DUTY AREA
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

A. GENERAL, OPERATING AND SAFETY DUTIES

1. Operates and maintains applicable shop **support/special equipment**.
2. Demonstrates/applies applicable **safety precautions and procedures around the helicopter and work center**.
3. Demonstrates/applies knowledge of applicable **helicopter publications, diagrams, sketches and drawings**.
4. Performs tasks on the helicopter using applicable **precision measuring equipment**.
5. Demonstrates/applies knowledge of fluids and gases and the principles of their use as applicable to **helicopter hydraulic/pneumatic systems**.

B. SCHEDULED AND UNSCHEDULED MAINTENANCE DUTIES

1. Performs **required scheduled/unscheduled inspections** on applicable systems/components as per Maintenance Requirement Cards (H-53D).
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 **flight control systems,** using appropriate maintenance procedures and support/test equipment (H-53D).
5. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **utility hydraulic system and subsystems,** using appropriate maintenance procedures and support/test equipment. (H-53D).
6. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **landing gear system,** using appropriate maintenance procedures and support/test equipment (H-53D).
7. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **blade/pylon and main rotor head hydraulic equipment systems**, using appropriate maintenance procedures and support/test equipment (H-53D).
8. Performs applicable organizational level maintenance actions common to all **hydraulic systems,** using the appropriate maintenance procedures and support/test equipment.
9. Performs **required scheduled/unscheduled inspections** on applicable systems/components as per Maintenance Requirement Cards (H-53E).
10. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the servo **systems,** using appropriate maintenance procedures and support/test equipment (H-53E).
11. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the landing gear **system,** using appropriate maintenance procedures and support/test equipment (H-53E).
12. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **first stage hydraulic system,** using appropriate maintenance procedures and support/test equipment. (H-53E)
13. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **second stage hydraulic system,** using appropriate maintenance procedures and support/test equipment. (H-53E)
14. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **utility system,** using appropriate maintenance procedures and support/test equipment (H-53E).
15. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **rotor brake system,** using appropriate maintenance procedures and support/test equipment (H-53E).
16. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **In-flight Blade Inspection System (IBIS)**, using appropriate maintenance procedures and support/test equipment (H-53E).
17. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Automatic Flight Control System (AFCS)**, using appropriate maintenance procedures and support/test equipment (H-53E).
18. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **trim system,** using appropriate maintenance procedures and support/test equipment. (H-53E)
19. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **main rotor damper system,** using appropriate maintenance procedures and support/test equipment. (H-53E)

DA MOS 6153 (continued)

20. Performs **hydraulic fluid sampling,** per helicopter requirements. (H-53E)
21. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance of **composite repair** using appropriate maintenance procedures and support/test equipment. (Asterisk (*) references are H-53E)
22. Performs **organizational level maintenance** on applicable systems including the removal, installation, adjustment and alignment of the system and the repair or replacement of associated components. (Asterisk (*) references H-53D)
23. Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **structural components**, using appropriate maintenance procedures and support/test equipment.

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 MARUNITS. Other task in Level II not indicated with an asterisk will be signed off when exposed to the individual for the first time. All subsequent training in 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 supervision. The unit is responsible for these sign-offs.

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 task in level III must be signed-off. Only one sign-off for the duty area is required.

Sign-off blanks: (MO/YR)/(INDIVIDUAL’S INITIALS)/(SUPERVISOR’S INITIALS)

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

INDIVIDUAL DUTY AREA QUALIFICATION SUMMARY
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

NAME/SSN_____

GRANTED MOS 6051 _____/_____
GRANTED MOS 6153 _____/_____

LEVEL II Completed_____/_____
LEVEL III Completed_____/_____
LEVEL IV Completed_____/_____

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

INDIVIDUAL QUALIFICATION RECORD
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

A. GENERAL, OPERATING AND SAFETY DUTIES

A.1 Operates and maintains applicable shop **support/special Equipment.**

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	5-ton axle jack	NA19-600-135-6-1		* / /	* / /	
B	12-ton jack	NA19-600-135-6-1		* / /	* / /	
C	15-ton jack	NA19-600-135-6-1		* / /	* / /	
D	25-ton jack	NA19-600-135-6-1		* / /	* / /	
E	Jacking beam	A1-H53XX-GAI-000		/ /	* / /	
F	HSU series	AG-140DB-MIB-000		* / /	* / /	
G	Box and pan brake	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
H	Bench grinder	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
I	Metal shears	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
J	Drill press	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
K	Belt/disc sander	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
L	Thermo-Coupler	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
M	Vacuum pump	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	
N	Rhine air pump (NF15-3)	NA-A1-NAOSH-SAF-000/P5100-1		/ /	* / /	

A.2 Demonstrates/applies applicable **safety precautions and procedures around the helicopter and work center.**

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Ground occupational safety & health program 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 DOD 4140.27-M Local Maint Instr		/ /	* / /	

DA A.2 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A-3	Hazardous material/waste	OPNAVINST 4790.2 OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 Local Maint Instr	*	* / /	* / /	
A-4	Safety procedures near electricity	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 Local Maint Instr	*	* / /	* / /	
A-5	Entry into confined spaces	Local Maint Instr		/ /	/ /	
A-6	Composite material safety	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1		/ /	/ /	
A-7	Gas free engineering	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1		/ /	/ /	
A-8	Personal protective equipment, (Safety/flight boots, clothing, hearing/eye protection, etc.)	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 Local Maint Instr		* / /	* / /	
A-9	Safety markings	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 Local Maint Instr		* / /	* / /	
B	Precautions & procedures around helicopter & support equipment					
B-1	Safety procedures around turning aircraft	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 Local Maint Instr		* / /	* / /	
B-2	Safety procedures near helicopter when applying or removing external electrical power	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	
B-3	APP pre-flight/start procedures	A1-H53XX-GAI-000 NATOPS		/ /	* / /	
B-4	Safety procedures near helicopter with use of hydraulic power	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	
B-5	Safety procedures near helicopter with ordnance	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	
B-6	Safety procedures when jacking helicopter or while on jacks	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	
B-7	Safety procedures near helicopter maintenance platforms	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	

DA A.2 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B-8	Safety procedures when washing helicopter	A1-H53XX-GAI-000 NA01-1A-509 Local Maint Instr		* / /	* / /	
B-9	Safety procedures near support equipment operations	A1-H53XX-GAI-000 Local Maint Instr		* / /	* / /	
C	Line emergency procedures					
C-1	Types of fire extinguishers	OSHA 29 CFR 1910 NAVAIR A1-NAOSH-SAF-000/P-5100-1 A1-H53XX-GAI-000		* / /	* / /	
C-2	Emergency egress procedures	A1-H53XX-GAI-000		* / /	* / /	
C-3	Fire fighting			/ /	/ /	
C-3.1	Proper extinguishing for composite fire	A1-H53XX-GAI-000		* / /	* / /	
C-3.2	Proper extinguishing for brake fire	A1-H53XX-GAI-000		* / /	* / /	
C-3.3	Proper extinguishing for engine fire	A1-H53XX-GAI-000		* / /	* / /	
C-3.4	Procedures when aircraft has loss of brakes	NATOPS Flight MANUAL		* / /	* / /	
C-3.5	Rotor brake fire	A1-H53XX-GAI-000		/ /	* / /	
C-4	Emergency hand signals	NATOPS Flight MANUAL		* / /	* / /	
D	Hydraulic contamination	OPNAVINST 4790.2 NA01-1A-17 Local Maint Instr	*	* / /	* / /	
E	EMI/ESD/EMC	OPNAVINST 4790.2 Local Maint Instr		/ /	/ /	
F	Emergency reclamation	OPNAVINST 4790.2 Local Maint Instr		/ /	* / /	
G	Wheels up landing procedures	A1-H53XX-NFM-000 Local Maint Instr		/ /	* / /	
H	Tire and wheel safety procedures	OPNAVINST 4790.2 Local Maint Instr		* / /	* / /	

