Air Education and Training Command

Sustaining the Combat Capability of America's Air Force

Occupational Survey Report
AFSC 2A6X3
Aircrew Egress Systems

U.S. AIR FORCE

2Lt Nora Alanis
20 January 2004

Integrity - Service - Excellence

Report Documentation Page

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Air Force Occupational Measurement SQ

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Randolph AFB, TX 78150
DSN 487–6811
https://www-r.omsq.af.mil/OA/oaproducts.htm

Overview

- Survey background
- Survey results
- Implications

Executive Summary

- Homogeneous job structure with one cluster and five jobs
- Technical tasks are performed throughout all skill levels
- Career ladder documents well supported by survey data
- Job satisfaction indicators are very good

Work Performed

- Maintain aircraft egress systems including ejection seats, canopies, hatches and modules; subsystems; and related support equipment
- Advise on and solve installation, maintenance, and repair problems
- Perform scheduled and unscheduled maintenance on egress systems as well as perform integrity inspections of the escape system

Current Training Program

- AFSC-awarding course
  - 361 TRS, Sheppard AFB TX
  - J3ABR2A633-022, *Aircrew Egress Systems Apprentice* Course, 6 weeks, 2 days
  - 11 semester hours for CCAF
  - <u>Programmed TPR</u> <u>Programmed Elimination Rate</u>

Programmed TPR	Programmed Elimination Rate
FY04: 220 students	FY04: 5%
FY05: 216 students	FY05: 3%

Survey Background

- Last Occupational Survey Report (OSR): May 00
- Current survey developed: Aug – Dec 02
  - Sheppard AFB TX
  - Edwards AFB CA
  - Nellis AFB NV
  - Luke AFB AZ

Survey Background (cont.)

- Survey initiated to obtain data to:
  - Evaluate current classification and training documents
  - Support promotion test development
- Current survey data collected : Jan - May 03
- Components surveyed:
  - Active Duty: 3-, 5-, and 7-Skill Levels
  - Guard: 3-, 5-, and 7-Skill Levels
  - Reserve: 3-, 5-, and 7-Skill Levels

Survey Sample Characteristics

	AD	AFRC	ANG	Total
Assigned*	780	52	270	1,102
Mailed Out	629	42	241	912
Sample	373	21	132	526
Usable Returns	64%	50%	55%	58%

Average time in career field for AD: 6 years 7 months
Average TAFMS for AD: 7 years 1 month
Percent of AD in first enlistment: 35%

* Assigned as of Jan 03

Paygrade Distribution

	Assigned**	Sample
E-1 - E-3	33%	29%
E-4	13%	14%
E-5	24%	24%
E-6	17%	20%
E-7	11%	12%
E-8	*	0%

