DUTY AREA
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

A. GENERAL, OPERATIONAL AND SAFETY DUTIES

1. Demonstrates/applies applicable **Safety precautions and procedures** around Tiltrotor aircraft and work center.
2. Demonstrates/applies knowledge of applicable **Tiltrotor aircraft publications, diagrams, sketches and drawings**.
3. Performs tasks on the helicopter using applicable **Precision measuring equipment**.
4. Demonstrates/applies knowledge of **Type and designations of fuels, lubricants and fluids in Tiltrotor aircraft servicing**.
5. Demonstrates/applies knowledge of **Aircraft servicing**.
6. Operates and maintains applicable **Shop support equipment**.

B. SCHEDULED AND UNSCHEDULED MAINTENANCE DUTIES

1. Performs **Required scheduled/unscheduled inspections** on applicable systems/components as per Maintenance Requirement Cards.
2. Incorporates applicable **Technical Directives changes/bulletins**.
3. Detects corrosion and performs **Corrosion control**.
4. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Auxiliary Power Unit (APU) system** using appropriate maintenance procedures and support/test equipment.
5. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Transmission systems** using appropriate maintenance procedures and support/test equipment.
6. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Power plant systems** using appropriate maintenance procedures and support/test equipment.
7. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Flight controls system** using appropriate maintenance procedures and support/test equipment.
8. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Proprotor system** using appropriate maintenance procedures and support/test equipment.
9. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Environmental Control System (ECS)** using appropriate maintenance procedures and support/test equipment.
10. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Fuel systems** using appropriate maintenance procedures and support/test equipment.
11. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **External cargo hook systems** using appropriate maintenance procedures and support/test equipment.
12. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Utility systems** using appropriate maintenance procedures and support/test equipment.
13. Directs Tiltrotor aircraft in proper **Ground handling** procedures.
14. Performs **Tiltrotor aircraft refueling/defueling.**

DATE: August 2002

SKILL PROGRESSION LEVEL DEFINITIONS

LEVEL I: An asterisk in level I indicates the task is taught at the “Entry Level (A) School”.

Level II: An asterisk in level II indicates the task is taught at the NAMTRA MARUNIT. Other tasks in level II not indicated with an asterisk will be signed off when exposed to the individual for the first time. All subsequent training, which the Marine performs after initial exposure, should be annotated on the OPNAV 4790/33 form until he/she is signed off in level III.

LEVEL III: An asterisk in level III indicates the task is considered training essential. A sign-off in level III indicates the Marine can perform that task w/o direct supervision. The unit is responsible for these sign-off’s.

LEVEL IV: Used by the unit to indicate an individual is advanced in technical and supervisory functions. Prior to sign-off, all training essential and training optional tasks in level III must have been signed-off. Only one sign-off for the Duty Area is required.

Sign–off blanks: **(MO/YR)/(INDIDVIDUAL’S INITIALS)/(SUPERVISOR’S INTIALS)**

Note: Refer to MCO P4790.20_ for further clarification.

INDIVIDUAL DUTY AREA QUALIFICATION SUMMARY
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

NAME/SSN_____ Granted MOS 6111 _____/_____ Level II Completed_____/_____
Granted MOS 6116/6176 _____/_____ Level III Completed_____/_____
Level IV Completed_____/_____

		LEVEL I	LEVEL II	LEVEL III	LEVEL IV
DUTY #	DUTY DESCRIPTION	DATE / SIGN	DATE / SIGN	DATE / SIGN	DATE / SIGN
A.	GENERAL, OPERATIONAL AND SAFETY DUTIES	XXXX

INDIVIDUAL QUALIFICATION RECORD
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

A. GENERAL, OPERATIONAL AND SAFETY DUTIES

A.1 Demonstrates/applies applicable **Safety precautions and procedures** around Tiltrotor aircraft and work center.

