



USCGC RICHARD DIXON (WPC-1113)
SPECIFICATION FOR MAINTENANCE AND REPAIRS
FY2019

Developed By: James L Ward

(Rev 0, 7 June 2019)

TABLE OF CONTENTS

Revisions Record.....	iii
Consolidated List of References.....	iv
Consolidated List of Government-furnished Property	x
Consolidated List of Critical Inspection Items	xii
Principal Characteristics	xiii
General Requirements	1
WORK ITEM 1: Various Maintenance (AFC30), Perform	11
WORK ITEM 2: Various Maintenance (AFC45), Perform	22
WORK ITEM 3: Electrical System Maintenance (AFC30 ODMS), Perform	27
WORK ITEM 4: Electrical System Maintenance (AFC45 ODMS), Perform	33
WORK ITEM 5: Auxiliary Machinery Maintenance, Perform (AFC-30)	40
WORK ITEM 6: Auxiliary Machinery Maintenance, Perform (AFC-45)	50
WORK ITEM 7: MTU Systems Maintenance (AFC30 ODMS DS1/DS2), Perform	60
WORK ITEM 8: MTU Systems Maintenance (AFC45 ODMS DS1/DS2), Perform	64
WORK ITEM 9: Hull Plating, Inspect (DD1).....	69
WORK ITEM 10: Propulsion Shafting System, Inspect and Repair (DD1)	71
WORK ITEM 11: Rudder Assemblies, Inspect and Repair	78
WORK ITEM 12: Stabilizing Fins, Inspect and Repair	82
WORK ITEM 13: Bow Thruster Propeller and Tunnel, Inspect and Repair	86
WORK ITEM 14: Impressed Current Cathodic Protection (ICCP) and Anti-Fouling System, Inspect and Maintain	89
WORK ITEM 15: 6000 HR MDE Maintenance, Perform	94

REVISIONS RECORD

This page is used to record specification revisions, which may have occurred subsequent to a Revision 0 (Rev-0) package. Information listed is intended to provide contractors and field unit personnel a means to ensure all the current specification revision pages are present when reviewing or utilizing this specification package.

DATE	REV#	WORK ITEM#	CHANGES MADE

NOTE : All work item and paragraph numbers listed above for a given revision correspond to same numbers in the previous revision. This revised specification is self-contained with all of the above listed changes incorporated.

CONSOLIDATED LIST OF REFERENCES

The below-listed documents form a part of this specification to the extent specified herein. Approval/publication dates or revision dates/numbers are also identified, to ensure that same document versions are used at the time of specification writing and during contract execution.

All Coast guard drawings, technical publications, and standard specifications will be provided to contractors by the Coast Guard at an appropriate time, or upon request, free of charge. Other Government documents may be accessed – free of charge – from links located on the SFLC website. Commercial sites provide access to their respective documents.

COAST GUARD DRAWINGS

Coast Guard Drawing 154WPC 085-201 Rev -, Propulsion System, SSDG, EDG Installation Drawings
Coast Guard Drawing 154 WPC 111-301, Rev A, Shell Expansion
Coast Guard Drawing 154WPC 151-301 Rev B, Scantlings Superstructure
Coast Guard Drawing 154 WPC 161-301, Rev B, Skegs and Stern Tubes Support Structures
Coast Guard Drawing 154WPC 200-301 Rev -, Machinery Arrangement Drawings
Coast Guard Drawing 154 WPC 204-301, Rev E, Equipment Removal Plan
Coast Guard Drawing 154 WPC 243-201, Rev A, Main Propulsion Shafting A&D
Coast Guard Drawing 154 WPC 245-304, Rev -, Propeller Plans and Data Six Blade Propeller
Coast Guard Drawing 154-WPC-256-301, Rev D, Main and Auxiliary Cooling System Diagram
Coast Guard Drawing 154-WPC-261-201, Fuel Oil Service System Arrangement
Coast Guard Drawing 154 WPC 310-301, Rev A, Electrical One Line Diagram
Coast Guard Drawing 154-WPC-521-301, Firemain System and Magazine Sprinkler Diagram
Coast Guard Drawing 154-WPC-528-301, Grey Water System Diagram
Coast Guard Drawing 154-WPC-529-301, Bilge System Diagram
Coast Guard Drawing 154B WPC 533-201, Rev -, Potable Water System Arrangement
Coast Guard Drawing 154 WPC 533-301, Rev E, Potable Water System Diagram
Coast Guard Drawing 154-WPC-541-201, Fuel Oil Transfer System Arrangement
Coast Guard Drawing 154-WPC-541-260, Fuel Oil Transfer System A&D-Module 60
Coast Guard Drawing 154-WPC-541-301, Fuel Oil Service and Transfer System
Coast Guard Drawing 154 WPC 551-301, Rev B, Compressed Air System Diagram
Coast Guard Drawing 154 WPC 556-202, Rev C, Fin Stabilizer Hydraulic System A&D
Coast Guard Drawing 154 WPC 556-302, Rev -, Fin Stabilizer Hydraulic System Diagram
Coast Guard Drawing 154 WPC 561-202, Rev -, Steering Arrangement & Details
Coast Guard Drawing 154 WPC 562-201, Rev A, Rudder Details
Coast Guard Drawing 154 WPC 562-202, Rev A, Rudder Arrangement & Details
Coast Guard Drawing 154 WPC 565-201, Rev -, Fin Stabilizer System A&D
Coast Guard Drawing 154 WPC 565-301, Rev -, Fin Stabilizer Control System
Coast Guard Drawing 154 WPC 565-302, Rev B, Fin Stabilizer Control System COED
Coast Guard Drawing 154 WPC 568-201, Rev A, Bow Thruster System A&D

USCGC RICHARD DIXON DS/DD FY19 AC&I

Coast Guard Drawing 154B WPC 582-201, Mooring and Towing A&D
Coast Guard Drawing 154 WPC 583-201, Cutter Boat Handling, and Stowage A&D
Coast Guard Drawing 154B-WPC-593-201, Sewage System Arrangement
Coast Guard Drawing 154-WPC-593-202, Oily Bilge System Arrangement
Coast Guard Drawing 154-WPC-593-301, Sewage System Diagram
Coast Guard Drawing 154 WPC 601-302, Rev C, General Arrangement
Coast Guard Drawing 154 WPC 612-201, Lifelines, Life Rails and Stanchions A&D
Coast Guard Drawing 154B WPC 623-301, Ladder Arrangement
Coast Guard Drawing 154 WPC 633-301, Rev B, Cathodic Protection System
Coast Guard Drawing 154 WPC 634-301, Deck Coverings Schedule
Coast Guard Drawing 154 WPC 997-001, Rev -, Docking Plan

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2014, Overhaul AC Electrical Motors
Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Auxiliary Machine Systems
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures
Coast Guard Maintenance Procedure Card (MPC) B00022.0 INSPECT TOPSIDE/WEATHERDECK CORROSION
Coast Guard Maintenance Procedure Card (MPC) B11007.0 INSPECT DECK FITTINGS
Coast Guard Maintenance Procedure Card (MPC) B11010.0 INSPECT LADDERS & ASSOCIATED HANDRAIL
Coast Guard Maintenance Procedure Card (MPC) B60000.0 INSPECT WATERTIGHT AIRTIGHT CLOSURES
Coast Guard Maintenance Procedure Card (MPC) P00012.0 INSPECT STERN DOOR ZINCS
Coast Guard Maintenance Procedure Card (MPC) P20001.0 INSPECT NOTCH PROTECTION DEVICES
Coast Guard Maintenance Procedure Card (MPC) Q22010.0 INSPECT NON-SKID EXTERIOR
Coast Guard Maintenance Procedure Card (MPC) B11008.0 INSP/CLN HANDRAIL, LIFELINE, STANCHION
Coast Guard Maintenance Procedure Card (MPC) B11012.0 INSP/CLN GANGWAY
Coast Guard Maintenance Procedure Card (MPC) B60016.0 SERVICE PILOTHOUSE DOOR GASKETS
Coast Guard Maintenance Procedure Card (MPC) B61012.0 INSP/LUBE DOORS, HATCHES AND MANHOLES
Coast Guard Maintenance Procedure Card (MPC) B61013.0 INSP/LUBE DOORS, HATCHES, SCUTTLE(19-32)
Coast Guard Maintenance Procedure Card (MPC) B61031.0 INSP/LUBE WTR TIGHT DOOR (1101-1118)
Coast Guard Maintenance Procedure Card (MPC) P20019.D RHIB WINCH CABLE CONVERSION

USCGC RICHARD DIXON DS/DD FY19 AC&I

Coast Guard Maintenance Procedure Card (MPC) P24104.0 INSP/LUBE CHAFING CHAIN
Coast Guard Maintenance Procedure Card (MPC) P24108.0 INSP/LUBE HAWSER REELS
Coast Guard Maintenance Procedure Card (MPC) P27014.0 LUBE CAPSTANS
Coast Guard Maintenance Procedure Card (MPC) P27109.0 INSP/LUBE J-BAR DAVIT CABLE
Coast Guard Maintenance Procedure Card (MPC) Q30005.0 INSP/LUBE LOCKERS AND SPECIAL STORAGE
Coast Guard Maintenance Procedure Card (MPC) Q21502.0 SEAL HULL PRESERVATION (MONTHLY)
Coast Guard Technical Publication (TP)8004-593-A, Oily Water Separator Boss 107 Separator System-Model 2.2/107 YM
Coast Guard Technical Publication (TP) 8105-533-A, Preliminary - Watermaker/Brominator Reverse Osmosis Model - FRC-B 1600
Coast Guard Technical Publication (TP)8106-077-A, Eye/Face Wash and Body Spray Station
Coast Guard Technical Publication (TP)8110-533-A, Commercial Point of Use Tank Water Heater Model: EGSP15 Use and Care Manual
Coast Guard Technical Publication (TP)8015-593-A, Jets Vacuum Sanitation System-Model JETS 30MB-D
Coast Guard Technical Publication (TP)8019-233-A, Preliminary-Main Propulsion Diesel Engine MTU 20V4000M93L
Coast Guard Technical Publication (TP)8159-524-A, “Y” Strainer-Model 352M and 851M
Coast Guard Technical Publication (TP)8196-524-A, Strainer, Simplex-Model 72-12, 72-14F, 72-16FL
Coast Guard Technical Publication (TP)S9522-AA-HBK-010-522-A, Magazine Sprinkler System
Coast Guard Technical Publication (TP)8210-593-A, Preliminary Simplex Basket Strainer Model 72
Coast Guard Maintenance Procedure Card (MPC) M33010.0, INSPECT POTABLE WATER FILL HOSE
Coast Guard Maintenance Procedure Card (MPC) M34020.0, INSPECT R/O HP PUMP BELT TENSION #1
Coast Guard Maintenance Procedure Card (MPC) M34020.0, INSPECT R/O HP PUMP BELT TENSION #2
Coast Guard Maintenance Procedure Card (MPC) B24312.0, INSP/CLN POTABLE WATER Y STRAINER
Coast Guard Maintenance Procedure Card (MPC) M34045.0, INSP/CLN R/O SEAWTR DUPLEX STRAINER
Coast Guard Maintenance Procedure Card (MPC) M28018.0, INSP/CLN OILY BILGE SIMPLEX STRAINER
Coast Guard Maintenance Procedure Card (MPC) M24010.0, INSP/CLN HVAC UNIT STRAINERS
Coast Guard Maintenance Procedure Card (MPC) M25001.0, INSP/CLN INTERNAL DECK DRAINS
Coast Guard Maintenance Procedure Card (MPC) M41045.0, INSP/CLN FO Y STRAINERS
Coast Guard Maintenance Procedure Card (MPC) M41055.0, INSP/CLN EMRG STOP SM BOAT FILL STA
Coast Guard Maintenance Procedure Card (MPC) M34005.0, INSP/CHK R/O SYS OP CHECK #1
Coast Guard Maintenance Procedure Card (MPC) M34005.0, INSP/CHK R/O SYS OP CHECK #2
Coast Guard Maintenance Procedure Card (MPC) M27008.0, INSP/LUBE BILGE VALVES