*Indicates less than 1%

**Assigned as of Jan 03

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

Command Representation

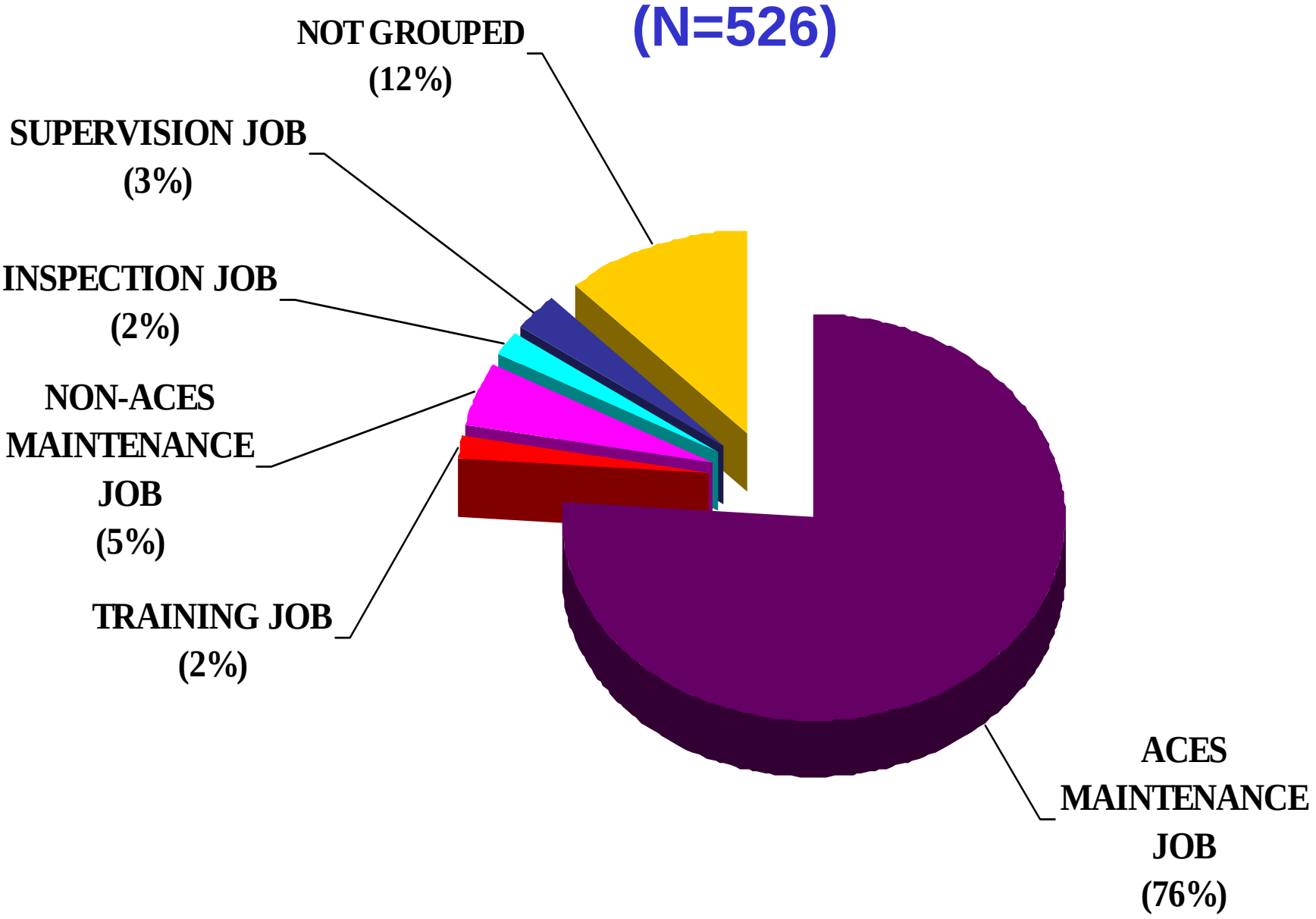
Command	Assigned %*	Sample %
ACC	40	39
ANG	25	25
PACAF	10	10
USAFE	9	9
AETC	9	9
AFRC	5	4
AFMC	2	3

* Assigned as of Jan 03

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

Specialty Jobs within Egress Systems Maintenance Cluster

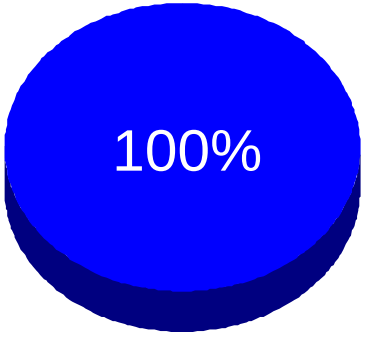
(N=526)



EGRESS SYSTEMS MAINTENANCE CLUSTER (N=526)

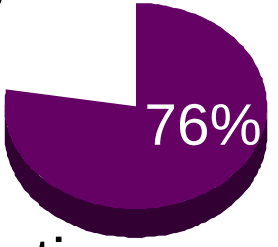
- Inspect ejection seat components
- Inspect ejection seat lap-belts
- Remove or install ejection seats
- Arm or dearm ejection seats
- Identify egress systems explosive component service-life or shelf-life
- Inspect inertia reel components
- Inspect ballistic hoses