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Ground occupational safety and health programs in specific areas					
A-1	First aid procedures	Marine BST Essential Subjects Book		/ /	* / /	
A-2	Use of solvents/paints/strippers/sealants, (shelf life)	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-3	Hazardous material	OPNAVINST 4790.2 OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-4	Safety procedures near electricity	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-5	Entry into confined spaces	NAMSOP		/ /	/ /	
A-6	Composite material safety	OSHA 29 CFR 1910		* / /	* / /	
A-7	Gas free engineering	OSHA 29 CFR 1910		/ /	/ /	
A-8	Shop and safety equipment			/ /	/ /	
A-8.1	Safety boots	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-8.2	Protective clothing	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-8.3	Proper eye protection	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-8.4	Proper hearing protection	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
A-8.5	Safety markings	OSHA 29 CFR 1910 NAMSOP		* / /	* / /	
B	Precautions and procedures on/around Tiltrotor aircraft and support equipment					
B-1	Safety procedures on/around turning Tiltrotor aircraft	OSHA 29 CFR 1910 Local Instr		* / /	* / /	
B-2	Safety procedures on/near Tiltrotor aircraft when applying or removing electrical power	IETM		/ /	/ /	
B-3	APU pre-flight/start procedures	IETM		* / /	* / /	
B-4	Safety procedures on/near Tiltrotor aircraft with use of hydraulic power	IETM NAMSOP		/ /	* / /	
B-5	Safety procedures on/near Tiltrotor aircraft with ordnance	IETM NAMSOP		/ /	* / /	
B-6	Safety procedures when jacking Tiltrotor aircraft or while Tiltrotor aircraft is on jacks	IETM NAMSOP		/ /	* / /	

DA A.1 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B-7	Safety procedures near Tiltrotor aircraft maintenance platforms	IETM NAMSOP		* / /	* / /	
B-8	Safety procedures when washing Tiltrotor aircraft	IETM NA01-1A-509 NAMSOP		/ /	* / /	
B-9	Safety procedures near support equipment operations	IETM NAMSOP		* / /	* / /	
C	Line emergency procedures					
C-1	Types of fire extinguishers	IETM		* / /	* / /	
C-2	Emergency egress procedures	IETM		* / /	* / /	
C-3	Fire fighting			/ /	/ /	
C-3.1	Proper extinguishing for composite fire	IETM		/ /	* / /	
C-3.2	Proper extinguishing for brake fire	IETM		/ /	* / /	
C-3.3	Proper extinguishing for engine fire	IETM		* / /	* / /	
C-3.4	Procedures when aircraft has loss of brakes	NATOPS		/ /	* / /	
C-3.5	Procedures for rotor brake fire	IETM		/ /	* / /	
C-4	Emergency hand signals	IETM		* / /	* / /	
D	Hydraulic contamination	OPNAVINST 4790.2 NA01-1A-17 NAMSOP		/ /	* / /	
E	EMI/ESD	OPNAVINST 4790.2 NAMSOP		/ /	* / /	
F	Emergency reclamation	OPNAVINST 4790.2 NAMSOP		/ /	* / /	
G	Wheels up landing procedures	OPNAVINST 4790.2 NAMSOP		/ /	* / /	
H	Tire and wheel safety procedures	OPNAVINST 4790.2 NAMSOP		* / /	* / /	

A.2 Demonstrates/applies knowledge of applicable **Tiltrotor aircraft publications, diagrams, sketches and drawings**.

A	Naval Aviation Maintenance Program (NAMP)	OPNAVINST 4790.2		* / /	* / /	
B	Principles of Operation	IETM		* / /	* / /	
C	Testing & Troubleshooting	IETM		* / /	* / /	
D	Maintenance Procedures	IETM		* / /	* / /	
E	Illustrated Parts Breakdown (IPB)	IETM		* / /	* / /	
F	Maintenance Requirement Cards (MRC)	IETM NA01-230-HMA-6-1 NA01-230-HMA-6-2 NA01-230-HMA-6-3 NA01-230-HMA-6-4		* / /	* / /	
G	Unified Numbering System Manual (UNS)			/ /	/ /	
H	Support Equipment Handling and Safety	NA00-80T-96		* / /	* / /	

IQR, MOS 6116/6176, NAME:_____ DATE: August 2002

DA A.2 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
I	Aircraft Cleaning & Corrosion Control Manual	NA01-1A-509		/ /	* / /	
J	Support Equipment Corrosion Manual	NA17-1-125		/ /	/ /	
K	Preservation of Naval Aircraft	NA15-01-500		/ /	* / /	
L	Safety Manual	OSHA 29 CFR 1910		/ /	* / /	
M	Safety requirements for Naval Aviation Shore Activities	NAVAIR A1-NAOSH-SAF-000/P-5100		/ /	* / /	
N	Integrated Electronic Technical Manuals (IETM)					
N-1	IETM maintenance task	IETM		* / /	* / /	
N-2	IETM parts identification	IETM		* / /	* / /	
N-3	IETM inspections	IETM		* / /	* / /	

A.3 Performs tasks on the helicopter using applicable **Precision measuring equipment**.