USCGC RICHARD DIXON DS/DD FY19 AC&I

Coast Guard Maintenance Procedure Card (MPC) M41015.0, INSP/LUBE REMOTE OPERATION
FUEL VALVES

Coast Guard Maintenance Procedure Card (MPC) B24100.0, CHECK FUEL OIL TANKS

Coast Guard Maintenance Procedure Card (MPC) M35009.0, CHECK SANITATION VACUUM
SYSTEM

Coast Guard Maintenance Procedure Card (MPC) M35005.0, SERVICE SEWAGE Y STRAINER
SCREEN

Coast Guard Maintenance Procedure Card (MPC) M28014.0, WASH OWS STRAINER

Coast Guard Maintenance Procedure Card (MPC) M28016.0, WASH OWS TPH MONITOR GLASS

Coast Guard Maintenance Procedure Card (MPC) B24314.0, DRAIN WTR HEATER TNK SEDIMENT

Coast Guard Maintenance Procedure Card (MPC) M22012.0, TEST/CHECK MAGAZINE SPRINKLER
CNRL VLV

Coast Guard Maintenance Procedure Card (MPC) M33014.0, TEST POT WTR TNK BROMINE (A-C-
533-47)

Coast Guard Maintenance Procedure Card (MPC) M34047.0, TEST R/O SALINITY CELL #1

Coast Guard Maintenance Procedure Card (MPC) M34047.0, TEST R/O SALINITY CELL #2

Coast Guard Maintenance Procedure Card (MPC) M28020.0, TEST OWS CONTROL VALVES

Coast Guard Maintenance Procedure Card (MPC) M28022.0, TEST OWS VALVE REMOTE
OPERATOR

Coast Guard Maintenance Procedure Card (MPC) B24311.0, TEST POT WTR ACCUMULATOR
PRESSURE

Coast Guard Maintenance Procedure Card (MPC) M20023.0, TEST P-100 SEAWATER VALVE

Coast Guard Maintenance Procedure Card (MPC) M21005.0, TEST FIREMAIN SYS FLUSH & FLOW

Coast Guard Maintenance Procedure Card (MPC) M27020.0, TEST SUMP PUMP

Coast Guard Maintenance Procedure Card (MPC) M30015.0, TEST WTR HTR TEMP/PRESS RELIEF
VLV

Coast Guard Maintenance Procedure Card (MPC) M33005.0, TEST EYEWASH STATIONS

Coast Guard Maintenance Procedure Card (MPC) M36008.0, TEST GREY WATER SUCTION
VALVES

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST MDE FO TANK HAND PUMP-
PORT

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST MDE FO TANK HAND PUMP-
STBD

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL OIL HAND PUMP-SSDG
PORT

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL TANK HAND PUMP-SSDG
STBD

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL OIL TANK HAND PUMP-
EDG

Coast Guard Maintenance Procedure Card (MPC) P20012.D SERVICE CBM WINCH OIL

Coast Guard Maintenance Procedure Card (MPC) P27025.D REPLACE CAPSTAN GEAR OIL

Coast Guard Maintenance Procedure Card (MPC) P20020.D TEST CUTTER BOAT WINCH LOAD

Coast Guard Maintenance Procedure Card (MPC) P27110.D TEST J-BAR DAVIT ANNUAL WEIGHT

USCGC RICHARD DIXON DS/DD FY19 AC&I

Coast Guard Maintenance Procedure Card (MPC) M28044.D, INSP/CLN OWS INTERNAL CLEANING

Coast Guard Maintenance Procedure Card (MPC) M27003.D, INSP/CLN ROSE BOX STRAINERS

Coast Guard Maintenance Procedure Card (MPC) M41049.D, CHECK NFV F/O TREATMENT SYS

Coast Guard Maintenance Procedure Card (MPC) M34022.D, SERVICE R/O HIGH PRESSURE PUMP-PORT

Coast Guard Maintenance Procedure Card (MPC) M34022.D, SERVICE R/O HIGH PRESSURE PUMP-STBD

Coast Guard Maintenance Procedure Card (MPC) M34015.D, REPLACE R/O CARBON FILTER PORT

Coast Guard Maintenance Procedure Card (MPC) M34015.D, REPLACE R/O CARBON FILTER STBD

Coast Guard Maintenance Procedure Card (MPC) M34030.D, REPLACE R/O HP PUMP OIL- PORT

Coast Guard Maintenance Procedure Card (MPC) M34030.D, REPLACE R/O HP PUMP OIL- STBD

Coast Guard Maintenance Procedure Card (MPC) M24018.D, TEST SSDG R/W RELIEF VALVES

Coast Guard Technical Publication (TP)8004-593-A, Oily Water Separator Boss 107 Separator System-Model 2.2/107 YM

Coast Guard Technical Publication (TP) 8105-533-A, Preliminary - Watermaker/Brominator Reverse Osmosis Model - FRC-B 1600

Coast Guard Technical Publication (TP)8106-077-A, Eye/Face Wash and Body Spray Station

Coast Guard Technical Publication (TP)8110-533-A, Commercial Point of Use Tank Water Heater Model: EGSP15 Use and Care Manual

Coast Guard Technical Publication (TP)8015-593-A, Jets Vacuum Sanitation System-Model JETS 30MB-D

Coast Guard Technical Publication (TP)8019-233-A, Preliminary-Main Propulsion Diesel Engine MTU 20V4000M93L

Coast Guard Technical Publication (TP)8159-524-A, “Y” Strainer-Model 352M and 851M

Coast Guard Technical Publication (TP)8196-524-A, Strainer, Simplex-Model 72-12, 72-14F, 72-16FL

Coast Guard Technical Publication (TP)S9522-AA-HBK-010-522-A, Magazine Sprinkler System

Coast Guard Technical Publication (TP)8210-593-A, Preliminary Simplex Basket Strainer Model 72

Coast Guard Technical Publication (TP) 8096, SWBS 568, Sep 2011, Seawater Service Pump Bow Thruster Schottel Transverse Thruster 60 LK and Racci Operator Panel and Motor Drive Installation, Service, and Opertation Manual

Coast Guard Technical Publications (TP) 6632, Reduction Gear – Model ZF 280-1

Coast Guard Technical Publications (TP) 8081, Stern Tube Seal with Emergency Packing Gland – Type PSE, Model H76214 with Emergency Packing Glad Model 78479

Coast Guard Technical Publication (TP) 8913, Sep 2014, Technical Repair Standard For Propellers

Coast Guard Technical Publication (TP) 8153, Type EL + IS Rudderstock seal Model H 78525-01, Installation, Operation and Maintenance Manual

Coast Guard Technical Publication (TP) 8010, 16 JUL 2010, Fin Stabilizer System HPU20 Hydraulic Power Unit Quantum QC-1500 Operational and Maintenance Manual

Coast Guard Technical Publication (TP) 8911A, 30 APR 2016, Technical Repair Standard, Depot Level, For Use On Fast Response Cutter (FRC-B), Sentinel Class, Fin Stabilizer System Quantum Model QC-1500 Overhaul Repair Procedures, Vol 1 & 2

Coast Guard Technical Publication (TP) 8001, Sep 2018, Cathodic Protection System

USCGC RICHARD DIXON DS/DD FY19 AC&I

Coast Guard Technical Publication 8019 (TP-8019), Sections A, B,C,D, and E, Main Propulsion Engine
MTU 20V4000M93L, Volume 1, 2, 3, 4, 5

Coast Guard Technical Publication 8902A (TP-8902A), Sections A, B, Technical Repair Standard, Depot
Level, for use on Fast Response Cutter (FRC-B), Sentinel Class, Main Propulsion Diesel Engine,
MC/OR and ETRAR Datasheets, MTU 20V4000M93L, Volume 1, 2

OTHER REFERENCES

American Bureau of Shipbuilding (ABS) Rules for Survey After Construction, Part 7

ASTM International (ASTM) D5363, 2008; Standard Specification for Anaerobic Single-Component
Adhesives (An)

MIL-PRF-16173, Sep 2006, Corrosion Prevention Compound, Solvent Cut-Back, Cold-Application

MIL-S-45180, 1998; Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

MIL-C-16173, Jan 1993, Corrosive Preventative Compound, Solvent Cutback, Cold Application

CONSOLIDATED LIST OF GOVERNMENT-FURNISHED PROPERTY

The following is a list of property, which the Government will furnish. This list supersedes any other material obligations indicated or implied by referenced drawings.