ACES Maintenance Job
Training Job
Non-ACES Maintenance Job
Inspection Job
Supervision Job

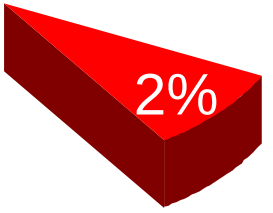


Jobs within Cluster

- ACES MAINTENANCE JOB (N=399)
  - Remove or install ACES system emergency oxygen bottles
  - Remove or install ACES system STAPAC assembly
  - Remove or install ACES system sequence-start switches
  - Perform operational checks on ejection seat linkages, such as D-rings or ejection control handles

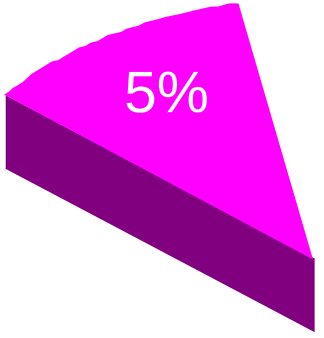


- TRAINING JOB (N=8)
  - Develop formal course curricula, plans of instruction, or specialty training standards
  - Develop or procure training materials or aids
  - Conduct formal course classroom training
  - Evaluate progress of trainees

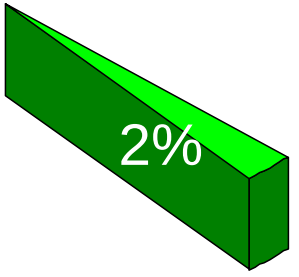


Jobs within Cluster (Cont.)

- NON-ACES MAINTENANCE JOB (N=25)
  - Inspect ejection seat rotary actuators
  - Inspect seat, cockpit, canopy, or hatch thrusters
  - Maintain documentation on items requiring periodic inspections or calibrations
  - Remove or install ejection seat rotary actuators

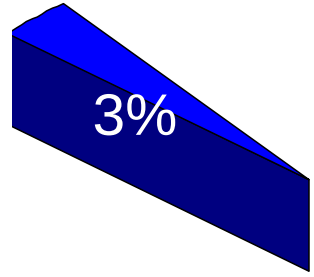


- INSPECTION JOB (N=9)
  - Inspect canopy transparencies
  - Inspect F-16 canopy manual flex drives
  - Inspect F-16 canopy actuator release bolts
  - Evaluate job hazards for compliance with AFOSH program



Jobs within Cluster (Cont.)

- SUPERVISION JOB (N=17)
  - Write replies to inspection reports
  - Maintain administrative files
  - Initiate or maintain standby rosters or workcenter pyramid recall rosters
  - Schedule personnel for TDY assignments, leaves, or passes
  - Conduct general meetings, such as staff meetings, conferences, or workshops



Percent Across Jobs within Cluster by DAFSC

	DAFSC 2A633 (N=164)	DAFSC 2A653 (N=223)	DAFSC 2A673 (N=139)
ACES MAINTENANCE JOB	70	83	72
TRAINING JOB	0	3	2
NON-ACES MAINTENANCE JOB	5	5	4
INSPECTION JOB	0	2	4
SUPERVISION JOB	0	*	12
NOT GROUPED	25	7	6

*Indicates less than 1%

Career Ladder Progression
Percent Time Spent on Duties

DUTIES	DAFSC 2A633 (N=164)	DAFSC 2A653 (N=223)	DAFSC 2A673 (N=139)
A. PERFORMING GENERAL AIRCREW EGRESS MAINTENANCE ACTIVITIES	57	49	38
B. MAINTAINING ACES SYSTEMS	19	18	14
C. MAINTAINING B-1B EGRESS SYSTEMS	1	1	1
D. MAINTAINING B-2 EGRESS SYSTEMS	*	*	*
E. MAINTAINING B-52 EGRESS SYSTEMS	1	1	*
F. MAINTAINING F-15 EGRESS SYSTEMS	1	1	1
G. MAINTAINING F-16 EGRESS SYSTEMS	4	4	3
H. MAINTAINING F-22 EGRESS SYSTEMS	*	*	*
I. MAINTAINING F-117 EGRESS SYSTEMS	*	*	*
J. MAINTAINING T-38 EGRESS SYSTEMS	*	*	*

