYSTEMS	81
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	80
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	78
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	78
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	76
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	76
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	75
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	74
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	72
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	72
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	71
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	71
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	71
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	70
K578 REPACK SHOCK STRUTS ON AIRCRAFT	69
K586 SERVICE AIRCRAFT ACCUMULATORS	69
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	68
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	68
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	68
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	68
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	66
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	66
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	66
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	65
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	65
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	65
H332 PERFORM OPERATIONAL CHECKS OF HYDRAULIC PRESSURE INDICATING SYSTEMS	64
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEMS COMPONENTS	63
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	62
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	62

TABLE 18
EQUIPMENT USED BY 10 PERCENT OR MORE
FIRST-TERM PERSONNEL
(N=866)

<u>EQUIPMENT</u>	<u>PERCENT MEMBERS PERFORMING</u>
TORQUE WRENCHES	93
SERVICING CARTS	82
HYDRAULIC GROUND SERVICING CARTS	80
SPANNER WRENCHES	79
HOSE CUT OFF MACHINES	68
HOSE ASSEMBLY MACHINES	67
HOSE SKIVING MACHINES	67
PORTABLE HYDRAULIC TEST STANDS	67
SHOP HYDRAULIC TEST STANDS	65
HYDRAULIC HOSE TEST UNITS	58
MULTIMETERS	44
AIR NITROGEN COMPRESSORS	39
DEGREASERS	39
MICROMETERS	39
*PRESSURE AND LEAK TESTERS	34
*PNEUMATIC TEST STANDS	34
BRAKE SPIN RIVETING MACHINES	29
WING JACKS	28
AXLE JACKS	25
CABLE TENSIMETERS	25
GENERATOR SETS	23
SPRING COMPRESSORS	23
SPIN RIVETER MACHINES	23
FORCE GAUGES	22
STOP WATCHES	18
DIAL INDICATORS	14
PROTRACTORS	14
COMPRESSION RIVETER MACHINES	14
FLUSHING MACHINES	13
ULTRASONIC LEAK DETECTORS	11
NITROGEN RECHARGERS	10
ULTRASONIC CLEANERS	10

* Not taught in technical school

TABLE 19

AIRCRAFT MAINTAINED BY 5 PERCENT OF
FIRST-ENLISTMENT PERSONNEL*

<u>TYPE AIRCRAFT</u>	<u>PERCENT</u>
KC-135A	21
C-141B	18
C-5A	13
T-38A	12
C-130E	11
B-52G	10
F-4E	10
F-16A	10
C-130H	9
F-16B	7
T-37B	7
A-10A	6
F-15C	6
RF-4C	6
B-52H	5
F-15A	5
F-15B	5
F-15D	5
T-39A	5

* Respondents may have responded to more than one type of aircraft.

TABLE 20

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

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	423X4 (N=866)	COMPARATIVE SAMPLE** (N=3,206)	423X4 (N=384)	COMPARATIVE SAMPLE** (N=1,447)	423X4 (N=478)	COMPARATIVE SAMPLE** (N=2,200)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	6	10	6	12	5	7
SO-SO	12	19	15	15	14	12
INTERESTING	80	70	78	73	78	79
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	11	20	15	19	13	15
FAIRLY WELL TO PERFECTLY	88	79	84	81	86	85
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	9	20	12	22	14	19
FAIRLY WELL TO PERFECTLY	90	80	88	78	85	81
<u>REENLISTMENT INTENTIONS:</u>						
PLAN TO RETIRE	1	-	1	-	13	19
NO OR PROBABLY NO	36	46	19	29	8	8
YES OR PROBABLY YES	62	53	79	70	79	72

* Columns may not add up to 100 percent due to no response or rounding

** Comparative sample includes Mission Equipment Maintenance career ladders surveyed in 1983, AFSCs include 305X4, 324X0, 328X5, 423X1, 423X5, and 464X0

- Less than one percent

FIGURE 3

AVERAGE PERCENT TIME SPENT ON ADMINISTRATIVE
AND SUPERVISORY TASKS BY TAFMS GROUPS

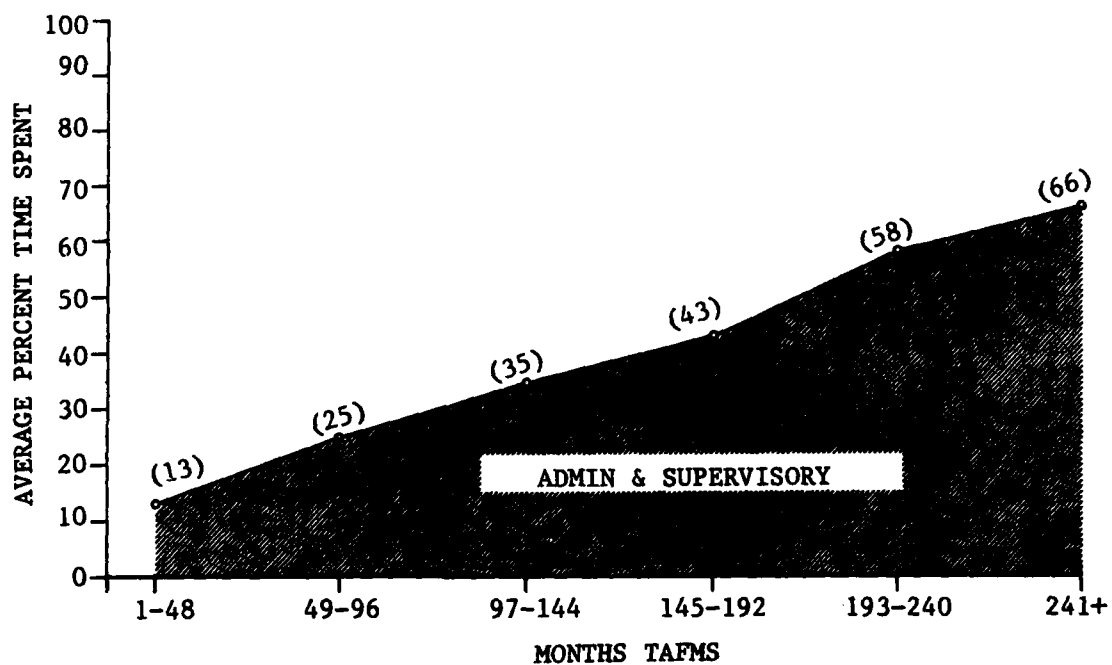
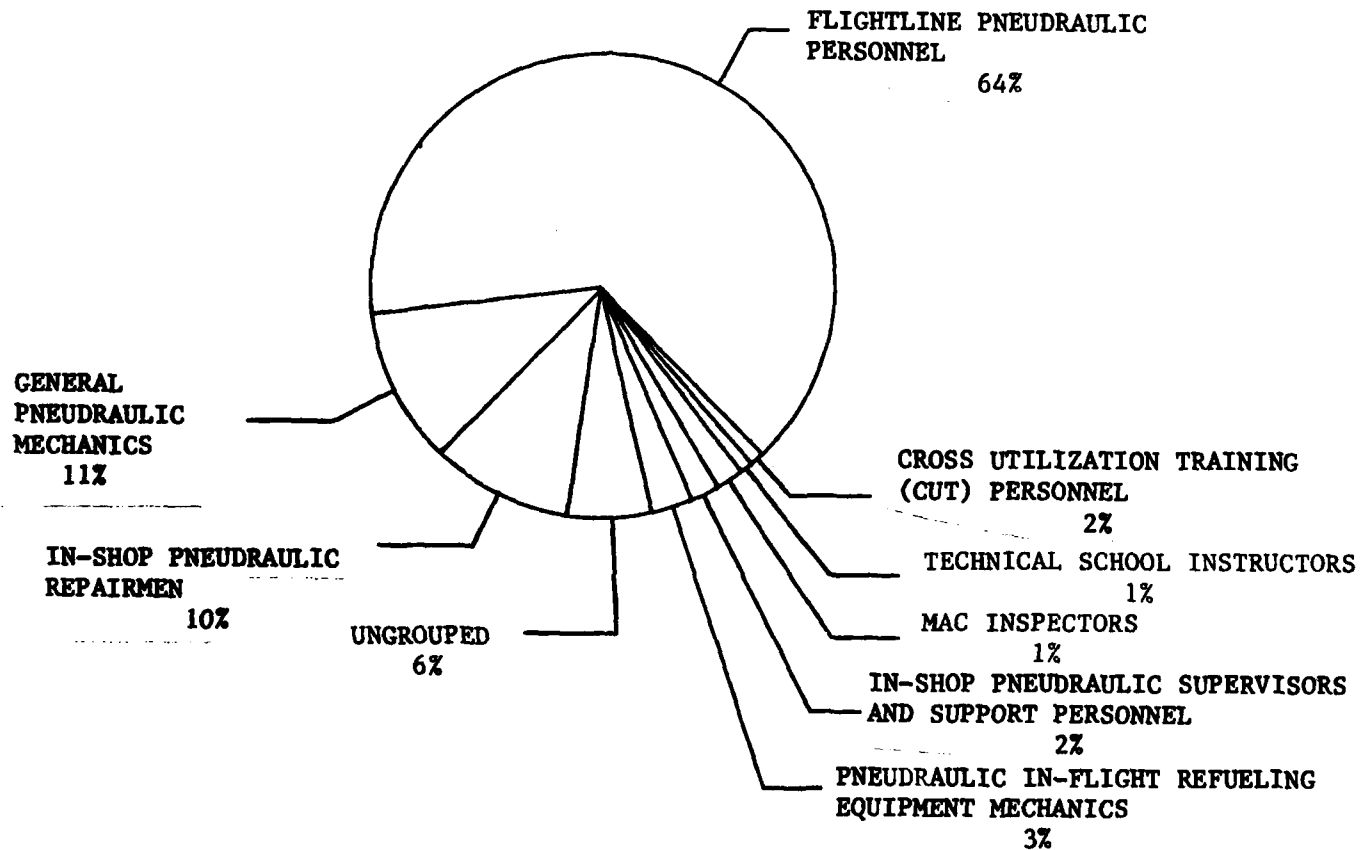


FIGURE 4

DISTRIBUTION OF 423X4 FIRST-ENLISTMENT PERSONNEL
ACROSS CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)



SPECIALTY TRAINING

Sixty-five NCOs in the 423X4 career ladder rated items in the job inventory on the degree of emphasis that should be placed on each task for first-enlistment training. These ratings were processed to provide a rank-order listing of tasks from high degree of emphasis to no training required. The average rating was 2.50, with a standard deviation of 1.59, so tasks receiving a rating of 4.09 or above were considered high in training emphasis. (For a more complete description of these ratings, see the section on Task Factor Administration under SURVEY METHODOLOGY.)

The tasks performed by relatively high percentages of first-enlistment personnel generally received the highest training emphasis ratings. One hundred and twenty-three tasks were rated high in training emphasis (4.09 or above). Of those tasks, only 3 were performed by less than 30 percent of the 1-48 months group. Two of those tasks were rated slightly above average in task difficulty.

Table 21 lists the 25 tasks rated highest in training emphasis as examples to illustrate the types of tasks considered important for first-term training by senior technicians. Note that all of the top 25 tasks were performed by 50 percent or more of first-term personnel.

Six of the 25 tasks were not matched with the POI. These are:

- K578 Repack shock struts on aircraft
- L664 Fabricate medium pressure rubber hose assemblies
- K546 Remove or install components of nose wheel steering systems
- L662 Fabricate high pressure teflon hose assemblies
- K558 Remove or install components of shock struts
- K576 Remove or install pneudraulic hose assemblies

These tasks might be considered for resident course training. There were an additional 15 tasks rated high in training emphasis and performed by at least 50 percent of first-enlistment personnel not matched with the POI. These also should be evaluated by training personnel. A total of 63 tasks rated above average in training emphasis were not matched to the POI.

Tasks rated average (2.50 mean) were generally performed by less than 30 percent of the relevant members. Examples of such tasks are:

TASKS	TNG EMPH	PERCENT OF FIRST ENLISTMENT	TASK DIFF
K507 OVERHAUL AIR REFUELING DROGUE ASSEMBLIES	2.53	10	5.45
F212 MAINTAIN INSPECTION CARDS OR ITEMS REQUIRING PERIODIC INSPECTIONS	2.50	22	3.99
M675 BENCH CHECK HYDRAULIC MAINTENANCE STAND ACTUATORS	2.50	9	3.86

The tasks lowest in training emphasis related to nontechnical management requirements.

Overall, the tasks being performed by larger percentages of first-term personnel received the highest training ratings. Conversely, tasks performed by few in the 1-48 months group were rated low on training emphasis. Thus, the TE ratings make an excellent summary index with which to examine specialty training control documents.