A.3 Demonstrates/applies knowledge of applicable helicopter **publications, diagrams, sketches and drawings.**

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Naval Aviation Maintenance Program (NAMP)	OPNAVINST 4790.2		* / /	* / /	
B	Principles of Operation Manuals	A1-H53XX-POM-100 A1-H53XX-POM-200	*	* / /	* / /	
C	Testing & Troubleshooting Manuals	A1-H53XX-TTM-100 A1-H53XX-TTM-200		* / /	* / /	

DA A.3 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
D	Maintenance Requirement Cards (MRC)	NA01-230-HMA-6-2 NA01-230-HMA-6-3 NA01-230-HMA-6-4 A1-H53CE-MRC-000 A1-H53CE-MRC-100 A1-H53CE-MRC-300 A1-H53CE-MRC-400	*	* / /	* / /	
E	Work Unit Code Manual	NA01-230HMA-8		* / /	* / /	
F	Maintenance Instruction Manuals					
F-1	Maintenance Procedures Manuals	A1-H53XX-GAI-000 A1-H53XX-GSE-000 A1-H53XX-110-000 A1-H53XX-130-000 A1-H53XX-140-000 A1-H53XX-150-000 A1-H53XX-220-000 A1-H53XX-260-000 A1-H53XX-450-000		* / /	* / /	
F-2	Illustrated Parts Brake down (IPB)	A1-H53XX-GAI-000 A1-H53XX-GSE-000 A1-H53XX-110-000 A1-H53XX-130-000 A1-H53XX-140-000 A1-H53XX-150-000 A1-H53XX-220-000 A1-H53XX-260-000 A1-H53XX-450-000		* / /	* / /	
G	Aircraft Tire/Wheel Applicability List	NA 04-10-1		/ /	* / /	
H	Aircraft Tire and Tubes	NA 04-10-506		/ /	* / /	
I	Aircraft Wheel Assemblies	NA 04-10-508		/ /	* / /	
J	Tire Inflation Kit	NA 17-1-123		/ /	* / /	
K	Contamination Kit Maintenance Manual	NA 17-15E-52		/ /	* / /	
L	Aviation Hydraulics Manual	NA01-1A-17	*	* / /	* / /	
M	Aviation Hose & Tube Manual	NA01-1A-20		/ /	* / /	
N	Aircraft Cleaning & Corrosion Control Manual	NA01-1A-509	*	/ /	* / /	
O	Preservation of Naval Aircraft	NA15-01-500		/ /	* / /	
P	Safety Manual	OSHA 29 CFR 1910		/ /	* / /	
Q	Safety Requirement for Naval Aviation Shore Activities	NAVAIR A1-NAOSH-SAF-000/P-5100-1		* / /	* / /	

DA A.3 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
R	Pre-operational inspection of support equipment	Pre-operational inspection of support equipment		* / /	* / /	
S	NATOPS	NA01-230HMA-1 NA01-H53CE-NFM-000		/ /	* / /	
T	Oxygen/Nitrogen Cryogenic System	NA06-30-501		/ /	* / /	
U	Anti Friction Bearings (OMA\IMA)	NA01-1A-503		/ /	* / /	
V	Structural repair manual	A1-H53CE-SRM-000 A1-H53XX-SRM-100 A1-H53XX-SRM-200		* / /	* / /	
W	Structural hardware manual	NA01-1A-8		* / /	* / /	
X	General manual for structural repair	NA01-1A-1		* / /	* / /	
Y	Avionics cleaning & corrosion manual	NA16-1-540		/ /	/ /	
Z	Support equipment corrosion manual	NA17-1-125		/ /	/ /	
AA	CNAP/CNAL corrosion instruction	4750 series		/ /	/ /	

A.4 Performs tasks on the helicopter using applicable **precision measuring equipment.**

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Operates direct pressure gauge	A1-H53XX-GAI-000		/ /	* / /	
B	Operates T-10 (check & fill unit)	A1-H53XX-150-000		/ /	* / /	
C	Operates stand-off gauge	NA17-1-123		/ /	* / /	
D	Operates dial indicator	A1-H53XX-GAI-000		/ /	* / /	
E	Operates force gauge	A1-H53XX-140-000		/ /	* / /	
F	Operates AFCS line analyzer	A1-H53XX-140-000		* / /	* / /	
G	Operates torque wrench	A1-H53XX-GAI-000		/ /	* / /	
H	Operates pyrometers digital	A1-H53XX-SRM-000		/ /	* / /	
I	Operates depth gauges	NA01-1A-509		/ /	* / /	
J	Operates micrometers	NA01-1A-509		/ /	* / /	

A.5 Demonstrates/applies knowledge of fluids and gases and the principles of their use as applicable to **helicopter hydraulic/pneumatic systems.**

TASK #	TASK DESCRIPTION	REFERENCE	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Hydraulic fluids used in Naval A/C					
A-1	MIL-H-5606	NA 01-1A-17		/ /	/ /	
A-2	MIL-H-83282	NA 01-1A-17	*	* / /	/ /	
B	Color coded functional identification tape	NA01-1A-509		* / /	/ /	
C	Nitrogen	NA 06-30-501		/ /	* / /	

INDIVIDUAL QUALIFICATION RECORD
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

B. SCHEDULED AND UNSCHEDULED MAINTENANCE DUTIES

B.1 Performs **required scheduled/unscheduled inspections** on applicable systems/components as per Maintenance Requirement Cards. (H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL 1	LEVEL II	LEVEL III	LEVEL IV
A	Periodic Maintenance Information Cards	A1-H53XX-MRC-000 NA 01-230HMA-6-3		*	/ /	* / /	
B	Turnaround Checklist Requirement Cards	NA 01-230HMA-6-3		*	/ /	/ /	
C	Daily/Servicing/Special/preservation/ conditional Requirement Cards	NA 01-230HMA-6-2 A1-H53XX-MRC-XXX		*	/ /	* / /	
D	Performs phase inspections	NA 01-230HMA-6-4		*	/ /	* / /	
E	Performs 14-day inspection	NA01-230-HMA-6-3			/ /	* / /	
F	Performs 28-day corrosion Insp	NA01-230-HMA-6-3			/ /	* / /	
G	Performs 182-day special Insp	NA01-230-HMA-6-3			/ /	* / /	
H	Performs acceptance/transfer Insp	OPNAVINST 4790.2			/ /	* / /	
I	Performs 50 Hr tail pylon inspection	NA01-230HMA-6-3			/ /	* / /	
J	Performs major structural inspection on hard landing, overstress, etc.	OPNAVINST 4790.2_ A1-H53XX-GAI-000 A1-H53XX-130-000 A1-H53XX-400-000 A1-H53XX-SRM-100			/ /	* / /	
K	Performs inspection of critical structures & linkage items	A1-H53XX-GAI-000 A1-H53XX-130-000 A1-H53XX-400-000 A1-H53XX-SRM-100			/ /	* / /	