A	Operates dial indicator	Operator's Manual		/ /	* / /	
B	Operates feeler gauges	Operator's Manual		/ /	* / /	
C	Operates fish scale	Operates Manual		/ /	* / /	
D	Operates depth micrometer	Operator's Manual		/ /	* / /	
E	Operates torque wrenches	Operator's Manual		* / /	* / /	

A.4 Demonstrates/applies knowledge of **Type and designations of fuels, lubricants and fluids in Tiltrotor aircraft servicing**.

A	Fuel					
A-1	JP-5/F-44	IETM		* / /	/ /	
B	MIL-L-23699 (Engine)	IETM		* / /	/ /	
C	MIL-H-83282 (Hydraulic)	ITEMS		* / /	/ /	
D	DOD-L-85734 (AS) (Gearboxes)	IETM		* / /	/ /	

A.5 Demonstrates/applies knowledge of **Aircraft servicing**.

A	Ground refuel defuel panel (GRDP)	IETM		* / /	* / /	
B	Transmission servicing	IETM		/ /	* / /	
B-1	Proprotor Gearbox (PRGB)	IETM		* / /	* / /	
B-2	Emergency lube system (ELS)	IETM		* / /	* / /	
B-3	Tilt Axis Gearbox (TAGB)	IETM		* / /	* / /	
B-4	Midwing Gearbox (MWGB)	IETM		* / /	* / /	

DA A.5 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
C	Engine servicing					
C-1	Engine	IETM		* / /	* / /	
C-2	APU	IETM		* / /	* / /	
C-3	Shaft Driven Compressor (SDC)	IETM		*	*	
D	Generator servicing					
D-1	Variable Frequency Generator (VFG)	IETM		* / /	* / /	

A.6 Operates and maintains applicable **Shop support equipment**.

A	Aircraft maintenance platforms, B-1, B-2, B-4, & B-5A	NA 19-600-19-6-1		* / /	* / /	
B	Aircraft tow bar, NT-4	NA 19-600-175-6-1		/ /	/ /	
C	Pon-6	IETM		* / /	* / /	

INDIVIDUAL QUALIFICATION RECORD
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

B. SCHEDULED AND UNSCHEDULED MAINTENANCE DUTIES

B.1 Performs **Required scheduled/unscheduled** inspections on applicable systems/components using appropriate Maintenance Requirement Cards.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Periodic Maintenance Information Cards	IETM			* / /	* / /	
B	Daily/Turnaround inspection	IETM	0521/0524		* / /	* / /	
C	Preflight/postflight inspection	IETM	0522/0523		* / /	* / /	
D	Special/conditional/preservation inspections	IETM					
D-1	120-day inspection	IETM	0531		/ /	/ /	
D-2	180-day inspection	IETM	0532		/ /	* / /	
D-3	360-day inspection	IETM	0533		/ /	* / /	
D-4	Engine hour inspection	IETM	053A		/ /	* / /	
D-5	Landing inspection	IETM	053B		/ /	* / /	
D-6	35-hour inspection	IETM	053D		/ /	* / /	
D-7	105-hour inspection	IETM	053F		/ /	* / /	
D-8	1000-2000 hour inspection	IETM	053G		/ /	* / /	
D-9	2000-3000 hour inspection	IETM	053H		/ /	* / /	
D-10	3000-4000 hour inspection	IETM	053J		/ /	* / /	
D-11	4000-5000 hour inspection	IETM	053K		/ /	* / /	
D-12	5000-6000 hour inspection	IETM	053L		/ /	* / /	
D-13	6000-7000 hour inspection	IETM	053M		/ /	* / /	
D-14	7000-8000 hour inspection	IETM	053N		/ /	* / /	
D-15	8000-9000 hour inspection	ITEM	053P		/ /	* / /	
D-16	9000-10000 hour inspection	ITEM	053Q		/ /	* / /	
D-17	3-year inspection	ITEM	053S		/ /	* / /	
D-18	5-year inspection	ITEM	053U		/ /	* / /	
D-19	6-year inspection	ITEM	053V		/ /	* / /	
D-20	10-year inspection	ITEM	053X		/ /	* / /	
D-21	15-year inspection	ITEM	053Y		/ /	* / /	
E	Performs phase maintenance requirements						
E-1	A-Phase inspection	ITEM	054A		/ /	* / /	
E-2	B-Phase inspection	ITEM	054B		/ /	* / /	
E-3	C-Phase inspection	ITEM	054C		/ /	* / /	
E-4	D-Phase inspection	ITEM	054D		/ /	* / /	
F	Preservation/depreservation inspection	OPNAVINST 4790.2			/ /	* / /	
G	Acceptance/transfer inspection	OPNAVINST 4790.2			/ /	* / /	