*Indicates less than 1%

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

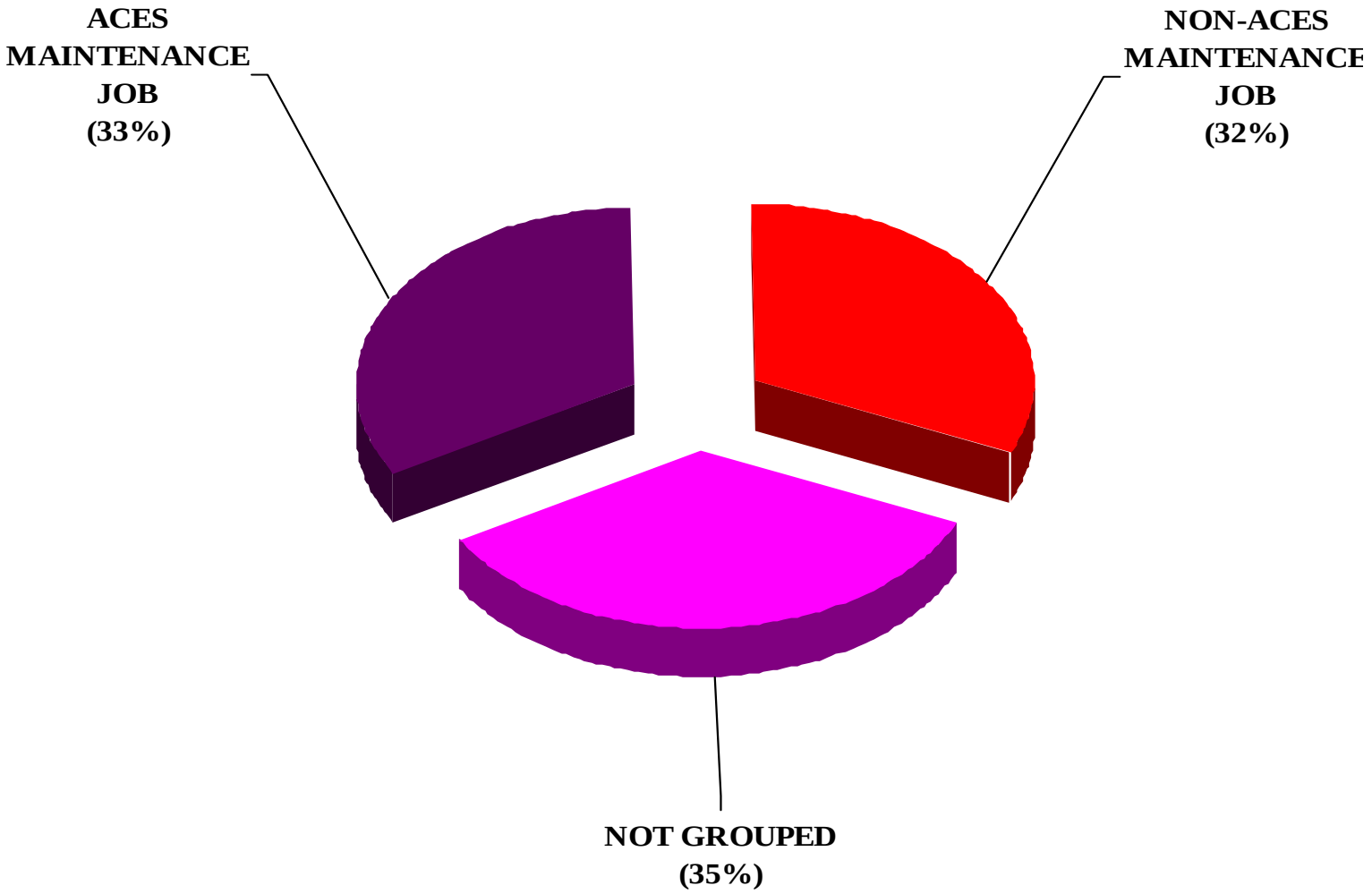
Career Ladder Progression
Percent Time Spent on Duties (Cont.)