TABLE 21

EXAMPLES OF TASKS RATED HIGH IN TRAINING EMPHASIS
FOR 423X4 PERSONNEL

TASKS	TNG EMPH*	1ST ENL	TASK DIFF**
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	7.27	78	3.26
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	6.77	71	3.19
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	6.62	60	6.21
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	6.48	70	3.29
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	6.41	84	4.69
H565 REMOVE OR INSTALL ENGINE DRIVE HYDRAULIC PUMPS	6.34	80	5.03
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	6.30	60	4.24
***K578 REPACK SHOCK STRUTS ON AIRCRAFT	6.28	69	6.17
L665 FABRICATE MEDIUM PRESSURE TEFLON HOSE ASSEMBLIES	6.23	53	4.40
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	6.20	66	5.63
***L664 FABRICATE MEDIUM PRESSURE RUBBER HOSE ASSEMBLIES	6.14	58	3.91
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	6.12	78	5.35
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	6.11	76	4.77
J457 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC POWER SYSTEMS	6.11	60	5.83
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	6.09	68	4.78
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	6.05	74	4.76
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	6.03	66	5.09
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	5.84	60	6.06
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	5.83	63	4.65
***K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	5.83	72	5.23
***L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	5.83	54	4.84
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	5.80	55	5.21
***K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	5.77	66	6.02
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	5.75	68	4.99
***K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	5.75	71	2.88

* Training emphasis average = 2.50, with SD = 1.59

** Task difficulty average = 5.0, with SD = 1

*** Not matched with POI

Analysis of the Specialty Training Standard (STS)

A review of STS 423X4, dated October 1978, compared STS elements to survey data. STS paragraphs containing general information or subject-matter knowledge requirements were not evaluated.

The elements listed in the STS with tasks referenced to them generally were well supported in terms of being performed by a substantial percent of specialty incumbents. All but a few elements were performed by at least 10 percent of the respondents in their first-enlistment or at the 5- or 7-skill level. Areas which reflect low percent members performing (less than 10 percent for a coded level) include publications, supervision, training, selection of maintenance material, and aerospace ground equipment. Elements with matched tasks reflecting low performance are given in Table 22. STS elements without inventory tasks matched are presented in Table 23. These elements may not have been matched because the element was inappropriately coded as a performance item, rather than a knowledge item, or inventory tasks appropriate to that item were unclear or omitted. These areas should be reviewed to determine the validity of their inclusion in the STS.

A number of inventory tasks were not matched to STS elements. Table 24 provides a listing of 30 tasks performed by at least 30 percent of first-enlistment and 5-skill level incumbents. Several tasks not referenced have average or above average training emphasis ratings, and over 10 percent of the first-enlistment personnel performing them. Thus, the tasks should be included in the STS as line entries or should be covered by some existing STS element. If it is determined that there are no tasks in the inventory which can be matched to a valid performance element, or covered in FTD or OJT, it is requested that subject-matter specialists draft the necessary task statements and send them to USAFOMC for review and inclusion in the next task inventory constructed for this specialty.

TABLE 22

STS PERFORMANCE ELEMENTS REFLECTING LOW PERCENT MEMBERS PERFORMING TASKS
(LESS THAN 10 PERCENT FOR A CODED LEVEL)

STS ELEMENTS	TASK	TNG EMPH*	TASK DIFF**	PERCENT MEMBERS PERFORMING			
				FIRST- ENLISTMENT	DAFSC 42354	DAFSC 42374	
5a(2)	<u>PREPARE EQUIPMENT AUTHORIZATION LIST</u>						
	F216 PREPARE EQUIPMENT AUTHORIZATION LIST	.39	4.90	2	3		6
5a(7)	<u>ASSIGN MAINTENANCE AND REPAIR WORK</u>						
	B44 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	1.88	4.92	5	9		30
5a(10)	<u>ANALYZE AND PREPARE MAINTENANCE AND INSPECTION REPORTS AND CHARTS</u>						
	A12 DEVELOP SELF-INSPECTION PROGRAMS	1.33	5.29	6	8		31
	A15 ESTABLISH INSPECTION PROCEDURES	.86	5.70	5	6		23
	B39 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	.53	4.76	3	5		16
	B35 COMPILE INFORMATION FOR REPORTS OR STAFF STUDIES	.42	5.87	3	4		17
	A21 PLAN EQUIPMENT OR FACILITY MAINTENANCE REQUIREMENTS	.36	5.07	4	6		15
	E197 PREPARE RECORDS OR GRAPHS, OTHER THAN TRAINING	.20	4.50	2	3		5
	<u>RECOMMEND PERSONNEL FOR TRAINING</u>						
	D146 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	.30	4.47	2	4		16
	<u>INTERPRET AND ANALYZE CIRCUITS</u>						
13a	J484 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC SYSTEMS USING ELECTRICAL SCHEMATICS	2.09	6.33	7	7		7
	J475 ISOLATE MALFUNCTIONS WITHIN PITCH TRIM ELECTRICAL SYSTEMS	1.25	6.64	7	8		6

TABLE 22 (CONTINUED)

STS PERFORMANCE ELEMENTS REFLECTING LOW PERCENT MEMBERS PERFORMING TASKS
(LESS THAN 10 PERCENT FOR A CODED LEVEL)

STS ELEMENTS	TASK	TNG EMPH*	TASK DIFF**	PERCENT MEMBERS PERFORMING		
				FIRST- ENLISTMENT	DAFSC 42354	DAFSC 42374
19E	<u>BENCH CHECK COMPONENTS OF PNEUMATIC SYSTEMS</u>					
	L649 BENCH CHECK PNEUMATIC ACTUATORS	3.16	4.36	11	11	8
	L651 BENCH CHECK PNEUMATIC SELECTOR VALVES	2.91	4.85	7	8	6
	L650 BENCH CHECK PNEUMATIC FILTER ASSEMBLIES	2.47	3.65	8	7	6
	L629 BENCH CHECK COMPONENTS OF PNEUMATIC PRESSURE INDICATING SYSTEMS	2.14	3.85	7	6	5
	L607 BENCH CHECK AIRCRAFT AIR COMPRESSORS	1.52	5.54	4	4	2
21b(2)(a)	<u>OPERATE PNEUMATIC SERVICING CARTS</u>					
	M693 PERFORM OPERATOR MAINTENANCE ON COMPRESSORS	1.67	3.79	5	5	6
21b(4)(a)	<u>OPERATE HYDRAULIC JACKS</u>					
	M689 PERFORM IN-SHOP OPERATIONAL CHECKS ON HYDRAULIC JACKS	1.83	3.53	5	5	6
21b(4)(b)	<u>MAINTAIN HYDRAULIC JACK COMPONENTS</u>					
	M680 CLEAN, LUBRICATE, OR INSPECT HYDRAULIC JACKS	2.11	2.72	7	8	9
	M697 REMOVE OR REPLACE COMPONENTS OF HYDRAULIC JACKS	1.83	3.91	5	6	6
21b(5)(a)	<u>OPERATE MAINTENANCE STANDS</u>					
	M692 PERFORM OPERATIONAL CHECKS ON HYDRAULICALLY POWERED MAINTENANCE STANDS	2.19	3.93	9	9	7

* Training emphasis average = 2.50 with a standard deviation = 1.59; high TE = 4.09

** Task difficulty average = 5.00 with a standard deviation = 1.00; high TD = 6.00

TABLE 23

**UNREFERENCED STS PERFORMANCE ELEMENTS
(EXCLUDING SAFETY WHICH IS INHERENT IN ALL TASK PERFORMANCE)**

**STS
ELEMENTS**

4a	LOCATE TECHNICAL ORDER NUMBERS AND TITLES IN INDEX TYPE TECHNICAL ORDERS
4c	APPLY INSTRUCTIONS IN TIME COMPLIANCE TECHNICAL ORDERS
4d	USE ABBREVIATED TECHNICAL ORDERS WHEN PERFORMING INSPECTIONS AND MAINTENANCE
4e	USE STANDARD PUBLICATIONS, PROCEDURES, INSTRUCTIONS, AND INFORMATION PERTINENT TO MAINTENANCE
4g	USE JOB GUIDE MANUALS
5a(17)	RECOMMEND POLICY CHANGES ON UTILIZATION OF PERSONNEL AND EQUIPMENT
5a(19)	INITIATE ACTION TO CORRECT SUBSTANDARD PERSONNEL PERFORMANCE
5b(3)	PREPARE JOB PROFICIENCY GUIDES
5b(4)	MOTIVATE TRAINERS AND TRAINEES
5b(6)(a)1	CAREER KNOWLEDGE UPGRADE TRAINING
5b(6)(a)2	JOB PROFICIENCY UPGRADE TRAINING
5b(6)(b)	QUALIFICATION TRAINING
10b(1)	SELECT AND USE AIRCRAFT HARDWARE
10b(3)	SELECT AND USE CLEANING AGENTS
10b(4)	SELECT AND USE SEALING DEVICES
10c(1)	IDENTIFY COMPONENTS OF HOSE ASSEMBLY
21a(3)(c)	CONNECT COMPONENTS BEING TESTED TO HYDRAULIC TEST STANDS
21b(2)(b)	CONNECT AIRCRAFT OR COMPONENT TO PNEUMATIC SERVICING CARTS
21b(3)(a)	OPERATE HYDRAULIC SERVICING CARTS
21b(3)(b)	CONNECT AIRCRAFT TO HYDRAULIC SERVICING CARTS

TABLE 24

TASKS NOT REFERENCED TO STS
(OVER 30 PERCENT MEMBERS PERFORMING)

TASKS	TNG EMPH*	PERCENT MEMBERS PERFORMING		TASK DIFF**
		FIRST- ENLIST (N=866)	DAFSC 42354 (N=1,085)	
F211 MAINTAIN CONSOLIDATED TOOL KITS	5.56	34	36	4.14
I373 ADJUST COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	5.31	48	50	4.88
E189 MAKE ENTRIES ON AF TO FORMS 781K (AEROSPACE VEHICLE INSPECTION AND DELAYED DISCREPANCY DOCUMENT)				
I407 ADJUST HYDRAULIC COMPONENTS OF LANDING GEAR	5.30	45	49	3.14
I411 ADJUST HYDRAULIC COMPONENTS OF RUDDER SYSTEMS	5.30	52	54	6.07
I409 ADJUST HYDRAULIC COMPONENTS OF PNEUDRAULIC POWER SYSTEMS	4.97	43	44	5.59
I381 ADJUST COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	4.84	30	40	5.23
I412 ADJUST HYDRAULIC COMPONENTS OF SPOILER SYSTEMS	4.80	49	50	5.37
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE) SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	4.72	39	41	5.55
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	4.72	68	68	3.59
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	4.67	62	64	1.68
I391 ADJUST COMPONENTS OF WING FLAP HYDRAULIC SYSTEMS	4.59	30	36	2.79
M678 CLEAN OR LUBRICATE SHOP HYDRAULIC TEST EQUIPMENT	4.55	35	35	5.65
I389 ADJUST COMPONENTS OF SPEED BRAKE SYSTEMS	4.42	35	36	3.21
K588 SERVICE AIRCRAFT PNEUMATIC SYSTEMS	4.41	34	36	4.97
I394 ADJUST HYDRAULIC COMPONENTS OF AILERON SYSTEMS	4.30	43	41	3.13
E170 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	4.17	36	34	5.88
C97 REVIEW EQUIPMENT FORMS	4.08	30	30	2.78
K530 REMOVE OR INSTALL COMPONENTS OF CARGO DOOR SYSTEMS	4.06	31	35	3.45
I416 ADJUST LANDING GEAR DOOR	3.75	30	34	4.57
N704 GROUND AIRCRAFT	3.56	31	33	5.58
K556 REMOVE OR INSTALL COMPONENTS OF ROTOR BRAKE SYSTEMS	3.19	37	39	1.14
	3.17	30	31	4.66

TABLE 24 (CONTINUED)

TASKS NOT REFERENCED TO STS
(OVER 30 PERCENT MEMBERS PERFORMING)

TASKS	TNG EMPH*	PERCENT MEMBERS PERFORMING		TASK DIFF**
		FIRST- ENLIST (N=866)	DAFSC 42354 (N=1,085)	
I377 ADJUST COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	2.97	37	34	5.81
H353 PERFORM OPERATIONAL CHECKS OF ROTOR BRAKE SYSTEMS	2.91	34	36	4.51
F214 PAINT FACILITIES OR EQUIPMENT	2.64	41	42	2.07
N706 JACK OR LEVEL AIRCRAFT	2.11	39	38	4.95
N707 LAUNCH OR RECOVER AIRCRAFT	2.08	44	44	4.59
N717 POSITION OR REMOVE AIRCRAFT CHOCKS OR GROUND SAFETY PINS	1.86	38	36	1.93
N716 POSITION NONPOWERED OR POWERED AGE TO AIRCRAFT	1.80	41	41	2.28
N729 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	1.37	37	35	1.03

* Training emphasis average = 2.50 with a standard deviation = 1.59; high TE = 4.09

** Task difficulty average = 5.00 with a standard deviation = 1.00; high TD = 6.00

Plan of Instruction (POI)

Based on previously mentioned assistance from technical school subject-matter specialists in matching inventory tasks to the POI, a computer product was generated displaying the results of the matching process. Information furnished on the computer printout includes training emphasis (TE) and task difficulty (TD), as well as percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel.

The percent members performing the inventory tasks generally support the technical portion of the POI. There were only four POI blocks which reflected low performance by first-term personnel (see Table 25). Tasks referenced to these blocks concerned material deficiency reports, researching technical orders, making entry on technical order system publication improvement report and reply, and performing operational checks of hydraulic test equipment. These tasks had slightly higher than average TE ratings, which indicates some structured training, i.e., OJT, may be appropriate.

There were several POI blocks not matched with inventory tasks. While these performance objectives generally were broader than the job inventory tasks, they still are in need of review. These blocks covered such areas as: electrical principles and circuits (use of multimeter and series circuit trainer), troubleshooting the nose wheel steering system, operating hydraulic test stand, operating the hydraulic or pneumatic servicing carts, and servicing trainer reservoir.