B.2 Incorporates applicable **Technical Directives changes/bulletins**.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Technical Directives System	NAVAIR 00-25-300			/ /	* / /	
B	Rapid Action Minor Engineering Change (RAMEC) Proposals	NAVAIRINST 5215.10			/ /	* / /	
C	Incorporates Technical Directives changes/bulletins	OPNAVINST 4790.2			/ /	* / /	

B.3 Detects corrosion and performs **Corrosion control**.

A	Corrosion detection during all maintenance actions	NA 01-1A-509		*	* / /	* / /	
B	Corrosion prevention during all maintenance actions	NA 01-1A-509		*	/ /	* / /	
C	Corrective action on corrosion discrepancies	NA 01-1A-509		*	* / /	* / /	
D	Corrosion detection/prevention on support equipment	NA 01-1-125			/ /	* / /	

B.4 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Auxiliary Power Unit (APU) system** using appropriate maintenance procedures and support/test equipment.

A	Theory of operation						
A-1	Auxiliary power unit system	IETM			* / /	* / /	
B	Functional check						
B-1	Auxiliary power unit system	IETM			/ /	* / /	
C	Fault isolation						
C-1	APU	IETM			* / /	* / /	
D	Organizational maintenance						
D-1	R&R APU	IETM			* / /	* / /	
D-2	R&R fuel control	IETM			/ /	* / /	
D-3	R&R fuel filter	IETM			/ /	* / /	
D-4	R&R exhaust duct	IETM			/ /	* / /	

B.5 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Transmission systems** using appropriate maintenance procedures and support/test equipment.

A	Theory of operation						
A-1	Mid Wing Gearbox (MWGB)	IETM			* / /	* / /	
A-2	Proprotor Gearbox (PRGB)	IETM			* / /	* / /	
A-2.1	Emergency Lube System (ELS)	IETM			* / /	* / /	

DA B.5 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A-3	Tilt axis gearbox (TAGB)	IETM			* / /	* / /	
A-4	Inter connect drive shaft system (ICDS)	IETM			* / /	* / /	
B	Fault isolation						
B-1	MWGB system	IETM			* / /	* / /	
B-2	PRGB system	IETM			* / /	* / /	
B-2.1	Pressure switches	IETM			/ /	* / /	
B-2.2	Chip detectors	IETM			/ /	* / /	
B-3	TAGB system	IETM			* / /	* / /	
B-4	ICDS system	IETM			/ /	* / /	
C	Organizational maintenance						
C-1	MWGB				/ /	/ /	
C-1.1	R&R MWGB	IETM			/ /	* / /	
C-1.2	R&R lube oil pump	IETM			/ /	* / /	
C-1.3	R&R oil filters	IETM			/ /	* / /	
C-2	PRGB system				/ /	/ /	
C-2.1	R&R PRGB	IETM			* / /	* / /	
C-2.2	R&R lube oil pump	IETM			/ /	* / /	
C-2.3	R&R oil filter	IETM			* / /	* / /	
C-2.4	R&R chip detectors	IETM			/ /	* / /	
C-2.5	R&R pressure switches	IETM			/ /	* / /	
C-3	TAGB system				/ /	/ /	
C-3.1	R&R TAGB	IETM			* / /	* / /	
C-3.2	R&R oil filter	IETM			/ /	* / /	
C-3.3	R&R lube oil pump	IETM			* / /	* / /	
C-3.4	R&R air/oil separator	IETM			/ /	* / /	
C-3.5	R&R chip detectors	IETM			/ /	* / /	
C-3.6	R&R pressure switches	IETM			/ /	* / /	
C-4	Inter connect drive shaft (ICDS)				/ /	/ /	
C-4.1	R&R pylon drive shaft	IETM			* / /	* / /	
C-4.2	R&R spindle drive shaft	IETM			* / /	* / /	
C-4.3	R&R wing drive shaft	IETM			* / /	* / /	
C-4.4	R&R center wing drive shaft	IETM			/ /	* / /	
C-4.5	R&R blower drive shaft	IETM			* / /	* / /	
C-4.6	R&R single coupling support	IETM			* / /	* / /	
C-4.7	R&R double coupling support	IETM			/ /	* / /	