WORK ITEM	MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
1	Y	V-Belt Tension TSTR	P/N: 3HX33, CAGE: 0AEU2, NIIN: 015485655	1	1000.00
2	N	Rope, Fibrous, Amsteel Blue	P/N: 8720328 NIIN: 01-673-9963	1	500
	Y	Life Raft NOTE: After existing life rafts are packaged and turned over to the COR by the Contractor, the COR will furnish to the Contractor new or overhauled life rafts supplied by NAVY.	N/A	2	6000
4	Y	**Propeller Shaft	NSN: 2010-01-605-7516	2	103,000
	Y	**LH Propeller	NSN: 2010-01-628-0276 PN: 531915	1	190,000
	Y	**RH Propeller	NSN: 2010-01-627-9761 531914	1	190,000
	N	**Stave Kit (each kit contains 8 reg. Romor staves, 2 rubber locking staves, 2 Romor staves w/keeper slot)	NSN: 3120-01-605-7400 P/N: 80920203000003	4	2430
	N	**FWD Bearing Split External Retaining Ring Kit (each kit contains 1ea retaining ring, 10ea socket head cap screws)	NSN: 3120-01-605-7345 P/N: 80920203000004	2	1970
	N	**AFT Bearing Split External Retaining Ring Kit (each kit contains 1ea retaining ring, 10ea socket head cap screws)	NSN: 3120-01-605-7510 P/N: 80920203000005	2	2575
	N	**Kit, Installation Part- Replacement (see note 4.1 for kit contents)	NSN: 2010-01-629-4693 P/N: 950700	2	1900
	Y	*Kit, Propeller – Removal/Installation Tools and Equipment (see note 4.2 for kit contents)	NSN: 2010-01-632-2198/ P/N: 999120	1	22,970
	N	Shaft Seal Overhaul Kit (see table 7-5 of TP-8081, pg 7-9, "Service Kit C")	NSN: 5330-01-618-5276 P/N: H76214-8	2	4896
	N	Anodes, Zinc (stern tube)	NIIN: 01-644-5483	16	50

USCGC RICHARD DIXON DS/DD FY19 AC&I

			P/N: Z0020202H3		
5	Y	**Rudder	NSN: 2040-01-618-2412	2	19,350
	N	Shaft Seal Overhaul Kit (Service Kit A from TP-8153, pg 7-5, Table 7-2)	NSN: 5330-01-595-4647 PN: H785252-01-6	2	9722
	N	Shaft Seal Overhaul Kit (Service Kit B from TP-8153, pg 7-5, Table 7-3)	NSN: 5330- 01-596-7760 PN: H78525-01-7	2	6,170
	N	Locknut PC5 154WPC 562-002	NSN: 5310-33-201-6431 PN: KM32	4	100.00
	N	Lock Washer PC6 154WPC 562-002	NSN: 5310-33-201-5247 PN: MB 32	2	150.00
	N	Upper Roller Bearing PC7 154WPC 562-002	NSN: 3110-01-597-3537 PN: 23032 CC/C2W33	2	502.11
	N	Oil Seal PC8 154WPC 562-002	NSN: 5330-01-618-5091 PN: CR70028 CRWH1R	2	60.00
	N	Lower Bearing PC9 154WPC 562-002	NSN: 3120-01-631-4104	2	\$1,162
6	Y	**Fin Blade	NSN: 2040-01-598-8181 PN: 601-15-020S02-00-00-A	2	22,254.38
7	N	**Set of bevel gears 19:28, Mfr: Schottel	NSN: 3020-01-618-1133 PN: 1088301	1st.	10,378.13
	Y	**Propeller, Mfr: Schottel	NSN: PN: 1161329	1ea.	20,000.00
8	N	**Anode, Corrosion, Elliptical	NSN: 5340-99-400-2561 PN: PPEC1202-MM50	2 ea.	1,900.00
	N	**Silver/Silver Chloride Reference Electrode Cell	NSN: 6630-99-553-5405 PN: PPR100019	2 ea.	1,625.00
	N	Copper Anode, Anti- Fouling	NSN: 5342-99-133-5325 PN: PAAZRRY037FT	3 ea.	436.69
9	Y	FRC MDE	NIIN: 0C 2815-12-392-7931	2	\$1,861,153.95
	N	FRC MDE Container	NIIN: 8145-01-F13-3476	2	\$47,857.63
	Y	Spreader Bar, Main Engine	NIIN: 01-F18-5444	1	\$50,000.00

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT ServiceCenter

CONSOLIDATED LIST OF CRITICAL INSPECTION ITEMS

The following is a list of work items, which contain Critical Inspection reports, which the Contractor must complete within the first 25% of the availability contract period (see SFLC Std Spec 0000, paragraph 3.2.6.5 (Inspection report particulars)):

Work Item	Title
1	Various Maintenance (AFC30), Perform
5	Auxiliary Machinery Maintenance, Perform (AFC-30)
6	Auxiliary Machinery Maintenance, Perform (AFC-45)
9	Hull Plating, Inspect (DD1)
10	Propulsion Shafting System, Inspect and Repair (DD1)
11	Rudder Assemblies, Inspect and Repair
12	Stabilizing Fins, Inspect and Repair
13	Bow Thruster Propeller and Tunnel, Inspect and Repair
14	Impressed Current Cathodic Protection (ICCP) and Anti-Fouling System, Inspect and Maintain

PRINCIPAL CHARACTERISTICS

154' WPC (SENTINEL CLASS)	
PHYSICAL	
Anchor	ROCNA, anchor, 150 KG/ 331 LB, Stainless Steel
Bulkheads	(7), Watertight Bulkheads located below the Main Deck
Displacement, delivery, light ship	302 Metric Tons
Draft, full load	2.58 Meters (8.46 Feet)
End of service life displacement	353 Metric Tons
Framing	Longitudinal
Full load displacement	353 Metric Tons
Height of highest projection	17.22 Meters (56.5 Feet)
Length overall (loa)	46.80 Meters (153.5 Feet)
Maximum beam	7.75 Meters (25.43 Feet)
Minimum operating displacement	314 Metric Tons
Waterline length (lwl)	44.35 Meters (145.5 Feet)
HULL	
Hull/main weatherdeck material	AH-36 Steel
Superstructure	5456-H1111 Aluminum
MACHINERY	
Bow thruster	Schottel STT 60 LK
Diameter of propeller	1900 mm
Emergency service generator (edg)	Cummins 6BTA5.9-DM Diesel with Stanford 93KW Generator
Fin stabilizer	(2), Quantum QC1500
Main propulsion	(2), MTU 20V4000 M93L, Sequential Turbo-Charged Diesels
Number of blades	6
Number of propellers	(2) Michigan Wheel Marine
Propeller pitch capability	Fixed
Propulsion shafts	(2), Electralloy Nitronic 50HS (9430mm) Shafts
Reduction gears	(2), ZF 23560C/D Series
Rudders	(2), 316L Stainless Steel
Shaft rotations per minute	478
Shaft(s) bearing, aft	(2), Duramax Bearings
Shaft(s) bearing, intermediate	(2), Duramax Bearings
Shaft(s) diameter	8 Inches
Shaft(s) Seal	(2), Wartsila Mechanical Seals
Ship service generators	(2), Cummins QSM11-DM Diesels with Stanford 317KW Generator
TANK CAPACITIES AT 95% LIQUID LOAD (22,958 TOTAL GALLONS)	
Fresh water tank, port (3-38-2-w)	708 gal
Fresh water tank, stbd (3-38-1-w)	756 gal
Fuel oil edg day tank (1-10-1-f)	134 gal
Fuel oil gen. ovrflw tnk, ctr. (3-40-0-f)	1,159 gal
Fuel oil overflow tank, center (3-10-0-f)	616 gal
Fuel oil service tank, #1 port (3-17-2-f)	1,750 gal
Fuel oil service tank, #1 stbd (3-17-1-f)	1,750 gal
Fuel oil service tank, #2 port (3-40-2-f)	890 gal
Fuel oil service tank, #2 stbd (3-40-1-f)	890 gal
Fuel oil storage tank, #1 center (3-11-0-f)	5,040 gal

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

f)	
Fuel oil storage tank, #2 center (3-23-0-f)	5,350 gal
TANK CAPACITIES AT 95% LIQUID LOAD (22,958 TOTAL GALLONS)	
Grey water tank, (3-17-0-w)	2,668 gal.
Lube oil storage tank, (2-35-2-f)	146 gal.
Oily water tank, (3-34-1-w)	336 gal.
Sewage collection tank, (3-6-0-w)	429 gal.
Waste oil tank, (3-34-2-f)	336 gal.

General Requirements

1. SCOPE

1.1 Intent. This standard specification invokes general requirements for conducting vessel repairs performed at a commercial contractor's facility for Coast Guard vessels.

1.2 Term interchangeability. The terms 'Contractor', 'CG Yard', 'NAVSTA EVERETT', 'shipyard', 'Base', and 'Coast Guard Industrial' are used interchangeably in this specification. Where the primary service provider is Coast Guard personnel, references to contractor and other noted descriptors within this specification or within drawings, publications, SFLC Standard Specifications or other commercial and military references are deemed the same as prime service provider.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall conform to all requirements specified in SFLC Std Spec 0000 and in this item, as applicable, during the performance of this availability.

NOTE

The requirements of paragraph 3.1 (General) applies to all work under the scope of this contract, whether explicitly stated in work items or not, and to all other work subsequently authorized by changes, modifications, or extensions to the contract.

3.2 Contractor-provided fire watch personnel. The Contractor shall provide fire watch personnel and equipment.

3.3 Preservation requirements. The Contractor shall accomplish all preservation tasks, including touch-ups, in accordance with SFLC Std Spec 6310.

3.3.1 Brand name approval. Ensure that all contractor-furnished coatings are in accordance with SFLC Std Spec 6310, Appendix C (Authorized Coatings for Use on Cutters and Boats).

3.3.2 Coating colors and system color schemes. Ensure that all colors and color coat/paint schemes are in accordance with COMDTINST M10360.3, Chapter 6 (Cutter and Boat Colors Exterior and Interior).

NOTE

Unless a waiver has been granted (in writing) by the KO, deviations from authorized coatings (listed in Appendix C of SFLC Std Spec 6310) and colors and color schemes (provided in Chapter 6 of COMDTINST M10360.3) are strictly prohibited.

3.4 Welding and brazing requirements. The Contractor shall perform all welding and allied processes, and NDE in accordance with SFLC Std Spec 0740.