Seventy-eight inventory tasks performed by 30 percent or more first-enlistment personnel, many having high training emphasis, were not referenced to any portion of the POI. All of these tasks had average or above training emphasis ratings. In addition, 19 of these tasks were performed by more than 50 percent of the target group.

Since the career field utilizes many different systems which are aircraft specific, the data was examined by first-term MAJCOM groups, as well as the total sample. It was found that, generally, the unmatched tasks performed by at least 50 percent of the total first-enlistment career field population, were performed across all commands. Thus, they are indicative of representative tasks which could be appropriate in a formal course setting. The items performed by 30 to 49 percent show more variations within commands. For example, tasks involving aircraft installed elevator systems are performed predominantly by personnel assigned to MAC. Aircraft refueling tasks are performed by SAC incumbents who attend a special follow-on course. TAC and ATC personnel adjust components of horizontal tail or stabilizer systems.

The unmatched tasks should be reviewed by training managers to determine if they should be added to resident training or follow-on training (FTD, OJT, etc).

TABLE 25

POI BLOCKS REFLECTING LOW PERCENT OF FIRST-ENLISTMENT PERFORMING TASKS
(LESS THAN 30 PERCENT)

POI REFERENCE BLOCK	TASKS	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
				FIRST- JOB (N=393)	FIRST- ENLISTMENT (N=866)
19E	E152 COMPLETE MATERIEL DEFICIENCY REPORTS	3.45	4.84	9	9
I11C	E200 RESEARCH TECHNICAL ORDERS TO IDENTIFY COMPONENTS OR ITEMS OF EQUIPMENT	3.73	4.80	22	22
I11G	E177 MAKE ENTRIES ON AFTO FORMS 22 (TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY)	3.89	4.50	7	4
III7D	M690 PERFORM OPERATIONAL CHECKS OF HYDRAULIC TEST EQUIPMENT	3.44	4.32	30	22

* Training emphasis average = 2.50 with a standard deviation = 1.59; high TE = 4.09

** Task difficulty average = 5.00 with a standard deviation = 1.00; high TD = 6.00

TABLE 26

TASKS NOT REFERENCED TO POI BLOCKS
(30 PERCENT OR MORE FIRST-ENLISTMENT PERFORMING)

TASKS NOT REFERENCED	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
			FIRST- JOB (N=393)	FIRST- ENLISTMENT (N=866)
K578 REPACK SHOCK STRUTS ON AIRCRAFT	6.28	6.17	66	69
L664 FABRICATE MEDIUM PRESSURE RUBBER HOSE ASSEMBLIES	6.14	3.91	57	58
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	5.83	5.23	68	72
L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	5.83	4.84	55	54
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	5.77	6.02	63	66
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	5.75	2.88	71	71
L607 ASSEMBLE OR DISASSEMBLE SHOCK STRUTS	5.66	6.47	47	52
F211 MAINTAIN CONSOLIDATED TOOL KITS	5.56	4.14	35	34
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	5.56	3.72	67	68
L663 FABRICATE LOW PRESSURE RUBBER HOSE ASSEMBLIES	5.41	3.71	52	54
I373 ADJUST COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	5.31	4.88	47	48
E189 MAKE ENTRIES ON AFTO FORMS 781K (AEROSPACE VEHICLE INSPECTION AND DELAYED DISCREPANCY DOCUMENT)	5.30	3.14	35	45
I407 ADJUST HYDRAULIC COMPONENTS OF LANDING GEAR SYSTEMS	5.30	6.07	51	52
K586 SERVICE AIRCRAFT ACCUMULATORS	5.28	2.91	66	69
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	5.23	4.61	65	65
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	5.17	3.00	77	76
H332 PERFORM OPERATIONAL CHECKS OF HYDRAULIC PRESSURE INDICATING SYSTEMS				
J496 ISOLATE MALFUNCTIONS WITHIN WING FLAP SYSTEMS	5.16	4.27	58	64
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	5.12	6.04	41	46
K540 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC PRESSURE INDICATING SYSTEMS	5.09	4.62	60	58
L604 BENCH CHECK ACCUMULATORS	5.09	4.09	50	56
I411 ADJUST HYDRAULIC COMPONENTS OF RUDDER SYSTEMS	5.06	4.24	44	45
	4.97	5.59	42	43

TABLE 26 (CONTINUED)

TASKS NOT REFERENCED TO POI BLOCKS
(30 PERCENT OR MORE FIRST-ENLISTMENT PERFORMING)

TASKS NOT REFERENCED	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
			FIRST- JOB (N=393)	FIRST- ENLISTMENT (N=866)
K528 REMOVE OR INSTALL COMPONENTS OF AUXILIARY HYDRAULIC SYSTEMS	4.92	4.54	61	59
G233 INSPECT AIRCRAFT INSTALLED ANTI-SKID CONTROL VALVES	4.86	4.65	38	41
I409 ADJUST HYDRAULIC COMPONENTS OF PNEUDRAULIC POWER SYSTEMS	4.84	5.23	28	30
J492 ISOLATE MALFUNCTIONS WITHIN SPEED BRAKE SYSTEMS	4.83	5.35	46	46
I381 ADJUST COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	4.80	5.37	48	49
G226 INSPECT AIR REFUELING HYDRAULIC SYSTEMS	4.73	5.18	33	34
G240 INSPECT AIRCRAFT INSTALLED ELEVATOR HYDRAULIC SYSTEMS	4.73	5.08	31	33
H294 PERFORM OPERATIONAL CHECKS OF AIR REFUELING HYDRAULIC SYSTEMS	4.73	5.44	40	44
I412 ADJUST HYDRAULIC COMPONENTS OF SPOILER SYSTEMS	4.72	5.55	40	39
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	4.72	3.59	65	68
K562 REMOVE OR INSTALL COMPONENTS OF SPOILER SYSTEMS	4.70	5.62	56	55
K525 REMOVE OR INSTALL COMPONENTS OF ANTI-SKID SYSTEMS	4.69	4.67	36	42
J436 ISOLATE MALFUNCTIONS WITHIN ANTI-SKID SYSTEMS	4.67	6.16	28	34
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	4.67	1.68	59	62
E149 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	4.66	3.34	32	31
G236 INSPECT AIRCRAFT INSTALLED AUXILIARY HYDRAULIC SYSTEMS	4.64	4.77	51	52
K516 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	4.64	5.20	34	37
M684 INSPECT SHOP HYDRAULIC TEST EQUIPMENT	4.64	4.31	31	35
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	4.58	2.79	25	30
H301 PERFORM OPERATIONAL CHECKS OF ANTI-SKID SYSTEMS	4.55	5.59	35	41
I391 ADJUST COMPONENTS OF WING FLAP HYDRAULIC SYSTEMS	4.55	5.65	34	35
M679 CLEAN TOOLS	4.50	1.44	63	61
J438 ISOLATE MALFUNCTIONS WITHIN AUXILIARY HYDRAULIC SYSTEMS	4.47	5.59	46	49

TABLE 26 (CONTINUED)

TASKS NOT REFERENCED TO POI BLOCKS
(30 PERCENT OR MORE FIRST-ENLISTMENT PERFORMING)

TASKS NOT REFERENCED	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
			FIRST- JOB (N=393)	FIRST- ENLISTMENT (N=866)
K531 REMOVE OR INSTALL COMPONENTS OF ELEVATOR SYSTEMS	4.44	5.59	32	37
M678 CLEAN OR LUBRICATE SHOP HYDRAULIC TEST EQUIPMENT	4.42	3.21	33	35
I389 ADJUST COMPONENTS OF SPEED BRAKE SYSTEMS	4.41	4.97	35	34
L590 ASSEMBLE OR DISASSEMBLE AIRCRAFT RESERVOIRS	4.41	4.79	30	33
M677 CLEAN OR LUBRICATE HYDRAULIC COMPONENTS OF TEST STANDS	4.34	3.33	30	30
H316 PERFORM OPERATIONAL CHECKS OF EMERGENCY PNEUMATIC SYSTEMS	4.31	5.42	37	37
K588 SERVICE AIRCRAFT PNEUMATIC SYSTEMS	4.30	3.13	41	43
L596 ASSEMBLE OR DISASSEMBLE HYDRAULIC FILTER ASSEMBLIES	4.30	3.24	49	53
M676 CLEAN OR LUBRICATE HOSE FABRICATION EQUIPMENT	4.26	3.16	34	34
K559 REMOVE OR INSTALL COMPONENTS OF SLAT, FLAP, OR WING SWEEP SYSTEMS	4.22	5.91	34	35
G275 INSPECT AIRCRAFT INSTALLED RESERVOIR PRESSURIZATION SYSTEMS	4.19	4.38	38	39
I394 ADJUST HYDRAULIC COMPONENTS OF AILERON SYSTEMS	4.17	5.88	37	36
H314 PERFORM OPERATIONAL CHECKS OF ELEVATOR SYSTEMS	4.14	5.16	37	39
K587 SERVICE AIRCRAFT DAMPERS	4.11	3.19	30	32
E170 MAKE ENTRIES ON AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	4.08	2.78	25	30
C97 REVIEW EQUIPMENT FORMS	4.06	3.45	29	31
H312 PERFORM OPERATIONAL CHECKS OF COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	4.02	5.22	29	30
J445 ISOLATE MALFUNCTIONS WITHIN ELEVATOR SYSTEMS	3.95	6.10	26	30
M682 INSPECT HOSE FABRICATION EQUIPMENT	3.91	3.73	32	34
K504 DRAIN SAMPLES OF HYDRAULIC FLUIDS FOR ANALYSIS	3.89	2.82	36	41
L597 ASSEMBLE OR DISASSEMBLE HYDRAULIC QUICK DISCONNECTS	3.84	2.98	40	42
G288 INSPECT HYDRAULIC PRESSURE INDICATING SYSTEMS	3.83	4.20	38	44

TABLE 26 (CONTINUED)

TASKS NOT REFERENCED TO POI BLOCKS
(30 PERCENT OR MORE FIRST-ENLISTMENT PERFORMING)

TASKS NOT REFERENCED	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
			FIRST- JOB (N=393)	FIRST- ENLISTMENT (N=866)
K530 REMOVE OR INSTALL COMPONENTS OF CARGO DOOR SYSTEMS	3.75	4.57	24	30
I416 ADJUST LANDING GEAR DOOR COMPONENTS	3.56	5.58	29	31
K503 DRAIN PRESSURIZED HYDRAULIC SYSTEMS	3.50	3.36	39	41
H356 PERFORM OPERATIONAL CHECKS OF RUDDER PEDAL STEERING SYSTEMS	3.27	5.00	38	40
N704 GROUND AIRCRAFT	3.19	1.14	33	38
K556 REMOVE OR INSTALL COMPONENTS OF ROTOR BRAKE SYSTEMS	3.17	4.66	30	30
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS				
I377 ADJUST COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	3.11	4.68	29	34
M687 ISSUE OR RECEIVE TOOLS	2.97	5.81	41	37
H353 PERFORM OPERATIONAL CHECKS OF ROTOR BRAKE SYSTEMS	2.95	1.89	29	30
F214 PAINT FACILITIES OR EQUIPMENT	2.91	4.51	31	34
	2.64	2.07	39	41

* Training emphasis average = 2.50 with a standard deviation = 1.59; high TE = 4.09

** Task difficulty average = 5.00 with a standard deviation = 1.00; high TD = 6.00

COMPARISON OF MAJCOMs

Another dimension along which jobs performed by individuals may vary is across major commands (MAJCOM). Differences among MAJCOM groups could have implications for how the specialty is organized or how new personnel are trained. Thus, an examination of the duties and tasks performed by incumbents according to MAJCOM is necessary. (Background information for MAJCOM groups is given in Table 27.)

Overall, MAJCOMs were very similar in average percent time performing duties (see Table 28). There were, however, certain MAJCOMs spending more time on particular duty areas. For example, ATC had the highest percentage of time spent on training (Duty D), which agrees with their basic mission. AFSC incumbents spend slightly more time performing in-shop maintenance than other command members. Incumbents assigned to ATC, SAC, and MAC spend less time on cross-utilization tasks.

There were also some variations in tasks performed across MAJCOMs. One area where tasks varied among MAJCOMs was in average number of tasks performed: AFSC performed the broadest range of tasks (205), while AFLC averaged the least average number of tasks (86).

The Flightline Pneudraulic Personnel cluster was divided into five functional groups based on type of aircraft maintained. Job types within these functional groups basically reflect command assignment as well. For example, personnel assigned to SAC service aircraft refueling systems and do not work on aileron systems. MAC personnel concentrate on cargo door and elevator operations. They generally do not maintain speed brakes or reservoir systems. Tactical forces personnel (TAC, PACAF, USAFE) are concerned uniquely with the arresting hook systems. Training aircraft personnel from ATC emphasize horizontal tail or stabilizer systems, speed break systems, and aircraft reservoir systems. Basically, the amount of time spent on each technical area and the type of tasks performed are similar across commands. The unique aircraft systems maintained by each group do, however, vary. Aircraft maintained by at least 20 percent of the incumbents within a command are indicated in Table 29. As shown in this table, there is a wide variation in the number of aircraft serviced within a command. Equipment used by at least 30 percent of command members is shown in Table 30. There were some variations by command in use of equipment. For instance, SAC personnel uniquely use the brake spin riveting machine, protractors, and the spin riveter machines. Wing jacks and pneumatic test stands are utilized by members of USAFE, AFLC, and TAC. This list of equipment might be examined to determine if a piece of equipment might be better utilized for training at command level rather than the general course.