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.**

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Performs corrosion detection during all maintenance actions	NA 01-1A-509 A1-H53XX-800-000			/ /	* / /	
B	Performs corrosion prevention during all maintenance actions	NA 01-1A-509 A1-H53XX-800-000			/ /	* / /	

DA B.3 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
C	Performs corrective action on corrosion discrepancies	NA01-1A-509 A1-H53XX-800-000			/ /	* / /	
D	Performs corrosion Detection/ prevention on support equipment	NA 01-1A-509 NA 17-1-25			/ /	* / /	

B.4 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **flight control systems**, using appropriate maintenance procedures and support/test equipment. (H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	1st & 2nd stage hydraulic system	A1-H53XX-POM-100		*	* / /	* / /	
A-2	AFCS system	A1-H53XX-POM-100		*	* / /	* / /	
A-3	Tail rotor system	A1-H53XX-POM-100		*	* / /	* / /	
B	Functional check						
B-1	1st & 2nd stage hydraulic system	A1-H53XX-140-000		*	* / /	* / /	
B-2	AFCS system	A1-H53XX-140-000		*	* / /	* / /	
B-3	Tail rotor system	A1-H53XX-140-000		*	* / /	* / /	
C	Fault isolation						
C-1	1st & 2nd stage hydraulic sys	A1-H53XX-TTM-100		*	* / /	* / /	
C-2	AFCS system	A1-H53XX-TTM-100		*	* / /	* / /	
C-3	Tail rotor system	A1-H53XX-TTM-100		*	* / /	* / /	
D	Organizational maintenance						
D-1	1st & 2nd stage hydraulic system						
D-1.1	R&R 1st & 2nd stage reservoir	A1-H53XX-140-000		*	/ /	* / /	
D-1.2	R&R 1st & 2nd stage pumps	A1-H53XX-140-000		*	/ /	* / /	
D-1.3	R&R 1st & 2nd stage manifold	A1-H53XX-140-000		*	/ /	* / /	
D-1.4	R&R primary servo cylinder assy	A1-H53XX-140-000		*	/ /	* / /	
D-1.5	R&R follow up arm	A1-H53XX-140-000		*	/ /	* / /	
D-1.6	Bleeds & services 1st stage	A1-H53XX-140-000		*	/ /	* / /	
D-1.7	Bleeds & services 2nd stage	A1-H53XX-140-000		*	/ /	* / /	
D-2	AFCS servo system						
D-2.1	R&R pitch AFCS servo	A1-H53XX-140-000		*	/ /	* / /	
D-2.2	R&R collective AFCS servo	A1-H53XX-140-000		*	/ /	* / /	
D-2.3	R&R roll AFCS servo	A1-H53XX-140-000		*	/ /	* / /	
D-2.4	R&R yaw AFCS servo	A1-H53XX-140-000		*	/ /	* / /	
D-2.5	R&R AFCS (MOOG) servo valve	A1-H53XX-140-000		*	/ /	* / /	
D-2.6	R&R AFCS stick trim valve	A1-H53XX-140-000		*	/ /	* / /	
D-2.7	R&R stick trim shut off valve	A1-H53XX-140-000		*	/ /	* / /	
D-2.8	Performs AFCS servo valve test	A1-H53XX-140-000		*	* / /	* / /	
D-2.9	Performs AFCS force check	A1-H53XX-140-000		*	* / /	* / /	
D-2.10	Adjust collective friction block	A1-H53XX-140-000		*	/ /	* / /	
D-2.11	adjust open loop spring	A1-H53XX-140-000		*	* / /	* / /	
D-3	Tail rotor servo system						
D-3.1	R&R tail rotor servo cylinder	A1-H53XX-140-000		*	/ /	* / /	

DA B.4 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	R&R tail rotor servo linkage assy	A1-H53XX-140-000		*	/ /	* / /	
D-3.3	R&R pitch change shaft fm T/R servo	A1-H53XX-140-000		*	/ /	* / /	
D-3.4	Adjust tail rotor linkage (timing)	A1-H53XX-140-000		*	/ /	* / /	

B.5 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **utility hydraulic system and subsystems** using appropriate maintenance procedures and support/test equipment. (H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Utility hydraulic system	A1-H53XX-POM-100		*	* / /	* / /	
A-2	Cargo winch system	A1-H53XX-POM-100		*	* / /	* / /	
A-3	Over head door & ramp system	A1-H53XX-POM-100		*	* / /	* / /	
A-4	Engine starter system	A1-H53XX-POM-100		*	* / /	* / /	
A-5	APP start system	A1-H53XX-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Utility hydraulic system	A1-H53XX-450-000		*			
B-2	Cargo winch system	A1-H53XX-110-000		*	* / /	* / /	
B-3	Overhead ramp & door system	A1-H53XX-110-000		*	* / /	* / /	
B-4	Engine start system	A1-H53XX-220-000		*	* / /	* / /	
B-5	APP start system	A1-H53XX-220-000		*	* / /	* / /	
C	Fault isolation						
C-1	Utility hydraulic system	A1-H53XX-TTM-100		*	* / /	* / /	
C-2	Cargo winch system	A1-H53XX-TTM-100			* / /	* / /	
C-3	Overhead ramp & door system	A1-H53XX-TTM-100		*	* / /	* / /	
C-4	Engine start system	A1-H53XX-TTM-110		*	* / /	* / /	
C-5	APP start system	A1-H53XX-TTM-110		*	* / /	* / /	
D	Organizational maintenance						
D-1	Utility hydraulic	A1-H53XX-450-000					
D-1.1	R&R utility hydraulic reservoir	A1-H53XX-450-000		*	/ /	* / /	
D-1.2	R&R utility hydraulic pump	A1-H53XX-450-000		*	/ /	* / /	
D-1.3	R&R utility hydraulic manifold	A1-H53XX-450-000		*	/ /	* / /	
D-1.4	R&R utility manifold emergency override cable	A1-H53XX-450-000		*	/ /	* / /	
D-1.5	R&R heat exchanger	A1-H53XX-110-000		*	/ /	* / /	
D-1.6	Bleeds & services utility system	A1-H53XX-450-000		*	/ /	* / /	
D-2	Cargo winch/engine						
D-2.1	R&R winch/engine start pump	A1-H53XX-110-000		*	/ /	* / /	
D-2.2	R&R winch/engine manifold	A1-H53XX-110-000		*	/ /	* / /	
D-2.3	R&R flow divider valve	A1-H53XX-110-000		*	/ /	* / /	
D-2.4	R&R winch shut off valve	A1-H53XX-450-000		*	/ /	* / /	
D-2.5	R&R winch/engine pump shut off valve	A1-H53XX-110-000			/ /	/ /	
D-3	Overhead ramp & door						
D-3	R&R ramp actuating cylinders	A1-H53XX-110-000		*	/ /	* / /	
D-3.2	R&R overhead door actuating cylinder	A1-H53XX-110-000		*	/ /	* / /	