DUTIES	DAFSC 2A633 (N=164)	DAFSC 2A653 (N=223)	DAFSC 2A673 (N=139)
K. PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	4	6	8
L. PERFORMING GENERAL ADMINISTRATIVE AND TO SYSTEM ACTIVITIES	1	2	4
M. PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3	3	4
N. PERFORMING GENERAL AIRCRAFT OR CROSS UTILIZATION TRAINING ACTIVITIES	3	3	3
O. PERFORMING DEPLOYMENT AND CONTINGENCY ACTIVITIES	1	2	3
P. PERFORMING TRAINING ACTIVITIES	1	4	7
Q. PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1	5	16

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

First-Enlistment Jobs within Cluster

(N=183)



First-Enlistment Personnel Representative Tasks

TASKS	PERCENT MEMBERS PERFORMING (N=183)
Arm or dearm ejection systems	93
Remove or install ejection seats	92
Transport egress system explosive components	91
Remove or install safety pins, struts, caps, or plugs	90
Remove or install inertia reels or components	90
Identify egress systems explosive component service-life or shelf-life	89
Remove or install ejection seat catapults	89
Remove or install ejection seat lap-belts	89
Inspect ejection seat components	87
Remove or install ejection seat survival kits	87
Inspect ejection seat lap-belts	87
Remove or install ejection seat headrest, backrest, legrest, or armrest pads	87
Inspect ballistic hoses	87

First-Enlistment Personnel Equipment or Tools

EQUIPMENT OR TOOLS	PERCENT MEMBERS PERFORMING (N=183)
Torque Wrenches	98
Seat Slings	97
Multimeters	91
Environmental Sensor Tests Sets, TTU-415	88
Grounding Cables	88
Pin Straighteners	87
Weights, such as 15 lbs or 30 lbs	87
Aerospace Ground Equipment (AGE) Cranes	86
Advanced Concept Ejection Seat (ACES II) Skids	85
Gauges, Depth	83
Seat Raise Bars	77
Inert Power Supplies	76
AGE Crew Chief Stands	70
Canopy Slings	67
Gauges, Clearances	67

Specialty Training Standard (STS) Analysis

- STS is well supported by survey data
  - 17 STS items were unsupported (two are significant)
- Seven technical tasks performed by 20% or more of members were not referenced to STS
  - These should be reviewed for possible inclusion in STS
- Some STS items may need proficiency code review
  - Over 1,100 uncoded STS items were performed by more than 20% of members

Unsupported STS Elements

UNIT	STS ELEMENT	PROF CODE	PERCENT MEMBERS PERFORMING 1st ENL (N=162)	PERCENT MEMBERS PERFORMING 3-LVL (N=189)	TNG EMP*
2.5.8.	Use Methods and Procedures technical orders (2.5.7. Use technical manuals as a source of information for:)	2b			
Task	L0327. Establish or maintain automated technical order management system (ATOMS) accounts		15	13	3.37
7.6.8.	Dissassemble/assemble Pyrotechnic Module 3 (7.6. F-15 Canopy systems)	2b			
Task	F0239. Assemble or disassemble F-15 pyrotechnic modules		19	19	2.43

*Mean TE Rating = 2.46; Standard Deviation = 1.63; High TE = 4.09

Tasks not Referenced to STS

Examples

TASK		TNG EMP*	PERCENT MEMBERS PERFORMING 1ST ENL (N=183)	PERCENT MEMBERS PERFORMING 3-LVL (N=163)
A0046	Inspect ejection sequence selectors	1.97	46	45
A0052	Inspect seat, cockpit, canopy or hatch thrusters	2.43	63	64
A0065	**Perform operational checks on inertia reels**	**5.40**	**83**	**82**
A0105	Remove or install ejection seat selectors	2.54	31	31
B0136	**Perform operational checks on ACES system mortar disconnect assemblies**	**6.34**	**59**	**56**
N0348	Assist in launching or recovering aircraft	1.40	28	26
N0368	Perform operational checks of aircraft seat adjustment systems	3.26	48	48