Table 31 provides information regarding the organizational structure by command. Most members are assigned to a pneudraulic shop performing duties either on the flightline or in shop. AFSC, MAC, and SAC personnel generally indicate they perform field maintenance. AFLC members concentrate

on depot maintenance. Members of the tactical commands are basically divided between field maintenance, organizational maintenance, and consolidated maintenance.

In terms of satisfaction (see Table 32), at least 74 percent of all MAJCOMs, except AFLC, found their job interesting. There was also agreement (80 percent or above), except for AFLC, on satisfaction with utilization of talents and training. Despite the lower job satisfaction ratings, members of AFLC expressed the highest reenlistment intent (81 percent yes or probably yes). AAC incumbents had the lowest reenlistment intent of the MAJCOM groups.

Duty area time did not vary significantly from one command to another. Differences in command groups were based primarily on technical tasks performed on command associated aircraft. While the type of tasks in removing or installing do not vary much, the specific aircraft systems do. This range of systems and equipment used in the field creates a definite need for follow-on training in the career field.

TABLE 27

SELECTED BACKGROUND DATA FOR 423X4 MAJCOM GROUPS

	<u>AAC</u>	<u>USAFE</u>	<u>AFLC</u>	<u>AFSC</u>	<u>ATC</u>	<u>MAC</u>	<u>PACAF</u>	<u>SAC</u>	<u>TAC</u>
NUMBER IN MAJCOM	20	181	31	29	153	450	58	425	399
AVERAGE NUMBER OF TASKS PERFORMED	138	130	86	205	111	146	122	175	130
DAFSC DISTRIBUTION*									
42334	20	14	3	10	5	7	10	13	11
42354	35	59	77	48	61	67	66	54	68
42374	45	24	19	41	34	25	24	32	21
AVERAGE MONTHS IN CAREER FIELD	83	65	80	74	81	62	65	68	57
AVERAGE MONTHS IN SERVICE	88	71	82	77	89	68	70	79	66
PERCENT FIRST-ENLISTMENT	50	60	48	38	44	57	53	52	61
PERCENT SUPERVISING	75	42	48	55	36	40	53	47	43

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

TABLE 28

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY MAJOR COMMAND GROUPS*

DUTIES	AAC (N=20)	USAF (N=181)	AFLC (N=31)	AFSC (N=29)	ATC (N=153)	MAC (N=450)	PACAF (N=58)	SAC (N=425)	TAC (N=399)
A ORGANIZING AND PLANNING	5	4	10	3	4	3	4	3	4
B DIRECTING AND IMPLEMENTING	5	3	6	3	4	3	4	3	4
C INSPECTING AND EVALUATING	5	4	8	3	5	3	5	4	4
D TRAINING	3	2	3	1	13	2	1	2	2
E PERFORMING ADMINISTRATIVE FUNCTIONS	9	8	7	5	8	7	10	7	7
F PERFORMING SUPPLY FUNCTIONS	3	3	4	3	4	3	5	3	4
G INSPECTING AIRCRAFT INSTALLED PNEUDRAULIC SYSTEMS	7	11	8	11	9	12	10	12	11
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUDRAULIC SYSTEMS	12	13	14	12	11	14	12	14	14
I ADJUSTING PNEUDRAULIC SYSTEMS AND COMPONENTS	3	4	3	6	6	5	4	6	5
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS	6	8	4	8	7	10	8	8	8
K REMOVING, INSTALLING, AND SERVICING AIRCRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS	16	15	15	16	10	17	13	19	16
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEUDRAULIC COMPONENTS	6	7	6	16	11	12	11	11	9
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)	3	4	3	3	3	3	4	3	3
N CROSS UTILIZATION TRAINING (CUT)	16	11	9	8	4	6	9	4	9

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

TABLE 29

**AIRCRAFT MAINTAINED BY COMMAND PERSONNEL
(20 PERCENT OR MORE MAINTAINING)**

<u>TYPE AIRCRAFT</u>	<u>AAC (N=20)</u>	<u>USAFE (N=181)</u>	<u>AFLC (N=31)</u>	<u>AFSC (N=29)</u>	<u>ATC (N=153)</u>	<u>MAC (N=450)</u>	<u>PACAF (N=58)</u>	<u>SAC (N=425)</u>	<u>TAC (N=399)</u>
A-10A	X			X			X		
B-52G								X	
B-52H								X	
C-5H						X			
C-130A				X					
C-130E						X			
C-130H						X			
KC-135A				X				X	
NC-135A				X					
C-141B						X			
F-4C			X	X			X		
YRF-4C			X						
F-4D			X	X			X		
F-4E			X	X			X		X
YF-4E			X	X			X		
F-4F			X						
F-4G			X						
F-15A	X			X					
F-15B	X			X					
F-15C				X			X		
F-15D				X			X		
F-16A			X	X			X		
F-16B			X	X			X		X
F-111D				X					
HH-1H				X					
UH-1N				X					
O-2A	X			X					
RF-4C				X			X		
NKC-135				X					
T-33A	X								
T-37B				X	X				
T-38A				X					
T-39A				X					
T-39B				X					

TABLE 30

EQUIPMENT MAINTAINED BY COMMAND PERSONNEL
(30 PERCENT OR MORE USING)

EQUIPMENT	AAC (N=20)	USAFE (N=181)	AFLC (N=31)	AFSC (N=29)	ATC (N=153)	MAC (N=450)	PACAF (N=58)	SAC (N=425)	TAC (N=399)
AIR NITROGEN COMPRESSORS	X	X	X	X	X	X			X
AXLE JACKS	X	X	X						X
BRAKE SPIN RIVETING MACHINES								X	
CABLE TENSIONMETERS			X					X	
DEGREASERS		X		X	X	X	X		X
DIAL INDICATORS				X					
FORCE GAUGES		X	X						X
GENERATOR SETS									
HOSE ASSEMBLY MACHINES	X	X		X	X	X	X	X	X
HOSE CUT OFF MACHINES	X	X		X	X	X	X	X	X
HOSE SKIVING MACHINES	X	X		X	X	X	X	X	X
HYDRAULIC HOSE TEST UNITS	X	X		X	X	X	X	X	X
MICROMETERS				X	X	X	X	X	X
MULTIMETERS		X		X	X	X	X	X	X
PORTABLE HYDRAULIC TEST STANDS	X	X	X	X	X	X	X	X	X
PRESSURE AND LEAR TESTORS				X	X	X	X	X	X
PROTRACTORS					X				
SERVICING CARTS	X	X	X	X	X	X	X	X	X
SHOP HYDRAULIC TEST STANDS	X	X	X	X	X	X	X	X	X
SPANNER WRENCHES	X	X	X	X	X	X	X	X	X
SPRING COMPRESSORS			X	X	X	X	X	X	X
TORQUE WRENCHES	X	X	X	X	X	X	X	X	X
WING JACKS	X	X	X	X	X	X	X	X	X
AUDIOVISUAL EQUIPMENT									
HYDRAULIC GROUND SERVICING CARTS	X	X	X	X	X	X	X	X	X
PNEUMATIC TEST STANDS		X		X	X				
SPIN RIVETER MACHINES		X		X	X				

TABLE 31

ORGANIZATIONAL STRUCTURE BY COMMAND*

WORK AREA ASSIGNED	AAC (N=20)	USAF (N=181)	PACAF (N=58)	TAC (N=399)	MAC (N=450)	SAC (N=425)	ATC (N=153)	AFLC (N=31)	AFSC (N=29)
AEROSPACE GROUND EQUIPMENT (AGE)	5	1		1			1		
JOB CONTROL				1					
MAINTENANCE BRANCH	25	18	7	10	3	2	1	32	3
MATERIAL CONTROL				1	1				
PNEUDRAULIC SHOP (PRIMARILY FLIGHTLINE)	40	34	40	45	70	74	33	23	19
PNEUDRAULIC SHOP (PRIMARILY IN-SHOP)	25	23	21	26	6	7	9	13	10
PNEUDRAULIC SHOP (PRIMARILY INSPECTION)		3		2	4	7	6	3	3
PROGRAMS AND MOBILITY						3		3	
QUALITY CONTROL			2	1			32		
TRAINING ORGANIZATION		2	2						
780 SUPPORT EQUIPMENT	5	3	10	6	2	3	6	19	3
OTHER									
LEVEL MAINTENANCE PERFORMED									
CONSOLIDATED MAINTENANCE	5	15	5	12	2	4	1	3	3
DEPOT MAINTENANCE			3	1		1		71	
ENROUTE MAINTENANCE		1	3	1	6				
FIELD MAINTENANCE	55	36	28	40	73	80	50	7	86
ORGANIZATIONAL MAINTENANCE	20	18	28	29	2	2	2	10	3
NONE	15	9	17	8	2	4	33	6	3

* Columns may not add up to 100 percent due to no response or rounding

TABLE 32

COMPARISON OF JOB SATISFACTION INDICATORS BY TOTAL MAJCOM GROUPS
(PERCENT MEMBERS PERFORMING)*

	AAC (N=20)	USAFE (N=181)	AFLC (N=31)	AFSC (N=29)	ATC (N=153)	MAC (N=450)	PACAF (N=58)	SAC (N=425)	TAC (N=399)
<u>EXPRESSED JOB INTEREST:</u>									
DULL	5	6	10	7	4	5	2	8	6
SO-SO	20	16	26	17	16	13	19	10	13
INTERESTING	75	77	61	76	78	79	74	80	80
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
LITTLE OR NOT AT ALL	10	14	36	7	12	11	17	11	14
FAIRLY WELL TO PERFECTLY	90	83	64	93	88	88	81	88	85
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
LITTLE OR NOT AT ALL	20	17	32	7	10	10	14	8	11
FAIRLY WELL TO PERFECTLY	80	81	64	93	90	88	84	92	87
<u>REENLISTMENT INTENTIONS:</u>									
PLAN TO RETIRE	15	6	-	7	3	4	5	5	4
NO OR PROBABLY NO	35	29	13	24	22	27	16	22	24
YES OR PROBABLY YES	50	64	81	69	74	68	78	72	71

* Columns may not add up to 100 percent due to rounding or no response

- Indicates less than 1 percent

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

Comparisons were made of the tasks performed and background data for 827 AFSC 42354 personnel assigned within the continental United States (CONUS) versus 248 airmen assigned overseas.

No major differences in the utilization of these groups were found. The most time-consuming areas for each group (see Table 33) were Removing, Installing, and Servicing Aircraft Pneudraulic Systems, Performing Operational Checks, and Inspecting Aircraft Pneudraulic Systems. The average number of tasks performed by the CONUS and overseas samples were approximately the same (142 CONUS versus 135 overseas). Table 34 provides a listing of sample tasks which differentiate between the CONUS and overseas samples. Greater percentages of individuals working within CONUS were performing tasks related to specific systems, cargo doors, and elevator systems. They are also performing more in-shop functions, such as assemble or disassemble hydraulic actuating cylinders. Larger percentages of overseas personnel perform cross-utilization training (CUT) tasks. Although these tasks show differences, they are basically minor variations which reflect specific aircraft responsibilities and maintenance organization concept (COMO vs AFR 66-1).

Background data was similar for the two groups. As shown in Table 35, job satisfaction and utilization were relatively high for airmen assigned both overseas and within CONUS. Although high, overseas airmen had a slightly lower perceived utilization of training (90 vs 83 percent responding positively). There was no difference in reenlistment intentions between the groups.

Overall, this review did not reveal any major differences in utilization between personnel assigned overseas and those serving in the CONUS.