DA B.5 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
D-3.3	R&R ramp up locks	A1-H53XX-110-000		*	/ /	* / /	
D-3.4	R&R ramp & door control valve	A1-H53XX-110-000			/ /	/ /	
D-3.5	R&R ramp door manual control valve				/ /	/ /	
D-4	Engine starter						
D-4.1	R&R engine starter	A1-H53XX-220-000		*	/ /	* / /	
D-4.2	Adjust eng motor drop out switch	A1-H53XX-220-000		*	/ /	* / /	
D-4.3	R&R dual start valve	A1-H53XX-220-000		*	/ /	* / /	
D-4.4	R&R engine starter dropout switch	A1-H53XX-220-000			/ /	* / /	
D-5	APP start system						
D-5.1	R&R APP accumulator	A1-H53XX-220-000		*	/ /	* / /	
D-5.2	R&R APP start motor	A1-H53XX-220-000		*	/ /	* / /	
D-5.3	R&R APP start valve	A1-H53XX-220-000		*	/ /	* / /	
D-5.4	R&R APP cold weather start valve	A1-H53XX-220-000			/ /	/ /	
D-5.5	Services APP accumulator	A1-H53XX-220-000		*	/ /	* / /	

B.6 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **landing gear system** using appropriate maintenance procedures and support/test equipment. (H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Landing gear system	A1-H53XX-POM-100		*	* / /	* / /	
A-2	Emergency extension system	A1-H53XX-POM-100		*	* / /	* / /	
A-3	Wheel brake system	A1-H53XX-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Landing gear system	A1-H53XX-130-000		*	* / /	* / /	
B-2	Emergency extension system	A1-H53XX-130-000		*	* / /	* / /	
B-3	Wheel brake system	A1-H53XX-130-000		*	* / /	* / /	
C	Fault isolation						
C-1	Landing gear system	A1-H53XX-TTM-100		*	* / /	* / /	
C-2	Emergency extension system	A1-H53XX-TTM-100		*	* / /	* / /	
C-3	Wheel brake system	A1-H53XX-TTM-100		*	* / /	* / /	
D	Organizational maintenance						
D-1	Landing gear						
D-1.1	Services MLG strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.2	R&R main wheel	A1-H53XX-130-000			/ /	* / /	
D-1.3	Services main wheel	A1-H53XX-130-000			/ /	* / /	
D-1.4	R&R MLG shock strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.5	Repacks MLG shock strut	A1-H53XX-130-000			/ /	/ /	
D-1.6	R&R MLG drag strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.7	Services NLG strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.8	R&R nose wheel	A1-H53XX-130-000			/ /	* / /	
D-1.9	Services nose wheel	A1-H53XX-130-000			/ /	* / /	
D-1.10	R&R NLG shock strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.11	Repacks NLG shock strut	A1-H53XX-130-000			/ /	/ /	

DA B.6 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
D-1.12	R&R NLG drag strut	A1-H53XX-130-000		*	/ /	* / /	
D-1.13	R&R co-rotating nose wheel viscous damper	A1-H53XX-130-000		*	/ /	* / /	
D-1.14	R&R tail skid	A1-H53XX-130-000		*	/ /	/ /	
D-1.15	R&R tail skid	A1-H53XX-130-000		*	/ /	* / /	
D-2	Emergency extension system						
D-2.1	R&R emergency release cable assy	A1-H53XX-130-000			/ /	/ /	
D-2.2	R&R emergency blow down bottle/3-way valve	A1-H53XX-130-000		*	/ /	/ /	
D-2.3	Services emergency blow down bottle	A1-H53XX-130-000		*	/ /	/ /	
D-3	Wheel brake system						
D-3.1	R&R parking brake handle and rod	A1-H53XX-130-000			/ /	/ /	
D-3.2	R&R master brake cylinder	A1-H53XX-130-000		*	/ /	/ /	
D-3.3	R&R parking brake valve	A1-H53XX-130-000		*	/ /	/ /	
D-3.4	R&R wheel brake assembly	A1-H53XX-130-000		*	/ /	/ /	

B.7 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **blade/pylon and main rotor head hydraulic equipment systems**, using appropriate maintenance procedures and support/test equipment. (H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Blade/pylon fold system	A1-H53XX-POM-100		*	* / /	* / /	
A-2	Rotor brake system	A1-H53XX-POM-100		*	* / /	* / /	
A-3	Damper system	A1-H53XX-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Blade/pylon fold system	A1-H53XX-150-000		*	/ /	* / /	
B-2	Rotor brake system	A1-H53XX-260-000		*	/ /	* / /	
B-3	Damper system	A1-H53XX-150-000		*	/ /	* / /	
C	Fault isolation						
C-1	Blade/pylon fold	A1-H53XX-TTM-120		*	* / /	* / /	
C-2	Rotor brake system	A1-H53XX-TTM-120		*	* / /	* / /	
C-3	Damper system	A1-H53XX-TTM-120		*	/ /	* / /	
D	Organizational maintenance						
D-1	Blade/pylon fold	A1-H53XX-150-000					
D-1.1	Performs blade fold operation	A1-H53XX-150-000		*	* / /	* / /	
D-1.2	Perform blade fold operation (ERH)	A1-H53XX-150-000		*	* / /	* / /	
D-1.3	R&R Pitch Lock Valve (ERH)	A1-H53XX-150-000			/ /	/ /	
D-1.4	R&R Pitch Lock Assy (ERH)	A1-H53XX-140-000			/ /	/ /	
D-1.5	R&R positioner assembly	A1-H53XX-150-000		*	/ /	/ /	
D-1.6	R&R hydraulic motor	A1-H53XX-150-000		*	/ /	/ /	
D-1.7	R&R blade fold valve	A1-H53XX-150-000		*	/ /	/ /	
D-1.8	R&R safety valve	A1-H53XX-150-000		*	/ /	* / /	
D-1.9	R&R rotary coupling	A1-H53XX-150-000		*	/ /	* / /	
D-1.10	R&R blade lock pins	A1-H53XX-150-000		*	/ /	* / /	
D-1.11	R&R reversing valve	A1-H53XX-150-000		*	/ /	/ /	
D-1.12	R&R manifold assembly	A1-H53XX-150-000		*	/ /	* / /	