B.6 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Power plant systems** using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Power plant systems	IETM			* / /	* / /	

DA B.6 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B	Functional check						
B-1	Power plant systems				/ /	/ /	
B-1.1	Pressure switches	IETM			/ /	* / /	
B-1.2	Chip detectors	IETM			/ /	* / /	
C	Fault isolation						
C-1	Engine lube system	IETM			/ /	* / /	
C-2	Engine fuel system	IETM			/ /	* / /	
C-3	Engine bleed air system	IETM			/ /	* / /	
C-4	Engine control system	IETM			/ /	* / /	
C-5	Engine start system	IETM			/ /	* / /	
D	Organizational Maintenance						
D-1	Engine				/ /	/ /	
D-1.1	R&R Engine	IETM			* / /	* / /	
D-2	Engine fuel control				/ /	/ /	
D-2.1	R&R Fuel Pump and Metering Unit (FPMU)	IETM			/ /	* / /	
D-2.2	R&R fuel filters	IETM			/ /	* / /	
D-2.3	R&R fuel nozzles	IETM			/ /	* / /	
D-2.4	R&R Compressor Variable Geometry (CVG) actuator	IETM			/ /	* / /	
D-3	Engine lubrication system				/ /	/ /	
D-3.1	R&R oil tank	IETM			/ /	* / /	
D-3.2	R&R Oil Conditioning Unit (OCU)	IETM			/ /	* / /	
D-3.3	R&R oil separator	IETM			/ /	* / /	
D-3.4	R&R oil filter	IETM			/ /	* / /	
D-4	Engine bleed air system				/ /	/ /	
D-4.1	R&R anti-ice valve	IETM			/ /	* / /	
D-4.2	R&R bleed air control valve	IETM			* / /	* / /	
D-4.3	R&R coanda bleed air valve assembly	IETM			/ /	* / /	
D-5	Borescope and inspect				/ /	/ /	
D-5.1	Compressor section	IETM			/ /	* / /	
D-5.2	Combustor section	IETM			/ /	* / /	
D-5.3	Turbine section	IETM			/ /	* / /	
D-6	Exhaust deflector	IETM			/ /	* / /	

B.7 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Flight controls system** using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Flight controls system	IETM			* / /	* / /	
B	Functional check						
B-1	Flight controls system	IETM			/ /	* / /	

DA B.7 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
C	Fault isolation						
C-1	Mechanical flight controls	IETM			/ /	* / /	
D	Organizational maintenance						
D-1	R&R proprotor flight controls	IETM			* / /	* / /	
D-1.1	Rig proprotor flight controls	IETM			* / /	* / /	
D-2	R&R cockpit mechanical flight controls	IETM			/ /	* / /	
D-2.1	Rig cockpit mechanical flight controls	IETM			/ /	* / /	

B.8 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Proprotor system** using appropriate maintenance procedures and support/test equipment.

A	Theory of operation						
A-1	Proprotor system	IETM			* / /	* / /	
B	Functional check						
B-1	Proprotor system	IETM			/ /	* / /	
C	Fault isolation						
C-1	Proprotor system	IETM			/ /	* / /	
C-2	Blade Fold Wing Stow (BFWS) system	IETM			* / /	* / /	
C-2.1	Wing stow, capstan/cables inop	IETM			/ /	/ /	
D	Organizational maintenance						
D-1	Proprotor hub assembly				/ /	/ /	
D-1.1	R&R proprotor hub	IETM			* / /	* / /	
D-1.2	R&R pendulum damper assembly	IETM			* / /	* / /	
D-2	Swashplate				/ /	/ /	
D-2.1	R&R swashplate	IETM			* / /	* / /	
D-2.2	R&R anti-drive assembly	IETM			/ /	* / /	
D-3	Proprotor blade				/ /	/ /	
D-3.1	R&R proprotor blade	IETM			* / /	* / /	
D-3.2	R&R optical trackers	IETM			/ /	* / /	
D-3.3	R&R root weights	IETM			/ /	* / /	
D-3.4	R&R tip weights	IETM			* / /	* / /	
D-4	Blade fold wing stow system				/ /	/ /	
D-4.1	Perform blade fold rigging procedures	IETM			/ /	* / /	
D-4.2	R&R leading edge planetary	IETM			* / /	* / /	
D-4.3	R&R trailing edge planetary	IETM			* / /	* / /	