TABLE 33

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY CONUS VS OVERSEAS GROUPS

DUTIES	CONUS 42354 (N=827)	OVERSEAS 42354 (N=248)
A ORGANIZING AND PLANNING	2	3
B DIRECTING AND IMPLEMENTING	2	2
C INSPECTING AND EVALUATING	2	2
D TRAINING	2	1
E PERFORMING ADMINISTRATIVE FUNCTIONS	6	8
F PERFORMING SUPPLY FUNCTIONS	3	3
G INSPECTING AIRCRAFT INSTALLED PNEUDRAULIC SYSTEMS	11	12
H PERFORMING OPERATIONAL CHECKS OF AIRCRAFT PNEUDRAULIC SYSTEMS	15	15
I ADJUSTING PNEUDRAULIC SYSTEMS AND COMPONENTS	6	5
J ISOLATE MALFUNCTIONS WITHIN AIRCRAFT PNEUDRAULIC SYSTEMS	9	10
K REMOVING, INSTALLING, AND SERVICING AIRCRAFT PNEUDRAULIC SYSTEMS AND COMPONENTS	18	18
L PERFORMING IN-SHOP MAINTENANCE OF AIRCRAFT PNEUDRAULIC COMPONENTS	12	9
M MAINTAINING SHOP AND AEROSPACE GROUND EQUIPMENT (AGE)	3	4
N CROSS-UTILIZATION TRAINING (CUT)	7	10

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

TABLE 34

TASKS WHICH BEST DIFFERENTIATE BETWEEN 423X4 CONUS AND OVERSEAS PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	CONUS (N=827)	OVERSEAS (N=248)	DIFFERENCE
M360 PERFORM OPERATIONAL CHECKS OF SPOILER SYSTEM	62	44	18
L595 ASSEMBLE OR DISASSEMBLE HYDRAULIC ACTUATING CYLINDERS	59	42	17
K562 REMOVE OR INSTALL COMPONENTS OF SPOILER SYSTEMS	61	44	17
L598 ASSEMBLE OR DISASSEMBLE HYDRAULIC VALVES	51	35	16
L589 ASSEMBLE OR DISASSEMBLE ACCUMULATORS	62	46	16
L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	56	40	16
L597 ASSEMBLE OR DISASSEMBLE HYDRAULIC QUICK DISCONNECTORS	44	30	14
K530 REMOVE OR INSTALL COMPONENTS OF CARGO DOOR SYSTEMS	37	23	14
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	57	44	13
L635 BENCH CHECK HYDRAULIC ACTUATORS	49	36	13
J494 ISOLATE MALFUNCTIONS WITHIN SPOILER SYSTEMS	53	40	13
L665 FABRICATE MEDIUM PRESSURE TEFLON HOSE ASSEMBLIES	55	42	13
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	63	50	13
H314 PERFORM OPERATIONAL CHECK OF ELEVATOR SYSTEMS	43	31	12
* * * * *	*	*	*
N717 POSITION OR REMOVE AIRCRAFT CHOCKS OR GROUND SAFETY PINS	33	46	-13
E188 MAKE ENTRIES ON AFTO FORMS 781H (AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE DOCUMENT)	18	31	-13
N707 LAUNCH OR RECOVER AIRCRAFT	41	54	-13
N714 PERFORM SINGLE-POINT AIRCRAFT REFUELING OR DEFUELING	8	22	-14
N716 POSITION NONPOWERED OR POWERED AGE TO AIRCRAFT	38	52	-14
N727 TOW NONPOWERED AGE	11	26	-15
N706 JACK OR LEVEL AIRCRAFT	34	52	-18
N729 WALK WINGS OR TAILS	30	50	-20

Average Number of Tasks Performed:

CONUS = 142

Overseas = 135

TABLE 35

COMPARISON OF JOB SATISFACTION INDICATORS BY CONUS AND OVERSEAS GROUPS
(PERCENT MEMBERS PERFORMING)*

	CONUS 42354 (N=827)	OVERSEAS 42354 (N=248)
<u>EXPRESSED JOB INTEREST:</u>		
DULL	6	5
SO-SO	13	13
INTERESTING	79	80
<u>PERCEIVED UTILIZATION OF TALENTS:</u>		
LITTLE OR NOT AT ALL	12	16
FAIRLY WELL TO PERFECTLY	87	82
<u>PERCEIVED UTILIZATION OF TRAINING:</u>		
LITTLE OR NOT AT ALL	9	15
FAIRLY WELL TO PERFECTLY	90	83
<u>REENLISTMENT INTENTIONS:</u>		
PLAN TO RETIRE	1	2
NO OR PROBABLY NO	29	28
YES OR PROBABLY YES	68	69

* Columns may not add up to 100 percent due to no response or rounding

COMPARISON TO PREVIOUS SURVEY

The results of the last survey in the 423X4 career ladder were reviewed to determine changes, if any, in the jobs performed by aircraft pneudraulic systems personnel. The last survey of this career ladder was made in 1976 under AFS 421X2, Aircraft Pneudraulic Repairman/Repair Technician career ladder. The career field was changed from AFS 421X2 to AFS 423X4 on 30 April 1976. During 1977, In-Flight Refueling Systems Mechanics from AFS 423X6 were incorporated into the 423X4 career ladder. The addition of In-Flight Refueling Personnel appears to have been accomplished without difficulty. Personnel assigned to SAC attend a follow-on course after completing the basic ABR program.

Job satisfaction factors were compared for the 1976 and 1984 TAFMS groups (see Table 36). Expressed job interest, utilization of talents and training is higher for first-term personnel in the 1984 sample. Reenlistment intent is also considerably higher for the 1-48 month group in the 1984 sample. After the first-enlistment period, the pattern of job satisfaction, though high, begins a shifting pattern. By the fourth-enlistment, the 1984 sample shows a slightly less favorable pattern than the 1976 sample. Reenlistment intent is high for both samples through the fourth-enlistment period. At the fifth-enlistment point, only 42 percent of the 1984 sample (52 percent in 1976 sample) indicate they plan to reenlist.

The current job structure analysis resulted in 2 clusters and 10 independent job types. The 1976 analysis identified 16 groupings. The general areas covered by the groupings in the 1976 study are listed below.

- I. General Pneudraulic Repairmen
- II. Specific Type Aircraft Pneudraulic Repairmen
- III. In-Shop Pneudraulic Repairmen and NCOICs
- IV. Supervisors
- V. Training Personnel
- VI. Antenna Systems Technicians
- VII. SAC Quality Control Inspectors

The 1976 and 1984 job analysis show the same basic structure of the career ladder. In the 1984 analysis, division occurred among the general jobs based on the addition of in-flight refueling duties performed primarily by SAC personnel. For instance, in the 1984 career structure, two general pneudraulic mechanics job types (primarily first-term personnel) were identified. The two job groups were performing many of the same tasks; however, one group was responsible for in-flight refueling equipment, the other group was not. The 1976 analysis identified a small group of five incumbents known as antenna systems technicians, which were not identified as a job type in the current analysis. This group was included in the Flightline Pneudraulic Personnel cluster. Generally, the career ladder structure seems to follow the same pattern as shown in the 1976 analysis.

Skill level and TAFMS groups are comparable, following the normal line of progression.

COMPARISON OF PREVIOUS SURVEY AND CURRENT SURVEY 423X4 TAFTS GROUPS
(PERCENT MEMBERS PERFORMING)*

* Columns may not add up to 100 percent due to no response or rounding
 ** 1976 survey response did not include plan to retire

SPECIAL CONSIDERATIONS

The pneumatic portion of the basic course was dropped in 1976, since only one aircraft in the inventory required knowledge of this type system. No information was available, however, to determine how many personnel were performing tasks related to pneumatic systems or components. To determine if training should be required, items in the current 423X4 inventory were split to identify "hydraulic" and "pneumatic" functions separately.

Tasks involving pneumatic activities are shown in Table 37. In examining the percent members performing data, only one task, "service aircraft pneumatic systems", was performed by more than 30 percent of the first-enlistment personnel. (This task also had a high TE rating.) The percentage of members performing tasks shown for the major command samples, however, shows that personnel assigned to TAC and USAFE perform many of the pneumatic functions. This indicates that, while the total percentage performing these pneumatic tasks does not necessarily create a requirement for formal school training, some specific type of training, i.e., trailer course, OJT, or FTD, probably should be provided by the specific commands. This is further emphasized by tasks which show above average TE ratings, such as items G271, I424, and K553 (see Table 37).

TABLE 37

INVENTORY TASKS RELATED TO PNEUMATIC SYSTEMS
(PERCENT MEMBERS PERFORMING)

TASKS	FIRST-ENLISTMENT PERSONNEL						TE RATING*	TD RATING**
	TOTAL (N=866)	MAC (N=246)	SAC (N=184)	TAC (N=216)	USAF (N=103)			
G270 INSPECT AIRCRAFT INSTALLED PNEUMATIC CANOPY SYSTEMS	9	3	-	15	14		2.45	4.89
G271 INSPECT AIRCRAFT INSTALLED PNEUMATIC POWER SYSTEMS	25	14	18	36	34		3.56	5.02
H348 PERFORM OPERATIONAL CHECKS OF PNEUMATIC CANOPY SYSTEMS	9	2	2	15	21		2.16	4.62
H349 PERFORM OPERATIONAL CHECKS OF PNEUMATIC CANOPY SYSTEMS	25	12	17	39	38		3.03	4.93
H350 PERFORM OPERATIONAL CHECKS OF PNEUMATIC PRESSURE INDICATING SYSTEMS	26	13	27	41	29		2.53	4.39
I414 ADJUST HYDRAULIC OR PNEUMATIC COMPONENTS OF CAMERA DOOR SYSTEMS	2	2	1	1	-		1.09	5.44
I415 ADJUST HYDRAULIC OR PNEUMATIC COMPONENTS OF RAM AIR TURBINE SYSTEMS	9	9	2	17	10		2.17	5.81
I417 ADJUST PNEUMATIC COMPONENTS OF AIR INDUCTION SYSTEMS	4	2	2	7	1		1.50	5.98
I418 ADJUST PNEUMATIC COMPONENTS OF AIRCRAFT RUNWAY BARRIERS	2	2	1	2	-		.55	5.41
I419 ADJUST PNEUMATIC COMPONENTS OF CANOPY SYSTEMS	4	3	3	6	7		1.75	5.63
I420 ADJUST PNEUMATIC COMPONENTS OF INFRARED SYSTEMS	3	3	2	6	-		.67	5.41
I421 ADJUST PNEUMATIC COMPONENTS OF LANDING GEAR SYSTEMS	23	15	18	32	28		3.17	5.71
I422 ADJUST PNEUMATIC COMPONENTS OF MISSILE OR BOMB BAY DOOR SYSTEMS	4	2	8	3	-		2.00	5.87
I423 ADJUST PNEUMATIC COMPONENTS OF PNEUDRAULIC POWER SYSTEMS	18	15	16	24	14		3.08	5.25
I424 ADJUST PNEUMATIC COMPONENTS OF RESERVOIR PRESSURIZATION SYSTEMS	17	5	28	24	14		3.20	5.02

TABLE 37 (CONTINUED)

INVENTORY TASKS RELATED TO PNEUMATIC SYSTEMS
(PERCENT MEMBERS PERFORMING)

TASKS	TOTAL (N=866)	FIRST-ENLISTMENT PERSONNEL				TE RATING*	TD RATING**
		MAC (N=246)	SAC (N=184)	TAC (N=216)	USAFE (N=103)		
J469 ISOLATE MALFUNCTIONS WITHIN MISSILE OR BOMB BAY DOOR PNEUMATIC SYSTEMS	4	4	10	3	-	1.84	6.25
J472 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING PNEUMATIC SYSTEMS	12	10	9	16	18	1.88	5.49
J480 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC CANOPY SYSTEMS	8	3	1	15	13	2.09	5.62
J481 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC COMPONENTS OF INFRARED SYSTEMS	3	3	2	5	-	.59	5.90
J482 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC INDI- CATING SYSTEMS	17	11	20	24	16	2.08	4.84
J483 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC POWER SYSTEMS	18	9	15	30	22	3.20	5.53
J484 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC SYSTEMS USING ELECTRICAL SCHEMATICS	7	5	6	8	9	2.09	6.63
J485 ISOLATE MALFUNCTIONS WITHIN PNEUMATIC SYSTEMS USING PNEUMATIC SCHEMATICS	19	9	15	33	19	3.08	5.59
K552 REMOVE OR INSTALL COMPONENTS OF PNEUMATIC CANOPY SYSTEMS	9	3	1	14	19	2.33	5.31
K553 REMOVE OR INSTALL COMPONENTS OF PNEUMATIC POWER SYSTEMS	25	12	18	41	34	3.45	4.86
K554 REMOVE OR INSTALL COMPONENTS OF PNEUMATIC PRESSURE INDICATING SYSTEMS	23	13	27	35	24	2.70	4.23
K588 SERVICE AIRCRAFT PNEUMATIC SYSTEMS	43	23	23	71	64	4.30	3.13
L602 ASSEMBLE OR DISASSEMBLE PNEUMATIC VALVES	17	11	22	15	18	3.03	5.28
L629 BENCH CHECK COMPONENTS OF PNEUMATIC PRESSURE INDICATING SYSTEMS	7	6	12	5	4	2.14	3.85
L649 BENCH CHECK PNEUMATIC ACTUATORS	11	6	8	17	13	3.16	4.36
L650 BENCH CHECK PNEUMATIC SELECTOR VALVES	8	6	11	8	7	2.47	3.65

TABLE 37 (CONTINUED)

INVENTORY TASKS RELATED TO PNEUMATIC SYSTEMS
(PERCENT MEMBERS PERFORMING)

TASKS	FIRST-ENLISTMENT PERSONNEL						TE RATING*	TD RATING**
	TOTAL (N=866)	MAC (N=246)	SAC (N=184)	TAC (N=216)	USAFE (N=103)			
M691 PERFORM OPERATIONAL CHECKS OF PNEUMATIC TEST STANDS	7	4	6	11	10		2.19	4.46
M695 PERFORM OPERATOR MAINTENANCE ON PNEUMATIC TEST STANDS	8	4	9	10	9		2.59	4.30

* Training emphasis average = 2.50 with SD 1.59

** Task difficulty average = 5.0 with SD = 1

IMPLICATIONS

Occupational survey results show 423X4 personnel perform maintenance on a common core of pneudraulic systems (i.e., brake, nose gear). Many of the systems serviced by these pneudraulic specialists are aircraft specific. Consideration for training must be made on which factors are representative of basic pneudraulic functions and which are aircraft specific and more feasibly taught through follow-on training on incumbent's first assignment. The large number of first-term personnel in this career ladder, combined with the variety of aircraft systems maintained, places heavy emphasis on both formal school and follow-on training. These factors also create a demand to retain senior skill personnel to accomplish follow-through training on specific aircraft systems.

Generally, the STS and POI were supported by the survey data. However, a number of tasks performed by first-enlistment personnel were not matched to these documents. Training managers should review the items not matched to determine their applicability to the STS and POI.

Job satisfaction and reenlistment potential appear positive in this career ladder. Comparison of the AFR 39-1 Specialty Description with survey information indicates support of this document.