DA B.7 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
D-1.13	R&R positioning valve	A1-H53XX-150-000		*	/ /	/ /	
D-1.14	R&R pylon fold valve	A1-H53XX-110-000		*	/ /	/ /	
D-1.15	R&R pylon/APP selector valve	A1-H53XX-110-000		*	/ /	/ /	
D-1.16	R&R Whittaker valve (ERH)	A1-H53XX-140-000			/ /	/ /	
D-1.17	R&R pylon fold actuator	A1-H53XX-110-000		*	/ /	/ /	
D-1.18	R&R pin puller assembly	A1-H53XX-110-000		*	/ /	/ /	
D-1.19	R&R hand pump	A1-H53XX-110-000		*	/ /	* / /	
D-2	Rotor brake system	A1-H53XX-260-000					
D-2.1	R&R rotor brake assy and disk	A1-H53XX-260-000		*	/ /	* / /	
D-2.2	R&R rotor brake manifold	A1-H53XX-260-000		*	/ /	* / /	
D-2.3	Services rotor brake manifold	A1-H53XX-260-000		*	/ /	* / /	
D-2.4	R&R rotor brake manual release cable	A1-H53XX-260-000			/ /	/ /	
D-3	Damper system						
D-3.1	R&R accumulator	A1-H53XX-150-000		*	/ /	* / /	
D-3.2	Services damper system	A1-H53XX-150-000		*	/ /	* / /	
D-3.3	Sleeve and spindle assy build-up	A1-H53XX-150-000			/ /	* / /	
D-3.4	Sleeve and spindle assy build-up	A1-H53XX-150-000			/ /	* / /	
D-3.5	Checks spar pressure	A1-H53XX-150-000			/ /	* / /	
D-3.6	R&R BIM Indicator	A1-H53XX-150-000			/ /	* / /	
D-3.7	R&R IBIS indicator	A1-H53XX-150-000			/ /	* / /	
D-3.8	Tests IBIS indicator	A1-H53XX-150-000			/ /	* / /	

B.8 Performs applicable organizational level maintenance actions common to all **hydraulic systems**, using the appropriate maintenance procedures and support/test equipment

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Hydraulic sampling						
A-1	Performs sampling of servicing equipment	NA01-1A-17			* / /	* / /	
A-2	Performs sampling of A/C systems	NA01-1A-17 A1-H53XX-450-000			/ /	* / /	
A-3	Performs flushing of A/C systems	NA01-1A-17			/ /	* / /	
B	Filters						
B-1	Performs filter check of 1st/2nd stage/utility	NA01-1A-17			/ /	* / /	
C	Common maintenance actions						
C-1	R&R pressure reducers	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	
C-2	R&R 3-way valves	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	
C-3	R&R pressure switches	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	
C-4	R&R check valves/restrictors/ snubbers	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	

DA B.8 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
C-5	R&R tube and hose assembly	NA01-1A-20			/ /	* / /	
C-6	R&R sequence valves	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	
C-7	Adjust sequence valves	A1-H53XX-140-000 A1-H53XX-450-000			/ /	* / /	
C-8	R&R four-way valve	A1-H53XX-150-000			/ /	* / /	
C-9	R&R fittings and jam nuts	NA-01-1A-20			/ /	* / /	
C-10	R&R QD's	NA-01-1A-20			/ /	* / /	

B.9 Performs **required scheduled/unscheduled inspections** on applicable systems/components as per Maintenance Requirement Cards. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Periodic Maintenance Information Cards	A1-H53CE-MRC-000		*	* / /	* / /	
B	Turnaround Checklist Requirement Card	A1-H53CE-MRC-100		*	/ /	/ /	
C	Daily/Servicing/Special/ Preservation /Conditional Requirement Cards	A1-H53CE-MRC-300		*	* / /	* / /	
D	Performs phase maintenance Insp	A1-H53CE-MRC-400			/ /	* / /	
E	6 month/blow down bottle	A1-H53CE-MRC-300			/ /	* / /	
F	Performs 6-month/200-hour inspection	A1-H53CE-MRC-300			/ /	* / /	
G	Performs acceptance/transfer inspections	OPNAVINST 4790.2		*	/ /	* / /	
H	Perform 25 Hr inspection	A1-H53CE-MRC-300			/ /	* / /	
I	Perform 50 Hr inspection	A1-H53CE-MRC-300			/ /	* / /	
J	Performs major structural inspection on hard landing, overstress, etc.	OPNAVINST 4790.2_ A1-H53CE-GAI-000 A1-H53CE-130-000 A1-H53CE-400-000 A1-H53CE-SRM-100			/ /	* / /	
K	Performs inspection of critical structures & linkage items	A1-H53CE-GAI-000 A1-H53CE-130-000 A1-H53CE-400-000 A1-H53CE-SRM-100			/ /	* / /	

B.10 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **servo systems** using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Main rotor servo	A1-H53CE-POM-100		*	* / /	* / /	
A-2	Servo control & indicator system	A1-H53CE-POM-100		*	* / /	* / /	
A-3	Tail rotor servo	A1-H53CE-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Main rotor servo	A1-H53CE-450-000		*	* / /	* / /	
B-2	Servo control & indicator system	A1-H53CE-450-000		*	* / /	* / /	

DA B.10 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B-3	Tail rotor servo	A1-H53CE-450-000		*	* / /	* / /	
C	Fault isolation						
C-1	Main rotor servo	A1-H53CE-TTM-100		*	/ /	* / /	
C-2	Servo control & indicator system	A1-H53CE-TTM-100		*	/ /	* / /	
C-3	Tail rotor servo	A1-H53CE-TTM-100		*	/ /	* / /	
D	Organizational maintenance						
D-1	R&R main rotor servo	A1-H53CE-450-000		*	/ /	* / /	
D-2	Tail rotor servo				* / /	/ /	
D-2.1	R&R tail rotor servo	A1-H53CE-450-000		*	/ /	* / /	
D-2.2	R&R tail rotor servo manifold	A1-H53CE-450-000		*	/ /	* / /	
D-2.3	R&R tail rotor servo & manifold quick disconnects	A1-H53CE-450-000		*	/ /	/ /	
D-2.4	R&R tail rotor servo valve	A1-H53CE-450-000		*	/ /	/ /	

B.11 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **landing gear system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Landing gear system	A1-H53CE-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Jacks & cycles landing gear	A1-H53CE-GAI-000			* / /	* / /	
C	Fault isolation						
C-1	Landing gear system	A1-H53CE-TTM-100		*	/ /	* / /	
D	Organizational maintenance						
D-1	R&R main wheel	A1-H53CE-130-000		*	/ /	* / /	
D-2	R&R nose wheel	A1-H53CE-130-000		*	/ /	* / /	
D-3	R&R co-rotating shimmy damper	A1-H53CE-130-000		*	/ /	* / /	
D-4	R&R torque shaft	A1-H53CE-130-000			/ /	* / /	
D-5	R&R drag strut	A1-H53CE-130-000			/ /	/ /	
D-6	R&R nose strut	A1-H53CE-130-000			/ /	/ /	
D-7	R&R main strut	A1-H53CE-130-000			/ /	/ /	
D-8	R&R landing gear up control valve	A1-H53CE-450-000		*	/ /	* / /	
D-9	R&R landing gear down control valve	A1-H53CE-450-000			/ /	/ /	
D-10	R&R blow down bottle	A1-H53CE-130-000		*	/ /	* / /	
D-11	Repack lower internal seals MLG	A1-H53CE-130-000			/ /	/ /	
D-12	Repack lower internal seals NLG	A1-H53CE-130-000		*	/ /	/ /	

B.12 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **first stage hydraulic system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	First stage hydraulic system	A1-H53CE-POM-100			* / /	* / /	