3.5 Environmental protection requirements. The Contractor shall adhere to the following environmental protection requirements in accordance with the SFLC Stand Spec 0000:

3.5.1 Contractor operated (non USCG) facilities. The Contractor shall provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix A, Requirements for Environmental Protection at Contractor Operated (Non USCG) Facilities, as applicable, during the performance of this availability. Contractor shall plan for and provide environmental protective measures to control pollution that develops during normal practice, as well as plan for and provide environmental protective measures required to correct conditions that develop during the project. Contractor shall comply with applicable Federal, state, and local laws, codes, ordinances, and regulations in their entirety. Any reference to a specific portion of a Federal, state, or local law, code, ordinance, or regulation in this or any other item shall not be construed to mean that relief is provided from any other sections of the law, code, ordinance, or regulation.

3.5.1.1 USCG Generator status. The activity Generator Status for the Coast Guard Facility is TBD.

3.5.1.2 Plans and permits. The CG Facility has unit specific permits including the following:

- Spill Prevention Control and Countermeasures (SPCC) Plan: Unit has a SPCC Plan which requires certain unit-specific procedures be followed for the storage, inspection, and transfer of petroleum products in containers 55 gallons or greater.
- National Pollutant Discharge Elimination System (NPDES) Storm Water (SW) Permit: Unit has an NPDES SW permit which requires unit-specific procedures be followed for the storage and inspection of equipment and materials which may contribute contaminants to storm water discharges.
- Air Emission Permit: Unit has a Air Emission Permit which requires unit-specific procedures be followed for the emissions of VOCs and hazardous air pollutants.

3.5.2 Test and procedures. The Contractor shall be required to promptly conduct tests and procedures for the purpose of assessing whether operations are in compliance with applicable Environmental Laws. Analytical work shall be done by qualified laboratories; and where required by law, the laboratories shall be certified.

3.5.3 Regulatory notifications. The Contractor shall be responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. In cases where the Coast Guard must also provide public notification, such as storm water permitting, the Contractor must coordinate with the Contracting Officer or COR,

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

and if work is being performed at a USCG Facility, the local Facility Engineer or Engineering Officer. The Contractor shall submit copies of all regulatory notifications to the Contracting Officer and the local Facility Engineer or Engineering Officer prior to commencement of work activities. Regulatory notifications shall be provided for including but not limited to demolition, renovation, National Pollutant Discharge Elimination System (NPDES) defined site work, and remediation of controlled substances such as asbestos, hazardous waste, and lead paint.

3.5.4 Environmental manager. The Contractor shall appoint in writing an Environmental Manager for the project, and shall be responsible for coordinating Contractor compliance with Federal, State, local, and station environmental requirements. The Environmental Manager shall ensure compliance with Hazardous Waste Program requirements, including hazardous waste handling, storage, manifesting, and disposal; implement the Contractors' Environmental Management Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Program Management requirements; ensure compliance with Hazardous Materials including storage, handling, and reporting requirements; as well as coordinate any remediation of regulated substances such as lead, asbestos, and polychlorinated biphenyl (PCB). This may be a collateral position; however the individual must be trained to accomplish the following duties; ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure all Contractor personnel are trained in 40 CFR requirements and individual position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out.

3.5.5 HW disposal. Contractor shall comply with SFLC Std Spec 0000 Appendix A, Requirements For Environmental Protection At Contractor Operated (Non USCG) Facilities for HW disposal.

3.6 Local Policy. None.

3.7 SFLC standard specification approved changes. The Contractor shall be aware that the following are approved changes to published SFLC 2014 Edition Standard Specifications and supersede published content:

3.7.1 Change to SFLC Std Spec 0000, paragraph 1.3. 'Acronyms and term definitions', page 5, "PCL (Paint Containing Lead)" definition replaced by, "Any paint or coating containing lead in excess of 0.009 percent by weight (1.0 mg/cm² or 90 ppm). Lead Based Paint (LBP) is an interchangeable term with PCL."

3.7.1.1 Change Std Spec 0000 paragraph 3.2.4.2.3(QP 1 inspector or tech rep duties) bullet, "Determine when applied coats have sufficiently cured for overcoating or for system service resumption (see paragraph 3.1.19 of SFLC Std Spec 6310 (Critical drying time requirements))." to "Determine when applied coats have sufficiently cured for overcoating or for system service resumption (see paragraph 3.1.17 of SFLC Std Spec 6310 (Critical drying time requirements))."

3.7.2 Change to Std Spec 5000, paragraph D2.2.1.1 bullet, "For running rigging, furnish class 6x37, uncoated, independent wire rope core (IWRC), right regular lay (RRL) wire rope or Dyform-18, rotation resistant wire rope," to "For running rigging, furnish class 6x36, uncoated, independent wire rope core (IWRC), right regular lay (RRL) wire rope or Dyform-18, rotation resistant wire rope."

3.7.2.1 Change to Std Spec 5000, page D-2, Table D-1 title from "DYFORM-18, 6X19 AND 6X37 IWRC RRL," to " DYFORM-18, 6X19 AND 6X36 IWRC RRL"

4. NOTES

4.1 QA inspection forms. QA inspection forms (QA-1 thru QA-5), required in SFLC Std Spec 6310 to be completed and submitted during preservation of “critical-coated surfaces”, are provided at the end of this document.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

**QA-1 - QUALITY ASSURANCE INSPECTION FORM
(PRESERVATION CHECKLIST)**

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)		AREA (SQFT)	

CHECKPOINT 1 – COATING SYSTEM COMPLIANCE			
Ensure all coatings are in compliance with SFLC Std Spec 6310, Appendix C.			
CHECKPOINT 2 - PAINT STORAGE			
Ensure all coatings are kept at a temperature of 65 to 85°F at all times, unless otherwise specified by the coating mfg.			
CHECKPOINT 3 - AMBIENT CONDITIONS			
Ensure surface and surrounding temperatures are each between 50 and 90°F for water-containing coatings, and 35 and 95°F for other coatings, unless otherwise specified by the coating manufacturer(s).			
Ensure maximum relative humidity (RH) is as follows, from surface preparations through final curing of topcoat: 50% for tanks, voids, and vent plenum; and 85% for all other areas, unless otherwise specified by manufacturer(s).			
Ensure surface temperature is at least 5°F above the dew point, unless otherwise specified by the coating mfg.			
CHECKPOINT 4 - PRE-SURFACE PREPARATION			
Remove surface contaminants (soluble salts, loose rust, mud, and marine growth) with low pressure fresh water wash down (maximum 5,000 psi). If oil and grease are present, perform solvent cleaning, as per SSPC SP-1.			
Verify equipment setup, blast media, and surface preparation methods match designated test coupon.			
CHECKPOINT 5 - SURFACE PREPARATION			
Verify environmental conditions (see CHECKPOINT 3).			
Ensure cleanliness of prepared surface is as per specification (i.e.: SSPC SP-11, SP-10, SP WJ-2...).			
Verify surface anchor profile using ASTM D4417-Methods B or C against SFLC Std Spec 6310. Conduct profile readings at a minimum of 5 locations for the first 1000-sqft area, and 2 locations for each succeeding 1000-sqft area.			
Measure soluble salt conductivity in accordance with SSPC-Guide 15. Conduct 5 measurements per each 1000-sqft area (max. threshold: 70 microsiemens/cm for non-submerged surfaces, 30 microsiemens/cm for submerged surfaces).			
CHECKPOINT 6 - PRIMER COAT APPLICATION			
Verify environmental conditions (see CHECKPOINT 3).			
Verify proper mixing and stand-in (induction) times.			
Ensure no paint is applied when the temperature is expected to drop to freezing before the paint has dried.			
Ensure surfaces are completely dry, unless otherwise allowed by the coating manufacturer(s).			
Verify wet film thickness (WFT) at random, to prevent under or over application. Verify final DFT.			
Brush out all runs, sags, drips, and puddles.			
Perform visual inspection for holidays and other defects.			
CHECKPOINT 7 – STRIPE COAT APPLICATION			
Verify environmental conditions (see CHECKPOINT 3).			
Ensure overcoating window is as per manufacturer's instructions.			
After primer coat (mist coat after inorganic zinc), brush-apply un-thinned coat of same primer paint over edges, weld seams, cut-outs, and areas of complex geometries @ 3-4 mils wet film thickness (WFT).			
CHECKPOINT 8 – TOP COAT APPLICATION			
Verify environmental conditions (see CHECKPOINT 3).			
Ensure overcoating window is as per manufacturer's instructions.			
Verify proper mixing and stand-in (induction) times, as applicable.			
Verify wet film thickness at random, to prevent under or over application.			
Brush out all runs, sags, drips, and puddles.			
CHECKPOINT 9 – FINAL INSPECTION			
Verify final system dry film thickness. Conduct 5 sets of 3 readings for each of the first 3 100-sqft areas, followed by 5 sets of 3 readings for each succeeding 1000-sqft area.			
Ensure that system cure is in accordance with manufacturer's recommendation for intended service.			
Ensure potable water tank exhaust ventilation is maintained continuously from and during coating application through final system cure, to exhaust all solvent to the atmosphere and to prevent solvent entrapment.			
For immersion coatings (including tank U/W body), record date and time of the following events: Final coat application: ____/____/____; Return to service or removal from environment controls: ____/____/____			
CHECKPOINT 10 – RECORD KEEPING			
Complete, sign, and submit all provided QA Inspection Forms.			
NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

**QA-2 - QUALITY ASSURANCE INSPECTION FORM
(ENVIRONMENTAL READINGS)**

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

Use one sheet for each activity. Record conditions every four hours from before surface preparation to application of final coating system coat.

DATE & TIME	ACTIVITY (SURFACE PREPARATION, PRIMER COAT, BARRIER COAT, TOP COAT, ETC...)	LOCATION (FRAME & DECK, RELATION TO EQUIPMENT, ETC.)	TEMPERATURE				% REL. HUMIDITY
			DEW PT.	SURFACE	AMBIENT	ΔT DP - SURFACE	
NAME OF QP-1/NACE INSPECTOR		SIGNATURE				CERT. #	DATE / TIME

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

**QA-3a - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-C)**

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)		AREA (SQFT)	

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		ABRASIVE SIEVE SIZE:		

PLACE SURFACE PROFILE REPLICA TAPES IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN A SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.					
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
MEAN MIL READING (IAW ASTM D4417-METHOD C) FOR ABOVE 15 READINGS:					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

**QA-3b - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-B)**

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)		AREA (SQFT)	

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		ABRASIVE SIEVE SIZE:		

RECORD MEASUREMENTS TAKEN IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Mean Reading (mils)					
Mean Reading (mils) IAW ASTM DD4417).					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

QA-4 - QUALITY ASSURANCE INSPECTION FORM (SURFACE SOLUBLE SALT CONDUCTIVITY LOG)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			AREA (SQFT)

[illegible]

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

**QA-5 - QUALITY ASSURANCE DATA FORM
(COATING THICKNESS)**

(Use one sheet for each sequence)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

COATING MFG	PRODUCT NAME	BATCH #	INDUCTION TIME	COATING SYSTEM SEQUENCE (PRIMER/TOUCHUP/3RD COAT, ETC.)