Basically, the career field appears stable.

APPENDIX A

TABLE I
FLIGHTLINE PNEUDRAULICS PERSONNEL
(GRP126)

TASKS	PERCENT MEMBERS PERFORMING (N=1,063)
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	94
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	93
K565 REMOVE OR INSTALL ENGINE DRIVE HYDRAULIC PUMPS	92
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	91
N702 BLEED OR SERVICE BRAKE SYSTEMS	90
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT	89
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	89
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	88
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	88
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	87
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	87
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	87
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	86
K578 REPACK SHOCK STRUTS ON AIRCRAFT	86
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	85
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	85
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	84
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	84
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENTION OR RETRACTION COMPONENTS	84
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	83
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	83
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	83
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	83
J457 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC POWER SYSTEMS	82
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	82
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	82
H332 PERFORM OPERATIONAL CHECKS OF HYDRAULIC PRESSURE INDICATING SYSTEMS	81
G262 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEM COMPONENTS	81
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	81

TABLE IA
TRAINING AIRCRAFT PNEUDRAULIC PERSONNEL
(GRP487)

TASKS	PERCENT MEMBERS PERFORMING (N=61)
N702 BLEED OR SERVICE BRAKE SYSTEMS	98
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	98
K560 REMOVE OR INSTALL COMPONENTS OF SPEED BRAKE SYSTEMS	98
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	98
K542 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR DOOR SYSTEMS	98
I381 ADJUST COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	98
L595 ASSEMBLE OR DISASSEMBLE HYDRAULIC ACTUATING CYLINDERS	97
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	97
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	97
I389 ADJUST COMPONENTS OF SPEED BRAKE SYSTEMS	97
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	95
K536 REMOVE OR INSTALL COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	95
G256 INSPECT AIRCRAFT INSTALLED LANDING GEAR DOOR ACTUATING COMPONENTS	95
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	95
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	95
L590 ASSEMBLE OR DISASSEMBLE AIRCRAFT RESERVOIRS	95
L603 ASSEMBLE OR DISASSEMBLE SHOCK STRUTS	93
N724 SERVICE AIRCRAFT SHOCK STRUTS	93
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	93
L665 FABRICATE MEDIUM PRESSURE TEFLON HOSE ASSEMBLIES	93
K578 REPACK SHOCK STRUTS ON AIRCRAFT	92
M679 CLEAN TOOLS	92
L635 BENCH CHECK HYDRAULIC ACTUATORS	92
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	92
H323 PERFORM OPERATIONAL CHECKS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	92
I377 ADJUST COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	92
G282 INSPECT AIRCRAFT INSTALLED SPEED BRAKE SYSTEMS	92
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	92
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	92
J492 ISOLATE MALFUNCTIONS WITHIN SPEED BRAKE SYSTEMS	92
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	90
I394 ADJUST HYDRAULIC COMPONENTS OF AILERON SYSTEMS	90

TABLE IB
AIRLIFT AIRCRAFT PNEUDRAULIC PERSONNEL
(GRP292)

TASKS	PERCENT MEMBERS PERFORMING (N=251)
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	96
K513 REMOVE OR INSTALL COMPONENTS OF AILERON SYSTEMS	94
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	94
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	94
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	93
K531 REMOVE OR INSTALL COMPONENTS OF ELEVATOR SYSTEMS	93
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	93
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	92
H314 PERFORM OPERATIONAL CHECKS OF ELEVATOR SYSTEMS	92
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	92
N702 BLEED OR SERVICE BRAKE SYSTEMS	91
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	91
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	91
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	90
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	90
J428 ISOLATE MALFUNCTIONS WITHIN AILERON SYSTEMS	90
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	90
K578 REPACK SHOCK STRUTS ON AIRCRAFT	90
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	90
K586 SERVICE AIRCRAFT ACCUMULATORS	90
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	89
J445 ISOLATE MALFUNCTIONS WITHIN ELEVATOR SYSTEMS	88
H363 PERFORM OPERATIONAL CHECKS OF WING FLAP SYSTEMS	88
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	88
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	87
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	87
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	86
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	86
N724 SERVICE AIRCRAFT SHOCK STRUTS	86
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	86
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	86
J491 ISOLATE MALFUNCTIONS WITHIN RUDDER SYSTEMS	85
K530 REMOVE OR INSTALL COMPONENTS OF CARGO DOOR SYSTEMS	84
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	84

TABLE IC
FIGHTER AIRCRAFT PNEUDRAULIC PERSONNEL
(GRP296)

TASKS	PERCENT MEMBERS PERFORMING (N=270)
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	97
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	97
N341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	96
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	94
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	94
N702 BLEED OR SERVICE BRAKE SYSTEMS	94
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	94
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	93
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	93
K560 REMOVE OR INSTALL COMPONENTS OF SPEED BRAKE SYSTEMS	93
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	92
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	92
J463 ISOLATE MALFUNCTIONS WITHIN LANDING GEAR EXTENSION OR RETRACTION HYDRAULIC SYSTEMS	91
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	90
N729 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	89
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	89
N724 SERVICE AIRCRAFT SHOCK STRUTS	89
H336 PERFORM OPERATIONAL CHECKS OF LANDING GEAR EMERGENCY SYSTEMS	89
J492 ISOLATE MALFUNCTIONS WITHIN SPEED BRAKE SYSTEMS	88
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	88
J457 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC POWER SYSTEMS	88
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	88
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	88
N706 JACK OR LEVEL AIRCRAFT	88
K586 SERVICE AIRCRAFT ACCUMULATORS	88
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	87
J459 ISOLATE MALFUNCTIONS WITHIN HYDRAULIC SYSTEMS USING HYDRAULIC SCHEMATICS	87
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	87
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	87
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	86

TABLE ID

RESCUE AND RECOVERY AIRCRAFT PNEUDRAULIC PERSONNEL
(GRP443)

TASKS	PERCENT MEMBERS PERFORMING (N=10)
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	100
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	100
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	100
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	100
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	100
N702 BLEED OR SERVICE BRAKE SYSTEMS	100
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	100
K528 REMOVE OR INSTALL COMPONENTS OF AUXILIARY HYDRAULIC SYSTEMS	100
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	100
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	90
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	90
F211 MAINTAIN CONSOLIDATED TOOL KITS	90
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	90
K556 REMOVE OR INSTALL COMPONENTS OF ROTOR BRAKE SYSTEMS	90
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	90
H353 PERFORM OPERATIONAL CHECKS OF ROTOR BRAKE SYSTEMS	90
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	90
G226 INSPECT AIR REFUELING HYDRAULIC SYSTEMS	90
N709 OPERATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	90
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	90
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	90
C101 WRITE APRs	90
K516 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	90
A4 COORDINATE WITH MAINTENANCE CONTROL ON MAINTENANCE PROBLEMS	90
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	90
G276 INSPECT AIRCRAFT INSTALLED ROTOR BRAKE SYSTEMS	90
H347 PERFORM OPERATIONAL CHECKS OF PNEUDRAULIC CARGO DOOR SYSTEMS	90
F214 PAINT FACILITIES OR EQUIPMENT	90
E164 MAKE ENTRIES ON AF FORMS 1492 (DANGER)	90
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	90
J438 ISOLATE MALFUNCTIONS WITHIN AUXILIARY HYDRAULIC SYSTEMS	90
G229 INSPECT AIRCRAFT INSTALLED AILERON BOOST PACK ASSEMBLIES	90

TABLE IE
BOMBER/TANKER AIRCRAFT PNEUDRAULIC PERSONNEL
(GRP222)

TASKS	PERCENT MEMBERS PERFORMING (N=312)
H297 PERFORM OPERATIONAL CHECKS OF AIR REFUELING SIGNAL SYSTEMS	98
H294 PERFORM OPERATIONAL CHECKS OF AIR REFUELING HYDRAULIC SYSTEMS	97
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	97
H296 PERFORM OPERATIONAL CHECKS OF AIR REFUELING INDICATING SYSTEMS	97
K519 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING SIGNAL SYSTEMS	96
H295 PERFORM OPERATIONAL CHECKS OF AIR REFUELING BOOM HOIST SYSTEMS	96
K516 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	96
K517 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING BOOM ASSEMBLIES	95
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	94
H312 PERFORM OPERATIONAL CHECKS OF COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	93
H300 PERFORM OPERATIONAL CHECKS OF AIR REFUELING BOOM STOWAGE LATCH CONTROL SYSTEMS	93
H293 PERFORM OPERATIONAL CHECKS OF AIR REFUELING ELECTRICAL SYSTEMS	92
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	91
H306 PERFORM OPERATIONAL CHECKS OF BOOM AIR REFUELING FUEL SYSTEMS	91
G226 INSPECT AIR REFUELING HYDRAULIC SYSTEMS	91
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	90
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	90
H360 PERFORM OPERATIONAL CHECKS OF SPOILER SYSTEMS	90
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	90
J435 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING SIGNAL SYSTEMS	89
K518 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING FUEL SYSTEMS	89
K562 REMOVE OR INSTALL COMPONENTS OF SPOILER SYSTEMS	89
G227 INSPECT AIR REFUELING INDICATING SYSTEMS	89
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	89
G228 INSPECT AIR REFUELING SIGNAL SYSTEMS	89
I425 RIG AIR REFUELING BOOM CONTROL CABLES	88
G220 INSPECT AIR REFUELING BOOM CONTROL SYSTEMS	88

AD-A143 019

AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC CAREER LADDER
AFSC 423X4(U) AIR FORCE OCCUPATIONAL MEASUREMENT CENTER
RANDOLPH AFB TX JUN 84

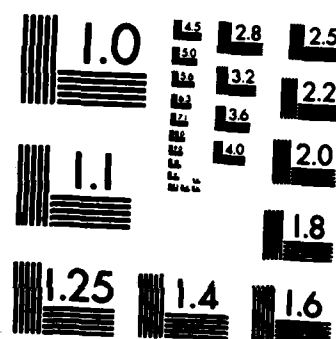
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE II
PNEUDRAULIC FLIGHTLINE SUPERVISORS
(GRP161)

TASKS	PERCENT MEMBERS PERFORMING (N=28)
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	100
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	100
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	100
G280 INSPECT AIRCRAFT INSTALLED SHOCK STRUTS	93
B57 SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42354) PERSONNEL	89
C98 REVIEW MAINTENANCE DATA COLLECTION FORMS	89
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	89
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	89
C66 CLEAR RED X CONDITIONS	86
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS	86
G262 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEM COMPONENTS	86
G256 INSPECT AIRCRAFT INSTALLED LANDING GEAR DOOR ACTUATING COMPONENTS	86
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	86
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	86
B40 DIRECT FLIGHTLINE PNEUDRAULIC REPAIR OPERATIONS	82
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	82
G272 INSPECT AIRCRAFT INSTALLED POWER RUDDER SYSTEMS	82
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	82
C101 WRITE APRs	82
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	82
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	79
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	79
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	79
B59 SUPERVISE APPRENTICE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42334) PERSONNEL	75
A33 SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	75
G282 INSPECT AIRCRAFT INSTALLED SPEED BRAKE SYSTEMS	75
G230 INSPECT AIRCRAFT INSTALLED AILERON SYSTEMS	75
D111 CONDUCT OJT	75
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	75
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	75

TABLE III
GENERAL PNEUDRAULIC MECHANICS
(GRP93)

TASKS	PERCENT MEMBERS PERFORMING (N=129)
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	84
N702 BLEED OR SERVICE BRAKE SYSTEMS	83
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	83
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	83
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	82
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	78
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	78
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	76
K586 SERVICE AIRCRAFT ACCUMULATORS	76
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	75
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	74
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	74
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	73
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	68
K578 REPACK SHOCK STRUTS ON AIRCRAFT	68
N729 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	65
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	65
K542 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR DOOR SYSTEMS	65
K546 REMOVE OR INSTALL COMPONENTS OF NOSE WHEEL STEERING SYSTEMS	65
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	64
N709 OPEATE AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	63
H315 PERFORM OPERATIONAL CHECKS OF EMERGENCY HYDRAULIC SYSTEMS	63
K513 REMOVE OR INSTALL COMPONENTS OF AILERON SYSTEMS	62
J470 ISOLATE MALFUNCTIONS WITHIN NOSE WHEEL STEERING HYDRAULIC SYSTEMS	62
H336 PERFORM OPERATIONAL CHECKS OF LANDING GEAR EMERGENCY SYSTEMS	62
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	61
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	60
K536 REMOVE OR INSTALL COMPONENTS OF HORIZONTAL TAIL OR STABILIZER SYSTEMS	60
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	58
K560 REMOVE OR INSTALL COMPONENTS OF SPEED BRAKE SYSTEMS	57
N724 SERVICE AIRCRAFT SHOCK STRUTS	57

TABLE IV
PNEUDRAULIC IN-FLIGHT REFUELING EQUIPMENT MECHANICS
(GRP112)