DA B.12 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B	Functional check						
B-1	First stage hydraulic system	A1-H53CE-TTM-100		*	* / /	* / /	
C	Fault isolation						
C-1	First stage hydraulic system	A1-H53CE-TTM-100			/ /	* / /	
D	Organizational maintenance						
D-1	R&R 1st stage pump	A1-H53CE-450-000		*	/ /	* / /	
D-2	R&R 1st stage reservoir	A1-H53CE-450-000		*	/ /	* / /	
D-3	R&R 1st stage pressure & return manifolds	A1-H53CE-450-000		*	/ /	* / /	
D-4	R&R 1st stage pressure transmitter	A1-H53CE-450-000			/ /	/ /	
D-5	R&R 1st stage heat exchanger	A1-H53CE-450-000			/ /	/ /	
D-6	R&R 1st stage pressure & return filters	A1-H53CE-450-000		*	/ /	* / /	
D-7	R&R 1st stage accumulator	A1-H53CE-450-000		*	/ /	* / /	
D-8	R&R 1st stage accumulator air gage	A1-H53CE-450-000			/ /	/ /	
D-9	R&R 1st stage check relief valve	A1-H53CE-450-000			/ /	/ /	
D-10	R&R 1st stage pump quick disconnects	A1-H53CE-450-000			/ /	* / /	
D-11	R&R first stage isolation valve	A1-H53CE-450-000			/ /	* / /	
D-12	R&R 1st stage hydraulic lines	A1-H53CE-450-000			/ /	/ /	
D-13	R&R servicing panel QD's	A1-H53CE-450-000			/ /	/ /	

B.13 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **second stage hydraulic system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Second stage hydraulic system	A1-H53CE-POM-100			* / /	* / /	
B	Functional check						
B-1	Second stage hydraulic system	A1-H53CE-TTM-100		*	* / /	* / /	
C	Fault isolation						
C-1	Second stage hydraulic system	A1-H53CE-TTM-100		*	/ /	* / /	
D	Organizational maintenance						
D-1	R&R 2nd stage pump	A1-H53CE-450-000		*	/ /	* / /	
D-2	R&R 2nd stage reservoir	A1-H53CE-450-000		*	/ /	* / /	
D-3	R&R 2nd stage pressure transmitter	A1-H53CE-450-000		*	/ /	/ /	
D-4	R&R 2nd stage pressure transmitter	A1-H53CE-450-000			/ /	/ /	
D-5	R&R 2nd stage heat exchanger	A1-H53CE-450-000			/ /	* / /	
D-6	R&R 2nd stage accumulator	A1-H53CE-450-000		*	/ /	* / /	
D-7	R&R 2nd stage accumulator air gage	A1-H53CE-450-000		*	/ /	/ /	
D-8	R&R 2nd stage check relief valve	A1-H53CE-450-000			/ /	/ /	
D-9	R&R 2nd stage pump quick disconnects	A1-H53CE-450-000			/ /	* / /	
D-10	R&R 2nd stage pressure & return filters	A1-H53CE-450-000		*	/ /	* / /	
D-11	R&R 2nd stage isolation valve	A1-H53CE-450-000			/ /	* / /	
D-12	R&R 2nd stage pressure reducer	A1-H53CE-450-000			/ /	/ /	
D-13	R&R 2nd stage hydraulic lines	A1-H53CE-450-000			/ /	* / /	
D-14	R&R servicing panel QD's	A1-H53CE-450-000			/ /	/ /	

B.14 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the utility system, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Utility system	A1-H53CE-POM-100		*	* / /	* / /	
A-2	Blade fold system	A1-H53CE-POM-100		*	* / /	* / /	
A-3	Pylon fold system	A1-H53CE-POM-100		*	* / /	* / /	
A-4	Ramp & door system	A1-H53CE-POM-100		*	* / /	* / /	
A-5	Wheel brake system	A1-H53CE-POM-100		*	* / /	* / /	
A-6	Engine start system	A1-H53CE-POM-100		*	* / /	* / /	
A-7	APP start system	A1-H53CE-POM-100		*	* / /	* / /	
A-8	Utility hoist system	A1-H53CE-POM-100		*	* / /	* / /	
A-9	Cargo winch system	A1-H53CE-POM-200		*	* / /	* / /	
B	Functional check	A1-H53CE-TTM-100					
B-1	Utility system	A1-H53CE-TTM-100		*	* / /	* / /	
B-2	Cargo winch system	A1-H53CE-TTM-100		*	* / /	* / /	
B-3	Pylon fold system	A1-H53CE-TTM-100		*	* / /	* / /	
B-4	Ramp & door system	A1-H53CE-TTM-100		*	* / /	* / /	
B-5	Wheel brake system	A1-H53CE-TTM-100		*	* / /	* / /	
B-6	Engine start system	A1-H53CE-TTM-100		*	* / /	* / /	
B-7	APP start system	A1-H53CE-TTM-100		*	* / /	* / /	
B-8	Utility hoist system	A1-H53CE-TTM-100		*	* / /	* / /	
B-9	Cargo winch system	A1-H53CE-TTM-200		*	* / /	* / /	
C	Fault isolation						
C-1	Utility system	A1-H53CE-TTM-100		*	* / /	* / /	
C-2	Blade fold system	A1-H53CE-TTM-100		*	* / /	* / /	
C-3	Pylon fold system	A1-H53CE-TTM-100		*	* / /	* / /	
C-4	Ramp & door system	A1-H53CE-TTM-100		*	* / /	* / /	
C-5	Wheel brake system	A1-H53CE-TTM-100		*	* / /	* / /	
C-6	Engine start system	A1-H53CE-TTM-100		*	* / /	* / /	
C-7	APP start system	A1-H53CE-TTM-100		*	* / /	* / /	
C-8	Utility hoist system	A1-H53CE-TTM-100		*	* / /	* / /	
C-9	Cargo winch system	A1-H53CE-TTM-200		*	* / /	* / /	
D	Organizational maintenance				/ /	/ /	
D-1	Utility system	A1-H53CE-450-000			* / /	/ /	
D-1.1	R&R utility pump	A1-H53CE-450-000		*	/ /	* / /	
D-1.2	R&R utility reservoir	A1-H53CE-450-000			/ /	* / /	
D-1.3	R&R heat exchanger	A1-H53CE-450-000			/ /	* / /	
D-1.4	R&R utility module	A1-H53CE-450-000			/ /	/ /	
D-1.5	R&R pressure & return filters	A1-H53CE-450-000		*	/ /	* / /	
D-1.6	R&R pressure transmitter	A1-H53CE-450-000			/ /	/ /	
D-2	Blade fold system						
D-2.1	R&R blade lock pin	A1-H53CE-150-000		*	/ /	* / /	
D-2.2	R&R blade fold valve	A1-H53CE-150-000			/ /	* / /	
D-2.3	R&R blade fold lines	A1-H53CE-150-000			/ /	* / /	
D-2.4	R&R safety valve	A1-H53CE-150-000		*	/ /	/ /	
D-2.5	R&R pitch lock	A1-H53CE-150-000		*	/ /	* / /	