DRY FILM THICKNESS (DFT) MEASUREMENTS IAW SSPC-PA 2.						
SPOT	1	2	3	4	5	AVERAGE VALUE
*BASE METAL READING (BMR) Required, If Magnetic Pull-Off (Type I/Banana) Gauge Is Used.						

LOCATION (FRAME REFERENCE):						
SPOT	1	2	3	4	5	OVERALL AVG. DFT
1						
2						
3						
AVG.						BEFORE ADJUSTMENTS
						AFTER ADJUSTMENTS

LOCATION (FRAME REFERENCE):						
SPOT	1	2	3	4	5	OVERALL AVG. DFT
1						
2						
3						
AVG.						BEFORE ADJUSTMENTS
						AFTER ADJUSTMENTS

LOCATION (FRAME REFERENCE):						
SPOT	1	2	3	4	5	OVERALL AVG. DFT
1						
2						
3						
AVG.						BEFORE ADJUSTMENTS
						AFTER ADJUSTMENTS

APPLICATION METHOD (AIRLESS, CONVENTIONAL SPRAY, ROLLED)	AVERAGE DFT

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

WORK ITEM 1: Various Maintenance (AFC30), Perform**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
Y	V-Belt Tension TSTR	P/N: 3HX33, CAGE: 0AEU2, NIIN: 015485655	1	1000.00

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES**COAST GUARD DRAWINGS**

Coast Guard Drawing 154 WPC 601-302, Rev C, General Arrangement

Coast Guard Drawing 154 WPC 582-201, Mooring and Towing A&D

Coast Guard Drawing 154B WPC 582-201, Mooring and Towing A&D

Coast Guard Drawing 154 WPC 612-201, Lifelines, Life Rails and Stanchions A&D

Coast Guard Drawing 154B WPC 612-201, Lifelines, Life Rails and Stanchions A&D

Coast Guard Drawing 154 WPC 623-301, Ladder Arrangement

Coast Guard Drawing 154B WPC 623-301, Ladder Arrangement

Coast Guard Drawing 154 WPC 583-201, Cutter Boat Handling, and Stowage A&D

Coast Guard Drawing 154 WPC 634-301, Deck Coverings Schedule

Coast Guard Drawing 154B WPC 634-301, Deck Covering Schedule

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Drawing 154-WPC-256-301, Main and Auxiliary Cooling System Diagram
Coast Guard Drawing 154-WPC-261-201, Fuel Oil Service System Arrangement
Coast Guard Drawing 154 WPC 310-301, Rev A, Electrical One Line Diagram
Coast Guard Drawing 154-WPC-521-301, Firemain System and Magazine Sprinkler Diagram
Coast Guard Drawing 154-WPC-528-301, Grey Water System Diagram
Coast Guard Drawing 154-WPC-529-301, Bilge System Diagram
Coast Guard Drawing 154B WPC 533-201, Rev -, Potable Water System Arrangement
Coast Guard Drawing 154 WPC 533-301, Rev E, Potable Water System Diagram
Coast Guard Drawing 154-WPC-541-201, Fuel Oil Transfer System Arrangement
Coast Guard Drawing 154-WPC-541-260, Fuel Oil Transfer System A&D-Module 60
Coast Guard Drawing 154-WPC-541-301, Fuel Oil Service and Transfer System
Coast Guard Drawing 154 WPC 551-301, Rev B, Compressed Air System Diagram
Coast Guard Drawing 154 WPC 582-201, Rev -, Mooring and Towing A&D
Coast Guard Drawing 154B-WPC-593-201, Sewage System Arrangement
Coast Guard Drawing 154-WPC-593-202, Oily Bilge System Arrangement
Coast Guard Drawing 154B-WPC-593-202, Oily Bilge System Arrangement
Coast Guard Drawing 154-WPC-593-301, Sewage System Diagram
Coast Guard Drawing 154-WPC-593-302, Oily Bilge System Diagram
Coast Guard Drawing 154 WPC 601-302, Rev C, General Arrangement

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014,
Requirements for Preservation of Ship Structures
Coast Guard Maintenance Procedure Card (MPC) B00022.0 INSPECT
TOPSIDE/WEATHERDECK CORROSION
Coast Guard Maintenance Procedure Card (MPC) B11007.0 INSPECT DECK FITTINGS
Coast Guard Maintenance Procedure Card (MPC) B11010.0 INSPECT LADDERS &
ASSOCIATED HANDRAIL
Coast Guard Maintenance Procedure Card (MPC) B60000.0 INSPECT WATERTIGHT
AIRTIGHT CLOSURES
Coast Guard Maintenance Procedure Card (MPC) P00012.0 INSPECT STERN DOOR ZINCS
Coast Guard Maintenance Procedure Card (MPC) P20001.0 INSPECT NOTCH PROTECTION
DEVICES
Coast Guard Maintenance Procedure Card (MPC) Q22010.0 INSPECT NON-SKID EXTERIOR
Coast Guard Maintenance Procedure Card (MPC) B11008.0 INSP/CLN HANDRAIL,
LIFELINE, STANCHION
Coast Guard Maintenance Procedure Card (MPC) B11012.0 INSP/CLN GANGWAY
Coast Guard Maintenance Procedure Card (MPC) B60016.0 SERVICE PILOTHOUSE DOOR
GASKETS

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) B61012.0 INSP/LUBE DOORS, HATCHES AND MANHOLES

Coast Guard Maintenance Procedure Card (MPC) B61013.0 INSP/LUBE DOORS, HATCHES, SCUTTLE(19-32)

Coast Guard Maintenance Procedure Card (MPC) B61031.0 INSP/LUBE WTR TIGHT DOOR (1101-1118)

Coast Guard Maintenance Procedure Card (MPC) P20019.D RHIB WINCH CABLE CONVERSION

Coast Guard Maintenance Procedure Card (MPC) P24104.0 INSP/LUBE CHAFING CHAIN

Coast Guard Maintenance Procedure Card (MPC) P24108.0 INSP/LUBE HAWSER REELS

Coast Guard Maintenance Procedure Card (MPC) P27014.0 LUBE CAPSTANS

Coast Guard Maintenance Procedure Card (MPC) P27109.0 INSP/LUBE J-BAR DAVIT CABLE

Coast Guard Maintenance Procedure Card (MPC) Q30005.0 INSP/LUBE LOCKERS AND SPECIAL STORAGE

Coast Guard Maintenance Procedure Card (MPC) Q21502.0 SEAL HULL PRESERVATION (MONTHLY)

Coast Guard Technical Publication (TP)8004-593-A, Oily Water Separator Boss 107 Separator System-Model 2.2/107 YM

Coast Guard Technical Publication (TP) 8105-533-A, Preliminary - Watermaker/Brominator Reverse Osmosis Model - FRC-B 1600

Coast Guard Technical Publication (TP)8106-077-A, Eye/Face Wash and Body Spray Station

Coast Guard Technical Publication (TP)8110-533-A, Commercial Point of Use Tank Water Heater Model: EGSP15 Use and Care Manual

Coast Guard Technical Publication (TP)8015-593-A, Jets Vacuum Sanitation System-Model JETS 30MB-D

Coast Guard Technical Publication (TP)8019-233-A, Preliminary-Main Propulsion Diesel Engine MTU 20V4000M93L

Coast Guard Technical Publication (TP)8159-524-A, “Y” Strainer-Model 352M and 851M

Coast Guard Technical Publication (TP)8196-524-A, Strainer, Simplex-Model 72-12, 72-14F, 72-16FL

Coast Guard Technical Publication (TP)S9522-AA-HBK-010-522-A, Magazine Sprinkler System

Coast Guard Technical Publication (TP)8210-593-A, Preliminary Simplex Basket Strainer Model 72

Coast Guard Maintenance Procedure Card (MPC) M33010.0, INSPECT POTABLE WATER FILL HOSE

Coast Guard Maintenance Procedure Card (MPC) M34020.0, INSPECT R/O HP PUMP BELT TENSION #1

Coast Guard Maintenance Procedure Card (MPC) M34020.0, INSPECT R/O HP PUMP BELT TENSION #2

Coast Guard Maintenance Procedure Card (MPC) B24312.0, INSP/CLN POTABLE WATER Y STRAINER

Coast Guard Maintenance Procedure Card (MPC) M34045.0, INSP/CLN R/O SEAWTR DUPLEX STRAINER

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) M28018.0, INSP/CLN OILY BILGE
SIMPLEX STRAINER

Coast Guard Maintenance Procedure Card (MPC) M24010.0, INSP/CLN HVAC UNIT
STRAINERS

Coast Guard Maintenance Procedure Card (MPC) M25001.0, INSP/CLN INTERNAL DECK
DRAINS

Coast Guard Maintenance Procedure Card (MPC) M41045.0, INSP/CLN FO Y STRAINERS

Coast Guard Maintenance Procedure Card (MPC) M41055.0, INSP/CLN EMRG STOP SM
BOAT FILL STA

Coast Guard Maintenance Procedure Card (MPC) M34005.0, INSP/CHK R/O SYS OP CHECK
#1

Coast Guard Maintenance Procedure Card (MPC) M34005.0, INSP/CHK R/O SYS OP CHECK
#2

Coast Guard Maintenance Procedure Card (MPC) M27008.0, INSP/LUBE BILGE VALVES

Coast Guard Maintenance Procedure Card (MPC) M41015.0, INSP/LUBE REMOTE
OPERATION FUEL VALVES

Coast Guard Maintenance Procedure Card (MPC) B24100.0, CHECK FUEL OIL TANKS

Coast Guard Maintenance Procedure Card (MPC) M35009.0, CHECK SANITATION VACUUM
SYSTEM

Coast Guard Maintenance Procedure Card (MPC) M35005.0, SERVICE SEWAGE Y
STRAINER SCREEN

Coast Guard Maintenance Procedure Card (MPC) M28014.0, WASH OWS STRAINER

Coast Guard Maintenance Procedure Card (MPC) M28016.0, WASH OWS TPH MONITOR
GLASS