TASKS	PERCENT MEMBERS PERFORMING (N=53)
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	96
K517 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING BOOM ASSEMBLIES	92
K516 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	91
H294 PERFORM OPERATIONAL CHECKS OF AIR REFUELING HYDRAULIC SYSTEMS	91
H296 PERFORM OPERATIONAL CHECKS OF AIR REFUELING INDICATING SYSTEMS	91
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	89
H297 PERFORM OPERATIONAL CHECKS OF AIR REFUELING SIGNAL SYSTEMS	89
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	85
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	85
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	83
I425 RIG AIR REFUELING BOOM CONTROL CABLES	83
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	83
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	83
H295 PERFORM OPERATIONAL CHECKS OF AIR REFUELING BOOM HOIST SYSTEMS	83
K562 REMOVE OR INSTALL COMPONENTS OF SPOILER SYSTEMS	81
H312 PERFORM OPERATIONAL CHECKS OF COMPONENTS OF AIR REFUELING HYDRAULIC SYSTEMS	79
H360 PERFORM OPERATIONAL CHECKS OF SPOILER SYSTEMS	79
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	79
H293 PERFORM OPERATIONAL CHECKS OF AIR REFUELING ELECTRICAL SYSTEMS	77
K518 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING FUEL SYSTEMS	75
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	75
N702 BLEED OR SERVICE BRAKE SYSTEMS	75
K528 REMOVE OR INSTALL COMPONENTS OF AUXILIARY HYDRAULIC SYSTEMS	75
K523 REMOVE OR INSTALL COMPONENTS OF AIRCRAFT BRAKE SYSTEMS	74
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	70
K519 REMOVE OR INSTALL COMPONENTS OF AIR REFUELING SIGNAL SYSTEMS	70
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	68

TABLE V
IN-SHOP PNEUDRAULIC SUPERVISORS AND SUPPORT PERSONNEL
(GRP47)

TASKS	PERCENT MEMBERS PERFORMING (N=127)
C101 WRITE APRs	87
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	83
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	78
B56 ORIENT NEWLY ASSIGNED PERSONNEL	76
C66 CLEAR RED X CONDITIONS	74
A8 DETERMINE WORK PRIORITIES	72
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	72
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	72
F203 COORDINATE WITH BASE SUPPLY ON OBTAINING PARTS	72
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS	72
B57 SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42354) PERSONNEL	71
A20 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	71
A4 COORDINATE WITH MAINTENANCE CONTROL ON MAINTENANCE PROBLEMS	71
C98 REVIEW MAINTENANCE DATA COLLECTION FORMS	71
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	70
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	69
C65 CERTIFY STATUS OR REPARABLE, SERVICEABLE, OR CONDEMNED PARTS	69
A33 SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	65
B54 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	64
F211 MAINTAIN CONSOLIDATED TOOL KITS	64
C99 REVIEW SUPPLY DAILY DOCUMENT REGISTERS	64
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	64
E163 MAKE ENTRIES ON AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	63
C97 REVIEW EQUIPMENT FORMS	62
F202 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	61
B59 SUPERVISE APPRENTICE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42334) PERSONNEL	61
A26 PLAN WORK ASSIGNMENTS	61
E149 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	61
C92 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	60

TABLE VA
SUPPLY PERSONNEL
(GRP75)

TASKS	PERCENT MEMBERS PERFORMING (N=11)
F211 MAINTAIN CONSOLIDATED TOOL KITS	100
F203 COORDINATE WITH BASE SUPPLY ON OBTAINING PARTS	100
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	91
M679 CLEAN TOOLS	91
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	82
E163 MAKE ENTRIES ON AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	82
F214 PAINT FACILITIES OR EQUIPMENT	82
F210 MAINTAIN BENCHSTOCK PARTS OR EQUIPMENT LEVELS	73
M687 ISSUE OR RECEIVE TOOLS	73
F208 ISSUE SUPPLIES AND EQUIPMENT	73
F213 MAINTAIN ORGANIZATIONAL EQUIPMENT OR SUPPLY RECORDS	73
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	73
F202 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	73
F219 RESEARCH MICROFICHE FILES FOR SUPPLY REQUISITION DATA	73
F206 EVALUATE SERVICEABILITY OF SUPPLIES OR EQUIPMENT	73
C99 REVIEW SUPPLY DAILY DOCUMENT REGISTERS	73
E149 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	73
E190 MAKE ENTRIES ON DD FORMS 1348-1 (DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT)	73
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	64
F209 LOG TURN-IN OF SUPPLIES AND EQUIPMENT	64
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	64
F215 PREPARE DOCUMENTATION TO TURN IN EXCESS OR SURPLUS PROPERTY	64
C65 CERTIFY STATUS OF REPARABLE, SERVICEABLE, OR CONDEMNED PARTS	64
C101 WRITE APRs	64
E175 MAKE ENTRIES ON AFTO FORMS 110 (TECHNICAL ORDER DISTRIBUTION RECORD)	55
A7 DETERMINE REQUIREMENTS FOR SPACE, EQUIPMENT, OR SUPPLIES	55
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	55
F218 PREPARE REQUISITIONS FOR LOCAL PURCHASE OF SUPPLY ITEMS	55
F204 ESTABLISH PROCEDURES FO ACCOUNTABILITY OF SUPPLIES AND EQUIPMENT	55
B63 WRITE CORRESPONDENCE	55
C150 COMPLETE AF FORMS 601B (CUSTODIAN REQUEST/RECEIPT)	55
L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	55

TABLE VB
WORKING SUPERVISORS
(GRP137)

TASKS	PERCENT MEMBERS PERFORMING (N=48)
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	96
L664 FABRICATE MEDIUM PRESSURE RUBBER HOSE ASSEMBLIES	94
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	92
M684 INSPECT SHOP HYDRAULIC TEST EQUIPMENT	92
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	90
L665 FABRICATE MEDIUM PRESSURE TEFLON HOSE ASSEMBLIES	90
E169 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	88
L663 FABRICATE LOW PRESSURE RUBBER HOSE ASSEMBLIES	88
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD	85
B41 DIRECT IN-SHOP PNEUDRAULIC REPAIR OPERATIONS	85
F211 MAINTAIN CONSOLIDATED TOOL KITS	85
L589 ASSEMBLE OR DISASSEMBLE ACCUMULATORS	83
B57 SUPERVISE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42354) PERSONNEL	81
C65 CERTIFY STATUS OF REPARABLE, SERVICEABLE, OR CONDEMNED PARTS	81
A8 DETERMINE WORK PRIORITIES	81
L635 BENCH CHECK HYDRAULIC ACTUATORS	81
L604 BENCH CHECK ACCUMULATORS	81
C101 WRITE APRs	81
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	79
L609 BENCH CHECK BRAKE ASSEMBLIES	79
D111 CONDUCT OJT	79
M679 CLEAN TOOLS	79
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	79
L595 ASSEMBLE OR DISASSEMBLE HYDRAULIC ACTUATING CYLINDERS	79
B56 ORIENT NEWLY ASSIGNED PERSONNEL	79
B59 SUPERVISE APPRENTICE AIRCRAFT PNEUDRAULIC SYSTEMS MECHANIC (AFSC 42334) PERSONNEL	77
F202 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG-MATERIEL)	77
E87 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	77
F203 COORDINATE WITH BASE SUPPLY ON OBTAINING PARTS	75
L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	75
L603 ASSEMBLE OR DISASSEMBLE SHOCK STRUTS	75

TABLE VC

NCOIC SHOP AND BRANCH CHIEFS
(GRP168)

TASKS	PERCENT MEMBERS PERFORMING (N=39)
A20 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	97
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	97
C101 WRITE APRs	97
B54 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	97
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	97
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	95
A32 SCHEDULE LEAVES, PASSES, OR TDY	95
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	95
A17 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	92
A33 SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	92
A26 PLAN WORK ASSIGNMENTS	92
C103 WRITE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	92
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS	90
F203 COORDINATE WITH BASE SUPPLY ON OBTAINING PARTS	90
C98 REVIEW MAINTENANCE DATA COLLECTION FORMS	90
A4 COORDINATE WITH MAINTENANCE CONTROL ON MAINTENANCE PROBLEMS	90
A19 ESTABLISH WORK SCHEDULES	90
A13 DEVELOP WORK METHODS OR PROCEDURES	90
B56 ORIENT NEWLY ASSIGNED PERSONNEL	90
C66 CLEAR RED X CONDITIONS	90
C76 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	90
C99 REVIEW SUPPLY DAILY DOCUMENT REGISTERS	87
A8 DETERMINE WORK PRIORITIES	87
B63 WRITE CORRESPONDENCE	87
C92 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	87
E156 MAINTAIN MAINTENANCE MANAGEMENT INFORMATION AND CONTROL SYSTEM (MMICS) WORKCENTER LISTINGS	87
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	87
C74 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	85
C65 CERTIFY STATUS OF REPARABLE, SERVICEABLE, OR CONDEMNED PARTS	85
C97 REVIEW EQUIPMENT FORMS	85
C64 ANALYZE WORKLOAD REQUIREMENTS	85
D117 DETERMINE OJT TRAINING REQUIREMENTS	85
A6 DETERMINE PERSONNEL REQUIREMENTS	82

TABLE VI
IN-SHOP PNEUDRAULIC REPAIRMEN
(GRP79)

TASKS	PERCENT MEMBERS PERFORMING (N=113)
L664 FABRICATE MEDIUM PRESSURE RUBBER HOSE ASSEMBLIES	95
L661 FABRICATE HIGH PRESSURE RUBBER HOSE ASSEMBLIES	95
L663 FABRICATE LOW PRESSURE RUBBER HOSE ASSEMBLIES	90
L591 ASSEMBLE OR DISASSEMBLE BRAKE ASSEMBLIES	89
L589 ASSEMBLE OR DISASSEMBLE ACCUMULATORS	88
L609 BENCH CHECK BRAKE ASSEMBLIES	85
L665 FABRICATE MEDIUM PRESSURE TEFLON HOSE ASSEMBLIES	83
L662 FABRICATE HIGH PRESSURE TEFLON HOSE ASSEMBLIES	83
L635 BENCH CHECK HYDRAULIC ACTUATORS	82
M679 CLEAN TOOLS	81
L604 BENCH CHECK ACCUMULATORS	81
L595 ASSEMBLE OR DISASSEMBLE HYDRAULIC ACTUATING CYLINDERS	74
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	73
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	71
L659 CLEAN AND INSPECT AIRCRAFT BRAKE ASSEMBLIES	67
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	65
M676 CLEAN OR LUBRICATE HOSE FABRICATION EQUIPMENT	65
M682 INSPECT HOSE FABRICATION EQUIPMENT	64
M678 CLEAN OR LUBRICATE SHOP HYDRAULIC TEST EQUIPMENT	64
N702 BLEED OR SERVICE BRAKE SYSTEMS	63
L598 ASSEMBLE OR DISASSEMBLE HYDRAULIC VALVES	62
M684 INSPECT SHOP HYDRAULIC TEST EQUIPMENT	61
M677 CLEAN OR LUBRICATE HYDRAULIC COMPONENTS OF TEST STANDS	59
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	58
F207 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	57
L603 ASSEMBLE OR DISASSEMBLE SHOCK STRUTS	57
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	57
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	54
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	53
L596 ASSEMBLE OR DISASSEMBLE HYDRAULIC FILTER ASSEMBLIES	52
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	51
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	50
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	50
K586 SERVICE AIRCRAFT ACCUMULATORS	50
F214 PAINT FACILITIES OR EQUIPMENT	48
M701 SERVICE HYDRAULIC TEST STANDS OR EQUIPMENT	47

TABLE VII
CUT PERSONNEL
(GRP57)

TASKS	PERCENT MEMBERS PERFORMING (N=57)
N723 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	100
N706 JACK OR LEVEL AIRCRAFT	95
N726 TOW AIRCRAFT	91
N729 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	91
N707 LAUNCH OR RECOVER AIRCRAFT	86
N709 OPERATE AEROSPARE GROUND EQUIPMENT (AGE), SUCH AS POWER UNITS, HEATERS, OR LIGHT CARTS	86
N703 CONNECT OR DISCONNECT PORTABLE HYDRAULIC TEST STANDS TO OR FROM AIRCRAFT	86
N716 POSITION NONPOWERED OR POWERED AGE TO AIRCRAFT	82
N717 POSITION OR REMOVE AIRCRAFT CHOCKS OR GROUND SAFETY PINS	77
N704 GROUND AIRCRAFT	77
N702 BLEED OR SERVICE BRAKE SYSTEMS	77
N714 PERFORM SINGLE-POINT AIRCRAFT REFUELING OR DEFUELING	73
N715 PERFORM THRUFLIGHT OR POSTFLIGHT INSPECTIONS	68
N713 PERFORM PREFLIGHT INSPECTIONS	68
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	68
N705 INVENTORY COMPOSITE TOOL KITS (CTK)	64
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	64
N720 REMOVE OR REPLACE AIRCRAFT BRAKE ASSEMBLIES	64
N724 SERVICE AIRCRAFT SHOCK STRUTS	64
E189 MAKE ENTRIES ON AFTO FORMS 781K (AEROSPACE VEHICLE INSPECTION AND DELAYED DISCREPANCY DOCUMENT)	64
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	64
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	64
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	64
K576 REMOVE OR INSTALL PNEUDRAULIC HOSE ASSEMBLIES	64
N725 SERVICE AIRCRAFT TIRES	59
N721 REMOVE OR REPLACE AIRCRAFT WHEEL ASSEMBLIES	59
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	59
K577 REMOVE OR INSTALL TUBE ASSEMBLIES	59
K558 REMOVE OR INSTALL COMPONENTS OF SHOCK STRUTS	59
G280 INSPECT AIRCRAFT INSTALLED SHOCK STRUTS	59
K539 REMOVE OR INSTALL COMPONENTS OF HYDRAULIC POWER SYSTEMS	55