DA B.14 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
D-2.6	R&R positioning/reversing valve	A1-H53CE-150-000		*	/ /	/ /	
D-2.7	R&R rotary coupling	A1-H53CE-150-000			/ /	* / /	
D-2.8	R&R sleeve & spindle build-up	A1-H53CE-150-000			/ /	* / /	
D-3	Pylon system						
D-3.1	R&R pylon fold selector valve	A1-H53CE-110-000		*	/ /	/ /	
D-3.2	R&R pylon lock pin	A1-H53CE-110-000		*	/ /	* / /	
D-3.3	R&R pylon control valve	A1-H53CE-110-000		*	/ /	/ /	
D-3.4	R&R pylon sequence valve	A1-H53CE-110-000			/ /	/ /	
D-3.5	R&R hand pump	A1-H53CE-110-000			/ /	/ /	
D-4	Ramp system						
D-4.1	R&R ramp sequence valve	A1-H53CE-110-000		*	/ /	* / /	
D-4.2	R&R ramp up-lock	A1-H53CE-110-000			/ /	/ /	
D-4.3	R&R ramp & door selector valve	A1-H53CE-110-000			/ /	/ /	
D-4.4	R&R ramp check relief valve	A1-H53CE-110-000			/ /	/ /	
D-4.5	R&R ramp up-lock pressure lines	A1-H53CE-110-000			/ /	/ /	
D-4.6	R&R ramp actuator	A1-H53CE-110-000			/ /	/ /	
D-5	Wheel brake system						
D-5.1	R&R wheel brake	A1-H53CE-110-000		*	/ /	* / /	
D-5.2	R&R parking brake valve	A1-H53CE-110-000		*	/ /	* / /	
D-5.3	R&R parking brake valve "T" handle cable	A1-H53CE-110-000			/ /	* / /	
D-5.4	R&R master wheel brake cylinder	A1-H53CE-130-000			/ /	* / /	
D-6	Engine system						
D-6.1	R&R start pump	A1-H53CE-450-000		*	/ /	* / /	
D-6.2	R&R start valves	A1-H53CE-220-000		*	/ /	* / /	
D-6.3	R&R start manifolds	A1-H53CE-450-000		*	/ /	* / /	
D-6.4	R&R start motors	A1-H53CE-220-000		*	/ /	* / /	
D-6.5	R&R start pressure & return bulkhead quick disconnects (QD's)	A1-H53CE-450-000			/ /	/ /	
D-6.6	R&R start manifold filters	A1-H53CE-450-000			/ /	* / /	
D-7	APP system						
D-7.1	R&R start manifold	A1-H53CE-220-000			/ /	/ /	
D-7.2	R&R accumulator	A1-H53CE-220-000		*	/ /	* / /	
D-7.3	R&R manual selector valve	A1-H53CE-110-000			/ /	/ /	
D-7.4	R&R accumulator pressure gauge	A1-H53CE-450-000			/ /	/ /	
D-7.5	R&R start motor	A1-H53CE-120-000			/ /	* / /	
D-8	R&R utility hoist motor	A1-H53CE-110-000			/ /	/ /	
D-9	R&R cargo winch motor	A1-H53CE-110-000			/ /	/ /	
D-10	R&R servicing panel QD's	A1-H53CE-450-000			/ /	/ /	

B.15 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **rotor brake system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						

DA B.15 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A-1	Rotor brake system	A1-H53CE-POM-100		*	* / /	* / /	
B	Functional check						
B-1	Rotor brake system	A1-H53CE-TTM-100		*	* / /	* / /	
C	Fault isolation						
C-1	Rotor brake system	A1-H53CE-TTM-100		*	* / /	* / /	
D	Organizational maintenance						
D-1	R&R rotor brake	A1-H53CE-260-000		*	/ /	* / /	
D-2	R&R rotor brake manifold	A1-H53CE-260-000		*	* / /	* / /	

B.16 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **In-flight Blade Inspection System (IBIS)**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	In-flight blade inspection system	A1-H53CE-POM-100			/ /	* / /	
B	Functional check						
B-1	In-flight blade inspection system	A1-H53CE-TTM-100			/ /	* / /	
C	Fault isolation						
C-1	In-flight blade inspection system	A1-H53CE-TTM-100			/ /	* / /	
D	Organizational maintenance						
D-1	R&R in-flight blade inspection indicator	A1-H53CE-150-100			/ /	* / /	

B.17 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **Automatic Flight Control System (AFCS)**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Collective AFCS servo	A1-H53CE-POM-100		*	* / /	* / /	
A-2	Roll AFCS servo	A1-H53CE-POM-100		*	* / /	* / /	
A-3	Yaw AFCS servo	A1-H53CE-POM-100		*	* / /	* / /	
A-4	Function check	A1-H53CE-POM-100		*	* / /	* / /	
B	Function check						
B-1	Pitch AFCS servo	A1-H53CE-450-000		*	* / /	* / /	
B-2	Collective AFCS servo	A1-H53CE-450-000		*	* / /	* / /	
B-3	Roll AFCS servo	A1-H53CE-450-000		*	* / /	* / /	
B-4	Yaw AFCS servo	A1-H53CE-450-000		*	* / /	* / /	
B-5	Performs servo engagement check	A1-H53CE-TTM-200		*	* / /	* / /	
B-6	Performs servo centering adjustment, (stick jump check)	A1-H53CE-TTM-200		*	/ /	* / /	
C	Fault isolation						
C-1	Pitch AFCS servo	A1-H53CE-TTM-100					
C-1.1	FAS actuator	A1-H53CE-TTM-100		*	* / /	* / /	
C-1.2	FAS rod	A1-H53CE-TTM-100			/ /	* / /	

DA B.17 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
C-2	Collective AFCS servo	A1-H53CE-TTM-100			/ /	* / /	
C-3	Roll AFCS servo	A1-H53CE-TTM-100					
C-3.1	Roll damper	A1-H53CE-TTM-100			/ /	* / /	
C-4	Yaw AFCS servo				/ /	* / /	
D	Organizational maintenance						
D-1	R&R pitch AFCS servo	A1-H53CE-450-000		*	/ /	* / /	
D-2	R&R roll AFCS servo	A1-H53CE-450-000			/ /	* / /	
D-3	R&R yaw AFCS servo	A1-H53CE-450-000			/ /	* / /	
D-4	R&R collective AFCS servo	A1-H53CE-450-000			/ /	* / /	
D-5	R&R FAS rod	A1-H53CE-450-000			/ /	* / /	
D-6	R&R FAS actuator	A1-H53CE-450-000		*	/ /	* / /	
D-7	R&R dual input valve	A1-H53CE-450-000		*	/ /	* / /	
D-8	R&R roll damper	A1-H53CE-450-000			/ /	* / /	
D-9	R&R AFCS turn on valve	A1-H53CE-450-000			/ /	* / /	

B.18 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **trim system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Trim system	A1-H53CE-POM-200		*	* / /	* / /	
B	Functional check						
B-1	Trim system	A1-H53CE-TTM-200		*	* / /	* / /	
C	Fault isolation						
C-1	Trim system	A1-H53CE-TTM-200		*	* / /	* / /	
D	Organizational maintenance						
D-1	R&R trim valve	A1-H53CE-450-000		*	/ /	* / /	
D-2	R&R trim shutoff valve	A1-H53CE-450-000		*	/ /	* / /	