Coast Guard Maintenance Procedure Card (MPC) B24314.0, DRAIN WTR HEATER TNK
SEDIMENT

Coast Guard Maintenance Procedure Card (MPC) M22012.0, TEST/CHECK MAGAZINE
SPRINKLER CNRL VLV

Coast Guard Maintenance Procedure Card (MPC) M33014.0, TEST POT WTR TNK BROMINE
(A-C-533-47)

Coast Guard Maintenance Procedure Card (MPC) M34047.0, TEST R/O SALINITY CELL #1

Coast Guard Maintenance Procedure Card (MPC) M34047.0, TEST R/O SALINITY CELL #2

Coast Guard Maintenance Procedure Card (MPC) M28020.0, TEST OWS CONTROL VALVES

Coast Guard Maintenance Procedure Card (MPC) M28022.0, TEST OWS VALVE REMOTE
OPERATOR

Coast Guard Maintenance Procedure Card (MPC) B24311.0, TEST POT WTR
ACCUMULATOR PRESSURE

Coast Guard Maintenance Procedure Card (MPC) M20023.0, TEST P-100 SEAWATER VALVE

Coast Guard Maintenance Procedure Card (MPC) M21005.0, TEST FIREMAIN SYS FLUSH &
FLOW

Coast Guard Maintenance Procedure Card (MPC) M27020.0, TEST SUMP PUMP

Coast Guard Maintenance Procedure Card (MPC) M30015.0, TEST WTR HTR TEMP/PRESS
RELIEF VLV

Coast Guard Maintenance Procedure Card (MPC) M33005.0, TEST EYEWASH STATIONS

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) M36008.0, TEST GREY WATER SUCTION VALVES

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST MDE FO TANK HAND PUMP-PORT

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST MDE FO TANK HAND PUMP-STBD

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL OIL HAND PUMP-SSDG PORT

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL TANK HAND PUMP-SSDG STBD

Coast Guard Maintenance Procedure Card (MPC) M41005.0, TEST FUEL OIL TANK HAND PUMP-EDG

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 Perform preventive maintenance tasks described in Table 2 and Table 3.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 and Table 3 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

NOTE

Change requests released in response to discrepancies identified while conducting inspections described in this AFC30 funded work item shall be written against and charged to the appropriate AFC45 funded CLIN, as follows:

- 1) Hull plate & stiffener repairs, below the waterline(e.g. bilges) – CLIN/Work Item 3 “Hull Plating, Inspect (DD1)”**
- 2) All above the waterline structural repairs - CLIN/Work Item 2 “Various Maintenance (AFC45), Perform”**
- 3) All piping repairs - CLIN/Work Item 2 “Various Maintenance (AFC45), Perform”**

3.2 Perform preventive maintenance tasks described in Table 2 and Table 3. The Contractor shall perform all maintenance described in Table 2 (topside maintenance) and Table 3 (below deck maintenance). **Submit a CIR** after completing all inspections detailed in Task 1 (topside inspections), Task 11 (piping inspections), and Task 12 (bilge inspections). If a discrepancy is identified while performing the other various inspections associated with Tasks 2 through 17 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

TOPSIDE PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	TOPSIDE WALK-THRU INSPECTIONS REQUIRING NO DISASSEMBLY – During the first 7 days of the availability, and in the presence of the COR or a Coast Guard Inspector, visually inspect (i.e. conduct a walkthrough, bow to stern) all external accessible surfaces of the cutter above the waterline (e.g. bits, chocks, mooring eyes, decks, non-skid areas, mast, foundations, superstructure, ladders, handrails, goose necks, ladders, stern door zinc anodes, hawser reels, all deck machinery, RHIB notch skid pads and anchor chain pads, etc.) and the coatings on the interior of the BOATSWAIN STORAGE (2-A-0-A) for discrepancies (e.g. damage, cracks, corrosion, pitting, deformation, coatings failure, maladjustment, missing fasteners, etc.). (MPC B00022.0, MPC B11007.0, MPC B11010.0, MPC B60000.0, MPC P00012.0, MPC Q20001.0, MPC Q22010.0, MPC B62017.0) HULL FITTING OP AND SEAL TEST – During the first 7 days of the availability, and in the presence of the COR or a Coast Guard Inspector, operate and inspect all fittings (e.g. doors, hatches, scuttles, lockers, etc.) listed in Table 4 and Table 5 below, and all associated components, to determine all discrepancies (e.g. missing parts, misalignment, excessive wear, general damage, corrosion and failed coatings, damaged or excessively worn gaskets, etc.). Perform a seal test (e.g. water hose test, chalk test, or equivalent test) on each fitting to identify sealing discrepancies and otherwise verify no sealing discrepancies. (MPC B60000.0, MPC B61012.0, MPC B61013.0, MPC B61031.0, MPC B62017.0) INSPECTION REPORT – Submit a CIR detailing all discrepancies found with recommended repairs, also include finding from the piping inspections detailed in Task 11 below, and the bilge inspections detailed in Task 16 below.
2	CUTTER BOAT MEDIUM (CBM) WINCH MAINTENANCE – N/A. NOTE: Wire rope is being renewed in Work Item 2 using fiber rope, Work Item 2 accomplishes MPC P20014.0 and MPC P20016.0.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3	HULL FITTING GROOMING AND MAINTENANCE (ALL FITTINGS LISTED IN TABLE 4 BELOW) – Clean, then apply a few drops of lubricating oil to all wearing/bearing/unpainted surfaces (e.g. dogs, hinge-pins, hold open device pivot pins, linkage rods, toggle threads, etc.) and then cycle all affected parts (e.g. pins, dogs, hinges, etc). Apply grease to all zerk fittings while cycling the associated shaft/bearing assemblies, clean all excess grease. Apply a thin coat of silicone compound or carnauba wax to all door/hatch/scuttle gaskets, allow 10 minutes drying time then buff gaskets to remove excess sealing compound. Apply a thin coat of aircraft and instrument grease, to the surface of the door striker catch of the three weather tight doors. Tighten all loose fasteners, and make all other necessary adjustments to ensure a tight seal. (MPC B60016.0, MPC B61012.0, MPC B61013.0, B62017.0, MPC B61031.0)
4	HANDRAILS, SAFETY CHAINS, LIFELINES, STANCHIONS, AND GANGWAY MAINTENANCE – Using detergent and water, clean all handrail, safety chain, lifeline, stanchion, and gangway assembly component surfaces with a general purpose detergent and water, use a wire brush where appropriate. Disassemble these items to the level necessary to gain access to all surfaces. At reassembly, apply a light coat of antiseize compound to all uncoated surfaces (e.g. sister hooks, threaded surfaces, etc.) Coat all handrail sockets with antiseize. Renew all cotterpins. (B11008.0, B11012.0, B11010.0)
5	ANCHOR AND ANCHOR CHAIN MAINTENANCE - Anchor and Anchor Chain - Inspect the entire anchor chain for discrepancies (e.g. Missing studs, Bent links, Corrosion, Sharp gouges, Loose studs, cracks, etc.). Apply a thin coat of lubricant (PN 016001) to the entire chain. Allow adequate time for drying then re-stow the anchor. (MPC P24104.0)
6	HAWSER REEL MAINTENANCE - Inject grease PN 71032 into all associated lubrication fittings. (MPC P24108.0)
7	FWD, AFT PORT and AFT STBD CAPSTAN MAINTENANCE - Clean, operate, and inspect the all capstans. While rotating the capstans, inject grease, P/N: ALVANIA EP2, into the zerk fitting on each capstan until clean grease exits the vent channel. Renew the gear case oil in each capstan (MPC P27014.0, MPC P27025.0)
8	J-BAR DAVIT MAINTENANCE - Remove/clean all old grease and contaminants from the wire rope. Inspect all wire rope end fittings and exposed wires for discrepancies (e.g. damage, corrosion, broken wires, distortion, etc.). Re-lubricate the wire rope and drum, working grease into the valleys, as well as between strands. (MPC P27109.0)
9	LOCKER AND SPECIAL STOWAGE MAINTENANCE (ALL FITTINGS LISTED IN TABLE 5 BELOW) – Wipe clean all locker surfaces with water/soap solution. Remove all old grease/lubricants to the greatest extent practicable from dogs, latches, hinges, etc. Re-lubricate all uncoated surfaces using P/N: ALVANIA EP2 grease and P/N: MIL-PRF-17331 oil, and antiseize compound, P/N: 34395. Return all lockers and stowages to normal/stowed position. (MPC Q30005.0)
10	WEATHER DECK DRAIN CLEANING AND INSPECTION (ALL FITTINGS LISTED IN TABLE 6 BELOW) Remove deck drain covers, clean out deck drains and all associated piping to remove all debris and foreign material. Inspect all associated surfaces to identify all discrepancies requiring repair (e.g. excessive rust/corrosion, etc.) Reassemble applying antiseize compound to all fasteners.– (MPC M25010.0)

TABLE 3

BELOW DECK PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
11	CURSORY VISUAL INSPECTION OF VARIOUS PIPING SYSTEMS – To identify all serious/urgent discrepancies (e.g. leaking flanges and valves, sized valves, pin holes in pipe, etc.), and without performing any significant disassembly to gain access, and in the presence of a Coast Guard Inspector or the COR/PE, conduct a cursory visual inspection of the easily accessible areas of the following piping systems: all diesel engine cooling water ppg, all auxiliary sea water ppg, all sewage and grey water ppg, all potable water ppg, all fuel oil ppg, all bilge water ppg. INSPECTION REPORT – Submit a CIR detailing all discrepancies found with recommended repairs, also include findings from the piping inspections detailed in Task 11 above, and the bilge inspections detailed in Task 12 below.
12	BILGE CLEANING, INSPECTION, AND TOUCH-UP PRESERVATION PORT STEERING GEAR ROOM (3-40-2-E) STBD STEERING GEAR ROOM (3-40-1-E) GENERATOR ROOM (3-36-0-E)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