TABLE VIII
TRAINING SUPERVISORS AND FTD INSTRUCTORS
(GRP65)

TASKS	PERCENT MEMBERS PERFORMING (N=21)
D141 PREPARE LESSON PLANS	95
D106 ADMINISTER STUDENT CRITIQUES	95
D107 ADMINISTER TESTS	90
D145 SCORE TESTS	90
D124 DEVELOP TRAINING AIDS	90
D122 DEVELOP PERFORMANCE TESTS	81
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	81
D147 WRITE TEST QUESTIONS	76
D129 EVALUATE STUDENT QUESTIONNAIRES OR CRITIQUES	76
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	76
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	76
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	76
D140 PREPARE INSTRUCTION TRAINING AREAS OR FACILITIES	71
D116 COUNSEL TRAINEES ON TRAINING PROGRESS	71
D136 MAINTAIN STUDY REFERENCE FILES	71
E154 MAINTAIN COUNSELING FORMS, SUCH AS STUDENT COUNSELING FORMS	71
A20 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	71
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	71
D130 EVALUATE TRAINING MATERIALS OR AIDS	67
D120 DEVELOP FORMAL COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR SPECIALTY TRAINING STANDARDS (STS)	67
D135 INSPECT TRAINING AIDS FOR OPERATION OR SUITABILITY	67
D113 CONDUCT SAFETY TRAINING	67
D143 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	67
D137 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	67
H336 PERFORM OPERATIONAL CHECKS OF LANDING GEAR EMERGENCY SYSTEMS	67
B54 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	67
H341 PERFORM OPERATIONAL CHECKS OF NOSE WHEEL STEERING SYSTEMS	67
H332 PERFORM OPERATIONAL CHECKS OF HYDRAULIC PRESSURE INDICATING SYSTEMS	67
H335 PERFORM OPERATIONAL CHECKS OF LANDING GEAR DOOR SEQUENCING MECHANISMS	67
H358 PERFORM OPERATIONAL CHECKS OF SPEED BRAKE SYSTEMS	67
D131 EVALUATE TRAINING METHODS OR TECHNIQUES	62
D127 EVALUATE INSTRUCTOR PERFORMANCE	62

TABLE IX
TECHNICAL SCHOOL INSTRUCTORS
(GRP83)

TASKS	PERCENT MEMBERS PERFORMING (N=16)
D145 SCORE TESTS	100
D141 PREPARE LESSON PLANS	100
D107 ADMINISTER TESTS	94
D106 ADMINISTER STUDENT CRITIQUES	94
D116 COUNSEL TRAINEES ON TRAINING PROGRESS	88
D112 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	81
E154 MAINTAIN COUNSELING FORMS, SUCH AS STUDENT COUNSELING FORMS	75
D122 DEVELOP PERFORMANCE TESTS	75
D137 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	63
D113 CONDUCT SAFETY TRAINING	56
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	56
D140 PREPARE INSTRUCTION TRAINING AREAS OR FACILITIES	56
D147 WRITE TEST QUESTIONS	56
D129 EVALUATE STUDENT QUESTIONNAIRES OR CRITIQUES	56
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	50
D135 INSPECT TRAINING AIDS FOR OPERATION OR SUITABILITY	50
E163 MAKE ENTRIES ON AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	50
D130 EVALUATE TRAINING MATERIALS OR AIDS	44
D124 DEVELOP TRAINING AIDS	44
C97 REVIEW EQUIPMENT FORMS	44
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	44
D146 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	38
C98 REVIEW MAINTENANCE DATA COLLECTION FORMS	38
D120 DEVELOP FORMAL COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR SPECIALTY TRAINING STANDARDS (STS)	38
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	38
B56 ORIENT NEWLY ASSIGNED PERSONNEL	31
C96 PERFORM SAFETY INSPECTIONS OF EQUIPMENT OR FACILITIES	31
A13 DEVELOP WORK METHODS OR PROCEDURES	31
E184 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	31
E179 MAKE ENTRIES ON AFTO FORMS 244 (SYSTEM/EQUIPMENT STATUS RECORD)	31
D132 EVALUATE TRAINING PROGRESS OF RESIDENT COURSE STUDENTS	25
C74 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	25
D108 ADVISE UNIT STAFF PERSONNEL ON TRAINING MATTERS	25

TABLE X
IN-FLIGHT REFUELING EQUIPMENT INSTRUCTORS
(GRP100)

TASKS	PERCENT MEMBERS PERFORMING (N=11)
H294 PERFORM OPERATIONAL CHECKS OF AIR REFUELING HYDRAULIC SYSTEMS	100
H297 PERFORM OPERATIONAL CHECKS OF AIR REFUELING SIGNAL SYSTEMS	100
H300 PERFORM OPERATIONAL CHECKS OF AIR REFUELING BOOM STOWAGE LATCH CONTROL SYSTEMS	100
H295 PERFORM OPERATIONAL CHECKS OF AIR REFUELING BOOM HOIST SYSTEMS	100
I366 ADJUST AIR REFUELING BOOM HOIST SYSTEMS	100
J435 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING SIGNAL SYSTEMS	91
H298 PERFORM OPERATIONAL CHECKS OF AIR REFUELING DROGUE SYSTEMS	91
J432 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING DROGUE SYSTEMS	91
I425 RIG AIR REFUELING BOOM CONTROL CABLES	82
J430 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING BOOM ASSEMBLIES	82
J431 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING BOOM STOWAGE LATCH CONTROL SYSTEMS	82
G228 INSPECT AIR REFUELING SIGNAL SYSTEMS	82
J429 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING BOOM HOIST	82
K367 ADJUST AIR REFUELING DROGUE SYSTEMS	82
H296 PERFORM OPERATIONAL CHECKS OF AIR REFUELING INDICATING SYSTEMS	82
G227 INSPECT AIR REFUELING INDICATING SYSTEMS	82
G223 INSPECT AIR REFUELING DROGUE SYSTEMS	82
G221 INSPECT AIR REFUELING BOOM HOIST SYSTEMS	82
J433 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING FUEL TOTALIZERS	82
I426 RIG COMPONENTS OF AIR REFUELING BOOM STOWAGE LATCH CONTROL SYSTEMS	73
H299 PERFORM OPERATIONAL CHECKS OF AIR REFUELING RECEIVER SYSTEMS	73
I369 ADJUST AIR REFUELING INDICATING SYSTEMS	73
H293 PERFORM OPERATIONAL CHECKS OF AIR REFUELING ELECTRICAL SYSTEMS	73
J434 ISOLATE MALFUNCTIONS WITHIN AIR REFUELING RECEIVER SYSTEMS	73
I397 ADJUST HYDRAULIC COMPONENTS OF AIR REFUELING BOOM SYSTEMS	73
G226 INSPECT AIR REFUELING HYDRAULIC SYSTEMS	73
G220 INSPECT AIR REFUELING BOOM CONTROL SYSTEMS	73
G224 INSPECT AIR REFUELING ELECTRICAL SYSTEMS	73
G225 INSPECT AIR REFUELING FUEL SYSTEMS, OTHER THAN IN-PROGRESS INSPECTIONS	73
G222 INSPECT AIR REFUELING BOOM STOWAGE LATCH CONTROL SYSTEMS	73

TABLE XI

MAC INSPECTORS
(GRP114)

TASKS	PERCENT MEMBERS PERFORMING (N=21)
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	95
H307 PERFORM OPERATIONAL CHECKS OF BRAKE SYSTEMS	95
G240 INSPECT AIRCRAFT INSTALLED ELEVATOR HYDRAULIC SYSTEMS	90
G262 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEM COMPONENTS	86
H304 PERFORM OPERATIONAL CHECKS OF AUXILIARY HYDRAULIC SYSTEMS	86
H314 PERFORM OPERATIONAL CHECKS OF ELEVATOR SYSTEMS	86
H291 PERFORM OPERATIONAL CHECKS OF AILERON SYSTEMS	86
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	81
G272 INSPECT AIRCRAFT INSTALLED POWER RUDDER SYSTEMS	81
G236 INSPECT AIRCRAFT INSTALLED AUXILIARY HYDRAULIC SYSTEMS	81
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	81
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	81
G230 INSPECT AIRCRAFT INSTALLED AILERON SYSTEMS	76
G268 INSPECT AIRCRAFT INSTALLED PNEUDRAULIC CARGO DOOR SYSTEMS	76
J445 ISOLATE MALFUNCTIONS WITHIN ELEVATOR SYSTEMS	76
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	71
K575 REMOVE OR INSTALL HYDRAULIC FILTER ASSEMBLIES OR ELEMENTS	71
K531 REMOVE OR INSTALL COMPONENTS OF ELEVATOR SYSTEMS	71
J440 ISOLATE MALFUNCTIONS WITHIN BRAKE SYSTEMS	71
N702 BLEED OR SERVICE BRAKE SYSTEMS	71
G239 INSPECT AIRCRAFT INSTALLED ELEVATOR BOOST PACK ASSEMBLIES	67
G279 INSPECT AIRCRAFT INSTALLED RUDDER BOOST PACK ASSEMBLIES	67
G284 INSPECT AIRCRAFT INSTALLED SPOILER SYSTEMS	67
H357 PERFORM OPERATIONAL CHECKS OF RUDDER SYSTEMS	67
G265 INSPECT AIRCRAFT INSTALLED PITCH TRIM HYDRAULIC SYSTEMS	67
H331 PERFORM OPERATIONAL CHECKS OF HYDRAULIC POWER SYSTEMS	67
K557 REMOVE OR INSTALL COMPONENTS OF RUDDER SYSTEMS	67
K565 REMOVE OR INSTALL ENGINE DRIVEN HYDRAULIC PUMPS	67
K543 REMOVE OR INSTALL COMPONENTS OF LANDING GEAR RETRACTION OR EXTENSION SYSTEMS	67
E183 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	62
G256 INSPECT AIRCRAFT INSTALLED LANDING GEAR DOOR ACTUATING COMPONENTS	62
G288 INSPECT HYDRAULIC PRESSURE INDICATING SYSTEMS	62

TABLE XII

SAC QUALITY CONTROL PERSONNEL
(GRP91)

TASKS	PERCENT MEMBERS PERFORMING (N=11)
G237 INSPECT AIRCRAFT INSTALLED BRAKE SYSTEM COMPONENTS	100
G257 INSPECT AIRCRAFT INSTALLED LANDING GEAR EXTENSION OR RETRACTION COMPONENTS	91
G284 INSPECT AIRCRAFT INSTALLED SPOILER SYSTEMS	91
G280 INSPECT AIRCRAFT INSTALLED SHOCK STRUTS	91
G226 INSPECT AIR REFUELING HYDRAULIC SYSTEMS	91
G236 INSPECT AIRCRAFT INSTALLED AUXILIARY HYDRAULIC SYSTEMS	91
G261 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEMS	91
G253 INSPECT AIRCRAFT INSTALLED HYDRAULIC POWER SYSTEMS	82
C97 REVIEW EQUIPMENT FORMS	82
G228 INSPECT AIR REFUELING SIGNAL SYSTEMS	82
G233 INSPECT AIRCRAFT INSTALLED ANTI-SKID CONTROL VALVES	82
G262 INSPECT AIRCRAFT INSTALLED NOSE WHEEL STEERING SYSTEM COMPONENTS	82
G227 INSPECT AIR REFUELING INDICATING SYSTEMS	82
G256 INSPECT AIRCRAFT INSTALLED LANDING GEAR DOOR ACTUATING COMPONENTS	73
E187 MAKE ENTRIES ON AFTO FORMS 781A (MAINTENANCE DISCREPANCY AND WORK DOCUMENT)	73
G220 INSPECT AIR REFUELING BOOM CONTROL SYSTEMS	73
G232 INSPECT AIRCRAFT INSTALLED AIR REFUELING BOOM ASSEMBLIES	73
G275 INSPECT AIRCRAFT INSTALLED RESERVOIR PRESSURIZATION SYSTEMS	73
G225 INSPECT AIR REFUELING FUEL SYSTEMS, OTHER THAN IN-PROGRESS INSPECTIONS	73
C67 CONDUCT INSPECTIONS OF ORGANIZATIONAL EQUIPMENT	64
G272 INSPECT AIRCRAFT INSTALLED POWER RUDDER SYSTEMS	64
G274 INSPECT AIRCRAFT INSTALLED RECEIVER AIR REFUELING SYSTEMS	64
C96 PERFORM SAFETY INSPECTIONS OF EQUIPMENT OR FACILITIES	64
G282 INSPECT AIRCRAFT INSTALLED SPEED BRAKE SYSTEMS	64
G288 INSPECT HYDRAULIC PRESSURE INDICATING SYSTEMS	64
G223 INSPECT AIR REFUELING DROGUE SYSTEMS	64
B56 ORIENT NEWLY ASSIGNED PERSONNEL	64
G224 INSPECT AIR REFUELING ELECTRICAL SYSTEMS	64
G268 INSPECT AIRCRAFT INSTALLED PNEUDRAULIC CARGO DOOR SYSTEMS	64
A5 COORDINATE WITH OTHER AIRCRAFT MAINTENANCE SHOPS ON MAINTENANCE PROBLEMS	64
C86 EVALUATE QUALITY CONTROL PROCEDURES	55
G276 INSPECT AIRCRAFT INSTALLED ROTOR BRAKE SYSTEMS	55
C94 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	55

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