B.9 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Environmental Control System (ECS)** using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Environmental Control System (ECS)	IETM			* / /	* / /	
A-2	Avionics cooling system	IETM			* / /	* / /	
A-3	Air conditioning & emergency vent fan	IETM			* / /	* / /	
A-4	Pressurization system	IETM			* / /	* / /	
A-5	OBOGS/OBIGGS system	IETM			* / /	* / /	
B	Functional check						
B-1	Environmental Control System (ECS)	IETM			/ /	* / /	
B-2	Avionics cooling system	IETM			/ /	* / /	
B-3	Air conditioning & emergency vent fan	IETM			/ /	* / /	
B-4	Pressurization system	IETM			/ /	* / /	
B-5	On Board Oxygen Generating System/On Board Inert Gas Generating System (OBOGS/OBIGGS)	IETM			/ /	* / /	
C	Fault isolation						
C-1	Environmental Control System (ECS)	IETM			* / /	* / /	
C-2	Avionics cooling system	IETM			* / /	* / /	
C-3	Air conditioning & emergency vent fan	IETM			* / /	* / /	
C-4	Pressurization system	IETM			* / /	* / /	
C-5	OBOGS/OBIGGS	IETM			* / /	* / /	
D	Organizational maintenance						
D-1	Environmental Control Unit (ECU)				/ /	/ /	
D-1.1	R&R Environmental Control Unit (ECU)	IETM			* / /	* / /	
D-1.2	R&R aircycle machine	IETM			/ /	* / /	
D-1.3	R&R water extractor & water spray nozzle	IETM			/ /	* / /	
D-1.4	R&R NBC filter	IETM			* / /	* / /	
D-2	Pneumatic power system				/ /	/ /	
D-2.1	R&R shaft driven compressor	IETM			* / /	* / /	
D-2.2	R&R SDC oil filter	IETM			/ /	* / /	
D-2.3	R&R pneumatic power system ducting	IETM			* / /	* / /	
D-2.4	R&R hydraflow & flexible coupler	IETM			* / /	* / /	
D-2.5	R&R pressure switches	IETM			* / /	* / /	
D-2.6	R&R chip detectors	IETM			/ /	* / /	
D-3	Air conditioning & emergency vent fan				/ /	/ /	
D-3.1	R&R emergency vent fan & check valve	IETM			/ /	* / /	
D-3.2	R&R proportioning valve	IETM			/ /	* / /	
D-3.3	R&R recirculation fan & check valve	IETM			/ /	* / /	
D-3.4	R&R cabin and cockpit ducting	IETM			/ /	* / /	
D-4	Pressurization system				/ /	/ /	
D-4.1	R&R cockpit outflow valve	IETM			/ /	* / /	
D-4.2	R&R cockpit safety valve	IETM			/ /	* / /	
D-4.3	R&R cabin outflow valve	IETM			/ /	* / /	
D-4.4	R&R cabin safety valve	IETM			/ /	* / /	
D-5	Intake fans	IETM			/ /	* / /	

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B.10 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Fuel systems** using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Main fuel system	IETM			* / /	* / /	
A-2	Auxiliary fuel system	IETM			* / /	* / /	
A-3	Internal auxiliary fuel system	IETM			* / /	* / /	
A-4	Aerial/HIFR refuel system	IETM			* / /	* / /	
A-5	Fuel cell inert system (OBIGGS)	IETM			/ /	* / /	
B	Functional check						
B-1	Main fuel system	IETM			/ /	* / /	
B-2	Auxiliary fuel system	IETM			/ /	* / /	
B-3	Internal auxiliary fuel system	IETM			/ /	* / /	
B-4	Aerial/HIFR refuel system	IETM			/ /	* / /	
B-5	Fuel cell inert system (OBIGGS)	IETM			/ /	* / /	
C	Fault isolation						
C-1	Main Fuel System	IETM			* / /	* / /	
C-2	Auxiliary fuel system	IETM			/ /	* / /	
C-3	Internal auxiliary fuel system	IETM			/ /	* / /	
C-4	Aerial/HIFR refuel system	IETM			/ /	* / /	
C-5	Fuel cell inert system (OBIGGS)	IETM			/ /	* / /	
D	Organizational maintenance						
D-1	R&R main fuel system components	IETM			* / /	* / /	
D-2	R&R auxiliary fuel system components	IETM			/ /	* / /	
D-3	R&R internal auxiliary tank	IETM			/ /	* / /	
D-4	R&R aerial refuel probe	IETM			* / /	* / /	
D-5	R&R purge/bleed air system components	IETM			/ /	* / /	