	ENGINE ROOM (3-27-0-E) FWD AUX SPACE (3-3-0-E) Clean (e.g. pressure wash, hand wash, wipe down, etc.) all bilge surfaces in the compartments designated above free of all foreign materials, such as dirt, oil, sediment or sludge. Remove all persistent residues, taking care not to damage the coating system or to allow any contamination to enter the machinery. Remove fluids, cleaning media, and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean, lint-free cloths. Collect, contain, and dispose of all fluids, wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Inspect all surfaces for discrepancies and Submit a CIR detailing all findings and all recommended repairs in conjunction with reports for Tasks 1 & 11. Perform up to 9 sqft of touch-up coating repairs in each bilge area designated below (all additional coating repairs, above 9 sqft per bilge area, shall be handled by CFR/CR). Do not disturb undamaged coatings. Carefully prepare (e.g. feather-in, etc.) failed areas in accordance with SSPC-SP 11 to achieve at least a 1.0 mil profile, not to exceed a 3.5 mil profile. Touch-up coat the bilge surfaces in accordance with SFLC Std Spec 6310. NOTE: If structural discrepancies are discovered in conjunction with performing this task all repairs (growth work) shall be charged to the "Hull Plating, Inspect (DD1)" work item (CLIN 3 in this package).
13	POTABLE WATER AND REVERSE OSMOSIS SYSTEMS – Open the potable water hose locker and inspect all hoses for discrepancies (e.g. damaged fittings, hose slipping out of fitting, fraying and other hose defects, etc. MPC M33010.0) Check the RO System performance in accordance with MPC M34005.0 Test the water heater temp/press relief valve in accordance with MPC B30015.0. Remove belt guard and inspect RO Unit HP Pump belts for discrepancies (e.g. cracking, glazing, fraying, wear, etc.). Verify drive belts are properly tensioned and aligned, make all necessary adjustments as required (paragraphs 5 and 6 of MPC M34020.0). Inspect the port and stbd potable water "Y" strainers and all associated seals and gaskets for discrepancies (e.g. dents, holes, cuts cracks, etc.) in accordance with B24312.0. Inspect the water heater tank for discrepancies. Drain sediment from the water heater tank in accordance with MPC B24314.0 Test the water bromine concentration of the water in the potable water tank in accordance with MPC M33014.0 (A-C-533-47). Test and calibrate the salinity meter then test the #1 and #2 RO salinity cells in accordance with MPC M34047.0. Test the potable water accumulator pressure in accordance with MPC B24311.0. Test the mess deck, main engine room, and emergency generator room eyewash stations in accordance with MPC M33005.0. (MPC M33010.0, M34005.0, M30015.0, M34020.0, B24312.0, B24314.0, M33014.0, M34047.0, M34047.0, B24311.0, M30015.0, M33005.0, AFC30)
14	BILGE AND OILY WATER SEPARATOR SYSTEM – Inspect and clean the oily bilge simplex strainer in accordance with MPC M28018.0. Inspect and lube 15ea bilge valves in accordance with MPC M27008.0. Clean and inspect the Oily Water Separator Y strainer in accordance with MPC M28014.0. Wash the Oily Water Separator petroleum hydrocarbon (THP) monitor glass in accordance with MPC M28016.0. Test (3)ea. OWS control valves in accordance with MPC M28020.0. Test the remote valve operator (1-35-2) through a complete open/close cycle in accordance with MPC M28022.0. Test the de-watering sump pump in accordance with MPC M27020.0. (MPC M28018.0, M27008.0, M28014.0, M28016.0, M28020.0, M28022.0, M27020.0, AFC30)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

15	FUEL OIL SYSTEM – Clean and inspect (3)ea. fuel oil strainers in accordance with MPC M41045.0. Clean and inspect the Small Boat Fill Station Emergency Stop switch/enclosure in accordance with MPC M41055.0. Inspect and lubricate (6)ea. remotely operated fuel valves in accordance with MPC M41015.0. Strip oily water from the (8)ea. fuel tanks into the oily water tank, while verifying all associated transfer pumps and suction/discharge valves are functioning properly with no discrepancies, in accordance with MPC B24100.0. Operate and inspect (5)ea. fuel oil hand pumps in accordance with MPC M410105.0. (M41045.0, M41055.0, M41015.0, B24100.0, M41005.0, M41005.0, M41005.0, M41005.0, M41005.0, AFC30)
16	SEWAGE AND GREY WATER SYSTEM – Disassemble, clean, inspect, and reassemble all (26) interior deck drain strainers/screens and drain-bodies in accordance with MPC M25001.0. Test and verify the sewage vacuum system develops and holds pressure in accordance with MPC M35009.0. If the work item titled “Sewage and Grey Water System, Clean and Inspect” is part of this contract, this work is already specified, do not execute, or duplicate pricing of this work, with this CLIN. After the sewage holding tank has been drained, disassemble, clean, inspect, and reassemble the firemain strainer associated with the sewage system tank in accordance with MPC M35005.0. Inspect and test (78)ea. grey water system valves in accordance with MPC M36008.0. (M25001.0, M35009.0, M35005.0, M36008.0, AFC30)
17	MAIN SEA WATER, AUXILIARY SEA WATER, AND FIREMAIN SYSTEMS – Open and inspect the R/O Seawater Duplex Strainer for discrepancies (e.g. holes, cracks, cuts, cracks, etc.). Clean the strainer baskets and reassemble in accordance with MPC M34045.0. Open, inspect, remove the baskets/strainers, and clean (2)ea. HVAC Y Strainers and (2)ea. HVAC Simplex Strainers in accordance M24010.0. Conduct an inspection of the magazine sprinkler system to identify discrepancies prior to testing, then test the magazine sprinkler control valve in accordance with MPC M22012.0. Clean, inspect, and operate the P-100 Seawater valve in accordance with MPC M20023.0. Flush (operate) the firemain system to clean loose debris from piping and verify operation of the engine room and fwd aux space fire pumps in accordance with MPC M21005.0 (R-S-1637). Inspect all sea chest valves designated in Table 4 below for all discrepancies and perform minor maintenance (e.g. tighten loose fasteners, clean the valve stem and reach rod assemblies, clean and grease deck fitting caps threads, etc.). Operate each valve, (motorized and manually) through its full range of motion at all control stations (e.g. on the MMS console, on the valve, at remote manual stations, etc.) verify ease of operation, “FULL OPEN” and “FULL CLOSED” indicators function properly in accordance with M20004.0. NOTE: The following MPCs are executed under the work item titled “ASW/Firemain System Components, Renew/Overhaul” herein: M20010.0, M20012.0, M24020.0 NOTE: The following MPC is executed under the work item titled “Impressed Current Cathodic Protection (ICCP) and Anti-Fouling System, Inspect and Maintain” herein: L12032.0. (MPC M34045.0, M24010.0, M22012.0, M20023.0, M21005.0 (R-S-1637), M20004.0, M20010.0, M20012.0, M24020.0, M25010.0, L12032.0)

TABLE 4

WATERTIGHT DOORS LOCATIONS (11)	
1	Mid-Main Deck Stbd 1-27-1 (Passage 1-17-0-L)
2	Mid-Main Deck Port 1-27-2 (Passage 1-17-0-L)
3	FWD DC Locker 1-11-2

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

4	Aft DC Locker 1-35-1
5	Magazine Room 1-8-1
6	Emergency Generator Room 1-10-1
7	Generator Room 3-35.5-1
8	Passage 2-25.5-0
9	Passage 2-17-0
10	Main Engine Room 3-27-1
11	FWD Aux. Space 2-10-0
WEATHERTIGHT DOORS LOCATIONS (3)	
12	Mid "01" Weather Deck Starboard (Pilot House) 01-22-1
13	Mid "01" Weather Deck Port (Pilot House) 01-22-2
14	Aft "01" Weather Deck (Pilot House) 01-27-0
HATCH LOCATIONS (13)	
15	Forward "01" Weather Deck 1-15-1
16	Pilot House Fwd Lockers 01-19-1
17	Pilot House Fwd Lockers 01-19-2
18	Pilot House Fwd Lockers 01-19-3
19	Pilot House Fwd Lockers 01-19-4
20	Fwd Main Deck Boatswain Storage
21	Fwd Aux. Space 1-6-1
22	Aft Main Deck Main Engine Room 1-34-2
23	Aft Main Deck Generator Room 1-39-2
24	Aft Main Deck Port Steering Gear Room 1-41-1
25	Aft Main Deck Stbd Steering Gear Room 1-41-2
26	Passage 1-16-1
27	Mess Deck 1-17-1
MANHOLE LOCATIONS (2)	
28	Boatswain Storage (Void Space) 1-2-2
29	Gun Foundation

TABLE 5

AFT 01 WEATHER DECK LOCKERS	
1	Flag Locker
2	Pyrotechnics Stowage Locker
3	50 CAL. Ready Service Locker
FWD 01 WEATHER DECK LOCKERS	
4	Damage Control Locker
5	50 CAL. Ready Service Locker
6	Stowage Locker 1 (TYP)
7	Stowage Locker 2 (TYP)
8	Stowage Locker 3 (TYP)
9	Stowage Locker 4 (TYP)
10	Stowage Locker 5 (TYP)
11	Stowage Locker 6 (TYP)
Passage 1-23-0-L LOCKERS	
12	Spare Fire Extinguishers
13	Locker Immersion Suit
14	Law Enforcement Stowage
15	Tech Book Storage
AFT MAIN WEATHER DECK LOCKERS	

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

16	First Aid Equipment Stowage Locker
17	Potable Water Hose Locker

TABLE 6

TYPE "C" DECK DRAINS	
1	Aft pilothouse roof, port
2	Aft pilothouse roof, stbd
3	01 Weather deck, frame 27, centerline
4	01 Weather deck, frame 23, stbd
5	01 Weather deck, frame 23, port
6	01 Weather deck, frame 35, stbd
7	01 Weather deck, frame 35, port
8	Main Weather deck, frame 32, centerline
FLUSH HATCH DRAINS	
9	Main Weather deck, frame 5, port
10	01 Weather deck, frame 16, centerline

3.3 Touch-up Preservation requirements. Prepare and coat all new and disturbed interior and exterior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) or Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

None.