B.19 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **main rotor damper system**, using appropriate maintenance procedures and support/test equipment. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Main rotor damper system	A1-H53CE-POM-200		*	* / /	* / /	
B	Functional check						
B-1	Main rotor damper system	A1-H53CE-150-000			* / /	* / /	
C	Fault isolation						
C-1	Main rotor damper system	A1-H53CE-TTM-100			* / /	* / /	
D	Organizational maintenance						
D-1	R&R main rotor damper	A1-H53CE-150-000		*	/ /	* / /	
D-2	R&R damper accumulator	A1-H53CE-150-000		*	/ /	* / /	
D-3	R&R damper accumulator air gauge	A1-H53CE-150-000			/ /	/ /	
D-4	R&R damper accumulator QD's	A1-H53CE-150-000			/ /	* / /	

B.20 Performs **hydraulic fluid sampling**, per helicopter requirements. (H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Performs hydraulic fluid sampling per helicopter requirements	A1-H53CE-450-000 NA01-1A-17		*	* / /	* / /	

D.21 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance of **composite repair**, using appropriate maintenance procedures and support/test equipment. (Asterisk (*) references are H-53E)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Theory of operation						
A-1	Composite repair structures/ structural components	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
B	Organizational maintenance	*A1-H53XX-SRM-100 A1-H53CE-SRM-000					
B-1	Repairs hole	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
B-2	Repairs corner & tab	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-3	Repairs honeycomb damage	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-4	Repairs sandwich panel	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-5	Repairs Kevlar covered structure	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-6	Acoustic coin tap	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-7	Repairs delamination damage	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-8	Vacuum bag procedures	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B-9	Vacuum bag repair	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	

B.22 Performs **organizational level maintenance** on applicable systems including the removal, installation, adjustment and alignment of the system and the repair or replacement of associated components. (Asterisk (*) references H-53D)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Repair of helicopter metal structures/structural components	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
B	Helicopter riveting						
B-1	Performs cherry max riveting, removal & installation	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
B-2	Performs solid riveting, removal & installation	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	

DA B.22 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
B-3	R&R special fasteners	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
C	Fold dog house						
C-1	R&R fold dog house	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
C-2	Repairs fold dog house	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
D	Sliding dog house						
D-1	R&R sliding dog house	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
D-2	Repairs sliding dog house	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
E	Engine cowling						
E-1	R&R engine cowling	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			* / /	* / /	
E-2	Repairs engine cowling	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
E-3	Cam-lock retaining bracket	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
F	Main rotor blades						
F-1	Repairs main rotor blades 53A/D	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
F-2	Repairs main rotor blades 53E	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
G	Repairs upper ramp door & up-locks	*A1-H53XX-SRM-100 *A1-H53XX-110-000 A1-H53CE-110-000 A1-H53CE-SRM-000			/ /	* / /	
H	Repairs oil cooler access panel	*A1-H53XX-SRM-100 *A1-H53XX-110-000 A1-H53CE-110-000 A1-H53CE-SRM-000			/ /	* / /	
I	Repairs lower personnel door	*A1-H53XX-SRM-100 *A1-H53XX-110-000 A1-H53CE-110-000 A1-H53CE-SRM-000			/ /	/ /	
J	Repairs avionics compartment doors	*A1-H53XX-SRM-100 *A1-H53XX-110-000 A1-H53CE-150-400 A1-H53CE-SRM-000			/ /	/ /	
K	Repairs batwing	*A1-H53XX-SRM-100 *A1-H53XX-460-000 A1-H53CE-460-000 A1-H53CE-SRM-000			/ /	* / /	

DA B.22 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
L	Repairs nose gear box cowling & camlock retaining bracket	*A1-H53XX-SRM-100 *A1-H53XX-220-000 A1-H53CE-220-000 A1-H53CE-SRM-000			/ /	/ /	
M	R&R "D" rings & brackets	*A1-H53XX-220-000 A1-H53CE-220-400			/ /	* / /	
N	Repairs #1 & #3 engine tail pipes (cracks)	*A1-H53XX-220-000 A1-H53CE-220-400			/ /	* / /	
O	Windows, windshield & chin bubbles						
O-1	R&R cabin windows	*A1-H53XX-110-000 A1-H53CE-110-000			* / /	* / /	
O-2	R&R cockpit windshield & chin bubbles	*A1-H53XX-110-000 A1-H53CE-110-000			/ /	* / /	
O-3	R&R cockpit escape windows	*A1-H53XX-110-000 A1-H53CE-110-000			* / /	* / /	
P	Repairs ramp assembly	*A1-H53XX-SRM-100 A1-H53CE-110-000 A1-H53CE-SRM-000			/ /	* / /	
Q	Repairs cabin & ramp floor assembly	*A1-H53XX-SRM-100 A1-H53CE-110-000 A1-H53CE-SRM-000			/ /	* / /	
R	R&R EAPS assembly	A1-H53CE-220-000			/ /	* / /	
S	Nose landing gear door						
S-1	R&R nose landing gear door	A1-H53CE-110-000			/ /	* / /	
S-2	Adjusts nose landing gear door	A1-H53CE-110-000			/ /	* / /	
T	#2 engine						
T-1	Repairs work platform	A1-H53CE-SRM-000			/ /	* / /	
T-2	Repairs upper cowling	A1-H53CE-SRM-000			/ /	* / /	
U	Repair of firewall	A1-H53CE-SRM-000			/ /	/ /	
V	Tail rotor blade						
V-1	R&R of tip cap	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
V-2	Repair of leading edge	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
V-3	Repair of skin	*A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	

B.23 Demonstrates/applies knowledge of theory of operation and performs applicable organizational level maintenance on the **structural components**, using appropriate maintenance procedures and support/test equipment.

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A	Functional check						

DA B.23 (Continued)

TASK #	TASK DESCRIPTION	REFERENCE	WUC	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
A-1	Performs structures/structural component assessment for failure or damage repair assessment	A1-H53XX-GAI-000 A1-H53XX-110-000 A1-H53XX-SRM-100 A1-H53CE-SRM-000			/ /	* / /	
B	Organizational maintenance						
B-1	Ducting						
B-1.1	Repairs ducting	A1-H53XX-GAI-000 A1-H53XX-SRM-100 A1-H53CE-SRM-000 A1-H53XX-400-000			/ /	* / /	
B-1.2	Replaces ducting	A1-H53XX-GAI-000 A1-H53XX-400-000			/ /	* / /	

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:

_____

_____

_____

DATE: JANUARY 2002

APPENDIX C

WORK CENTER SUMMARY
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

WORK CENTER NAME/NUMBER_____

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

WORK CENTER SUMMARY
HELICOPTER HYDRAULIC/PNEUMATIC MECHANIC (MOS 6153)

WORK CENTER NAME/NUMBER_____

NAME/MOS	LEVEL	B.11	B.12	B.13	B.14	B.15	B.16	B.17	B.18	B.19	B.20	B.21	B.22	B.23
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													
	II						XXXX		XXXX			XXXX		
	III													
	IV													

APPENDIX D

SUPPORT EQUIPMENT LICENSING RECORD

SUPPORT EQUIPMENT NOMENCLATURE	REFERENCE	PHASE I	PHASE II	LICENSED	EXPIRATION