B.11 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **External cargo hook systems** using appropriate maintenance procedures and support/test equipment.

A	Theory of operation						
A-1	External cargo hook systems	IETM			* / /	* / /	
B	Functional check						
B-1	External cargo hook systems	IETM			* / /	* / /	
C	Fault isolation						
C-1	External cargo hook	IETM			/ /	* / /	
D	Organizational maintenance						
D-1	R&R external cargo hooks and components	IETM			/ /	* / /	
D-1.1	R&R external cargo hook load cells	IETM			/ /	* / /	

B.12 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Utility systems** using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Cargo winch system	IETM			* / /	* / /	
A-2	Utility hoist system	IETM			* / /	* / /	
B	Functional check						
B-1	Cargo winch system	IETM			* / /	* / /	
B-2	Utility hoist system	IETM			* / /	* / /	

B.13 Directs Tiltrotor aircraft in proper **Ground handling** procedures.

A	Performs hand signals during launch	A1-V22AB-NFM-000 NA-00-80T-113			* / /	* / /	
B	Performs hand signals during recovery	A1-V22AB-NFM-000 NA-00-80T-113			* / /	* / /	
C	Secures aircraft, normal & foul weather	IETM A1-V22AB-NFM-000			* / /	* / /	
D	Performs wing/tail walker duties	OPNAVINST 4790.2 NAMSOP			* / /	* / /	
E	Aircraft taxi						
E-1	Day taxi	IETM NA-00-80T-113			* / /	* / /	
E-2	Night taxi	IETM NA-00-80T-113			* / /	* / /	

B.14 Performs **Tiltrotor aircraft refueling/defueling**.

A	Refueling	IETM					
A-1	Performs pressure refueling	IETM			/ /	* / /	
A-1.1	Performs pressure refueling (hot proprotor turning)	IETM			/ /	* / /	
A-1.2	Performs gravity refueling	IETM			/ /	* / /	
B	Defuel	IETM					
B-1	Gravity	IETM			/ /	* / /	
B-1.1	Suction	IETM			/ /	* / /	
B-1.2	Pressure	IETM			/ /	* / /	
C	Perform fuel samples	IETM			/ /	* / /	

APPENDIX A

INDIVIDUAL EXPERIENCE DATA SHEET

INDIVIDUAL DATA

NAME: _____

SSN: _____

FORMAL SCHOOLS

SCHOOLS NAME	DATE COMPLETED

UNIT EXPERIENCE DATA

UNIT	SHOP	BILLET	FROM/TO DATES

COMMENTS:

_____

_____

_____

APPENDIX C

WORK CENTER SUMMARY
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

WORK CENTER NAME/NUMBER _____

NAME/MOS	LEVEL	A.1	A.2	A.3	A.4	A.5	A.6	B.1	B.2	B.3	B.4	B.5	B.6	B.7	B.8	B.9	B.10
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
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	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																
	II								XXXX								
	III				XXXX												
	IV																

DATE: August 2002

APPENDIX C

WORK CENTER SUMMARY
TILTROTOR MECHANIC/CREWCHIEF (MOS 6116/6176)

WORK CENTER NAME/NUMBER _____

NAME/MOS	LEVEL	B.11	B.12	B.13	B.14
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				XXXX
	III				
	IV				
	II				
	III				
	IV				

DATE: August 2002

APPENDIX D

SUPPROT EQUIPMENT LICENSING RECORD

SUPPORT EQUIPMENT NOMENCLATURE	REFERENCE	PHASE I	PHASE II	LICENSED	EXPIRATION

NAME/SSN _____ RANK _____ MOS _____ DATE: August 2002