*Mean TE Rating =2.46; Standard Deviation =1.63; High TE = 4.09

Job Satisfaction Indicators (Across Jobs within Cluster)

	ACES MAINT JOB (N=399)	TRAINING JOB (N=8)	NON-ACES MAINT JOB (N=25)	INSPECTION JOB (N=9)	SUPERVISION JOB (N=17)
JOB INTERESTING	69	88	76	89	88
TALENTS WELL UTILIZED	86	100	92	100	89
TRAINING WELL UTILIZED	95	100	88	100	82
SENSE OF ACCOMPLISHMENT	77	100	80	78	82
PLAN TO REENLIST	70	50	60	67	59

Job Satisfaction Indicators (Across AD, ANG, AFRC)

	AD (N=373)	ANG (N=132)	AFRC (N=21)
JOB INTERESTING	87	**96**	91
TALENTS WELL UTILIZED	74	85	**86**
TRAINING WELL UTILIZED	91	96	**100**
SENSE OF ACCOMPLISHMENT	86	**95**	90

Job Satisfaction Indicators (Current vs. Previous Study)

	1-48 Months		49-96 Months		97+ Months	
	2003 (N=183)	2000 (N=95)	2003 (N=66)	2000 (N=61)	2003 (N=124)	2000 (N=143)
JOB INTERESTING	60	49	71	41	69	59
TALENTS WELL UTILIZED	78	69	84	67	93	78
TRAINING WELL UTILIZED	92	80	92	92	91	92
SENSE OF ACCOMPLISHMENT	70	61	74	59	77	62
PLAN TO REENLIST	56	45	73	57	60	59

Retention Dimensions
First-Term Airmen (N=183)

PLANNING TO REENLIST (N=103)	PERCENT RESPONDING	AVERAGE
Job security	**73**	**2.61**
Retirement benefits	**72**	**2.78**
Medical or dental care for AD member	67	2.65
Bonus or special pay	66	2.54
Military-related education/training opportunities	63	2.54

PLANNING TO SEPARATE (N=78)		
Military lifestyle	63	2.41
Pay and allowances	56	2.46
Civilian job opportunities	50	2.49
Location of present assignment	42	2.18
Recognition of efforts	38	2.38

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence

Retention Dimensions
Second-Term Airmen (N=66)

PLANNING TO REENLIST (N=48)	PERCENT RESPONDING	AVERAGE
Retirement benefits	**63**	**2.73**
Bonus or special pay	63	2.67
Medical or dental care for AD member	60	2.45
Medical or dental care for family members	59	2.68
Job security	**58**	**2.36**

PLANNING TO SEPARATE (N=17)		
Military lifestyle	54	1.89
Pay and allowances	42	2.14
Civilian job opportunities	41	2.71
Bonus or special pay	36	2.67
Esprit de corps/morale	36	2.50

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence

Retention Dimensions
Career Airmen (N=124)

PLANNING TO REENLIST (N=75)	PERCENT RESPONDING	AVERAGE
Retirement benefits	**76**	**2.72**
Job security	**66**	**2.76**
Pay and allowances	65	2.39
Military lifestyle	52	2.26
Medical or dental care for family members	49	2.38

PLANNING TO SEPARATE (N=8)		
Promotion opportunities	51	2.75
Number/duration of TDYs or deployments	51	2.25
Recognition of efforts	51	2.00
Enlisted evaluation system	38	2.67
Medical/dental care for AD member	38	2.33

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence

Summary of Results

- Career ladder is homogeneous job structure with one cluster and five jobs
- Career ladder documents well supported by survey data
  - STS provide comprehensive coverage of work performed by career ladder
  - Review of some items warranted
- Job satisfaction indicators
  - More satisfaction when compared to previous study across all TAFMS groups

Questions?

Visit our web site at:

https://www-r.omsq.af.mil/OA/oaproducts.htm

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