WORK ITEM 2: Various Maintenance (AFC45), Perform**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Rope, Fibrous, Amsteel Blue	P/N: 8720328 NIIN: 01-673-9963	1	500
Y	Life Raft NOTE: After existing life rafts are packaged and turned over to the COR by the Contractor, the COR will furnish to the Contractor new or overhauled life rafts supplied by NAVY.	N/A	2	6000

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES**COAST GUARD DRAWINGS**

Coast Guard Drawing 154-WPC-256-301, Main and Auxiliary Cooling System Diagram

Coast Guard Drawing 154-WPC-261-201, Fuel Oil Service System Arrangement

Coast Guard Drawing 154 WPC 310-301, Rev A, Electrical One Line Diagram

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Drawing 154-WPC-521-301, Firemain System and Magazine Sprinkler Diagram
Coast Guard Drawing 154-WPC-528-301, Grey Water System Diagram
Coast Guard Drawing 154-WPC-529-301, Bilge System Diagram
Coast Guard Drawing 154B WPC 533-201, Rev -, Potable Water System Arrangement
Coast Guard Drawing 154 WPC 533-301, Rev E, Potable Water System Diagram
Coast Guard Drawing 154-WPC-541-201, Fuel Oil Transfer System Arrangement
Coast Guard Drawing 154-WPC-541-260, Fuel Oil Transfer System A&D-Module 60
Coast Guard Drawing 154-WPC-541-301, Fuel Oil Service and Transfer System
Coast Guard Drawing 154 WPC 551-301, Rev B, Compressed Air System Diagram
Coast Guard Drawing 154 WPC 582-201, Rev -, Mooring and Towing A&D
Coast Guard Drawing 154B-WPC-593-201, Sewage System Arrangement
Coast Guard Drawing 154-WPC-593-202, Oily Bilge System Arrangement
Coast Guard Drawing 154B-WPC-593-202, Oily Bilge System Arrangement
Coast Guard Drawing 154-WPC-593-301, Sewage System Diagram
Coast Guard Drawing 154-WPC-593-302, Oily Bilge System Diagram
Coast Guard Drawing 154 WPC 601-302, Rev C, General Arrangement

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014,
Requirements for Preservation of Ship Structures
Coast Guard Maintenance Procedure Card (MPC) P20012.D SERVICE CBM WINCH OIL
Coast Guard Maintenance Procedure Card (MPC) P27025.D REPLACE CAPSTAN GEAR OIL
Coast Guard Maintenance Procedure Card (MPC) P20020.D TEST CUTTER BOAT WINCH
LOAD
Coast Guard Maintenance Procedure Card (MPC) P27110.D TEST J-BAR DAVIT ANNUAL
WEIGHT
Coast Guard Technical Publication (TP)8004-593-A, Oily Water Separator Boss 107 Separator
System-Model 2.2/107 YM
Coast Guard Technical Publication (TP) 8105-533-A, Preliminary - Watermaker/Brominator
Reverse Osmosis Model - FRC-B 1600
Coast Guard Technical Publication (TP)8106-077-A, Eye/Face Wash and Body Spray Station
Coast Guard Technical Publication (TP)8110-533-A, Commercial Point of Use Tank Water
Heater Model: EGSP15 Use and Care Manual
Coast Guard Technical Publication (TP)8015-593-A, Jets Vacuum Sanitation System-Model
JETS 30MB-D
Coast Guard Technical Publication (TP)8019-233-A, Preliminary-Main Propulsion Diesel Engine
MTU 20V4000M93L
Coast Guard Technical Publication (TP)8159-524-A, "Y" Strainer-Model 352M and 851M
Coast Guard Technical Publication (TP)8196-524-A, Strainer, Simplex-Model 72-12, 72-14F, 72-
16FL
Coast Guard Technical Publication (TP)S9522-AA-HBK-010-522-A, Magazine Sprinkler System

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Technical Publication (TP)8210-593-A, Preliminary Simplex Basket Strainer Model 72

Coast Guard Maintenance Procedure Card (MPC) M28044.D, INSP/CLN OWS INTERNAL CLEANING

Coast Guard Maintenance Procedure Card (MPC) M27003.D, INSP/CLN ROSE BOX STRAINERS

Coast Guard Maintenance Procedure Card (MPC) M41049.D, CHECK NFV F/O TREATMENT SYS

Coast Guard Maintenance Procedure Card (MPC) M34022.D, SERVICE R/O HIGH PRESSURE PUMP- PORT

Coast Guard Maintenance Procedure Card (MPC) M34022.D, SERVICE R/O HIGH PRESSURE PUMP- STBD

Coast Guard Maintenance Procedure Card (MPC) M34015.D, REPLACE R/O CARBON FILTER PORT

Coast Guard Maintenance Procedure Card (MPC) M34015.D, REPLACE R/O CARBON FILTER STBD

Coast Guard Maintenance Procedure Card (MPC) M34030.D, REPLACE R/O HP PUMP OIL- PORT

Coast Guard Maintenance Procedure Card (MPC) M34030.D, REPLACE R/O HP PUMP OIL- STBD

Coast Guard Maintenance Procedure Card (MPC) M24018.D, TEST SSDG R/W RELIEF VALVES

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. If a discrepancy is identified while performing the various inspections associated with Tasks 1 through 8 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	CUTTER BOAT MEDIUM (CBM) WINCH MAINTENANCE – Renew the gear oil in the CBM Winch (MPC P20012.D) If wire rope is installed, remove and dispose of the wire rope. Renew, or install new, fibrous rope using Government-furnished Amsteel Blue fiber rope. (MPC P20019.D)
2	PULL TEST CBM WINCH AND WEIGHT TEST J-BAR DAVIT –. Inspect and pull test the CBM Winch in accordance with MPC P20020.D by moving the small boat out of the notch, shackling a dynamometer to the winch cable and two double-bits near the transom, then pulling with the winch to 6,875lbs (+0 lbs – 10 lbs) and holding for 10 minutes. Submit a CFR affirmatively certifying the winch passed and detailing any noted discrepancies. Inspect and weight test (static, dynamic, and rated loads) the J-Bar davit using Govt-furnished test weights in both port and stbd deck sockets in accordance with MPC P27110.D. (MPC P20020.D, MPC P27110.D)
3	POTABLE WATER AND REVERSE OSMOSIS SYSTEMS – Remove the port and stbd RO HP Pump, remove associated pulleys, remove/disassemble/overhaul the associated manifold, and service the associated crankcase seals in accordance with MPC M34022.D. Renew the port and stbd RO carbon filter in accordance with MPC M34015.D. Renew the port and stbd RO HP pump gear case oil in accordance with MPC M34030.D. (MPC M34022.D, M34015.D, M34030.D)
4	BILGE AND OILY WATER SEPARATOR SYSTEM – Perform all of the OWS maintenance (e.g. internal cleaning, etc) in accordance with MPC M28044.D Disassemble, clean, and inspect (21)ea rose box strainer in the bilge in accordance with MPC M27003.D. (MPC M28044.D, M27003.D)
5	FUEL OIL SYSTEM – Perform various tests on the NFV Fuel Oil Treatment system in accordance with MPC M41049.D. (MPC M41049.D)
6	SEWAGE AND GREY WATER SYSTEM – N/A

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

7	AUXILIARY SEA WATER AND FIREMAIN SYSTEMS – Shop test the port and stbd SSDG raw water relief valve in accordance with MPC M24018.D NOTE: The following MPC is executed under the work item titled ““Impressed Current Cathodic Protection (ICCP) and Anti-Fouling System, Inspect and Maintain” herein: L11020.D (MPC M24018.D, L11020.D)
8	LIFE RAFTS – Remove both life rafts from the cutter. Package each for shipment and turn over to the COR. Reinstall 2 new or overhauled life rafts that will furnished by the COR.

3.3 Touch-up Preservation requirements. Prepare and coat all new and disturbed interior and exterior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) or Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

None.

WORK ITEM 3: Electrical System Maintenance (AFC30 ODMS), Perform

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Filter Element, Fluid	P/N: 3100308 2940-01-509-8960	2 ea.	\$15.33
N	Filter Element, Fluid,	P/N: 2020PM-OR 2910-01-344-5791	4 ea.	\$8.44
N	Gasket	P/N: 11007 5330-01-046-1990	4 ea.	\$2.46
N	Air Cleaner, Intake	P/N: 3924893 2940-01-415-6363	1 ea.	\$104.14
N	Disc, Glass ODMS-PARTS KIT, FIRE CONTROL	P/N: 10250TGL 1290-01-628-5484	3 ea.	\$2.79

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154-WPC-085-201, Propulsion System, SSDG, EDG Installation Drawings

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Drawing 154B-WPC-085-201, Propulsion System, SSDG, EDG Installation Drawings
Coast Guard Drawing 154-WPC-202-301, Machinery Control and Monitoring System
Coast Guard Drawing 154B-WPC-202-301, Machinery Control and Monitoring System (MCMS)
Coast Guard Drawing 154-WPC-202-301, Machinery Control & Monitoring System (MCMS) Cable Block Diagram
Coast Guard Drawing 154-WPC-202-302, Machinery Control and Monitoring System, I/O Schedule
Coast Guard Drawing 154-WPC-204-301, Equipment Removal Plan
Coast Guard Drawing 154-WPC-310-301, Electrical One Line Diagram
Coast Guard Drawing 154-WPC-313-301, DC System Wiring Diagram
Coast Guard Drawing 154-WPC-320-301, 450V System Deck Plan
Coast Guard Drawing 154-WPC-330-301, Lighting System Deck Plan
Coast Guard Drawing 154-WPC-330-301, 120V System Deck Plan
Coast Guard Drawing 154-WPC-324-302, Ship's Service Switchboard Wiring Diagram
Coast Guard Drawing 154-WPC-324-301, Generator and Switchboard Drawing
Coast Guard Drawing 154-WPC-541-301, Fuel Oil Service and Transfer System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures
Coast Guard Technical Publication TP 8006-311-A, Parker/Racor Filter Assembly Marine Turbine - Model 751000MAX
Coast Guard Technical Publication TP 8051-311-A, Ship Service Diesel Generator (SSDG) Series QSM11-DM
Coast Guard Technical Publication TP 8051-311-A, Preliminary-Ship Service Diesel Generator (SSDG)-Volume 1 of 7
Coast Guard Technical Publication TP 8051-311-C, Preliminary Ship Service Diesel Generator (SSDG)-Volume 3 of 7
Coast Guard Technical Publication TP 8051-311-D, Preliminary-Ship Service Diesel Generator (SSDG)-Volume 4 of 7
Coast Guard Technical Publication TP 8051-311-F, Preliminary-Ship Service Diesel Generator (SSDG)-Volume 6 of 7
Coast Guard Technical Publication TP 8054-312-A, Emergency Generator Series 6BTA5.9DM
Coast Guard Technical Publication TP 8054-312-A, Preliminary - Emergency Generator Series 6BTA5.9-DM
Coast Guard Technical Publication TP 8075-324-A, Preliminary-Ship Service Switchboard-Model 2009-41R1000
Coast Guard Technical Publication TP 8076-324-A, Preliminary - Emergency Switchboard - Model 2009-41R2000
Coast Guard Technical Publication TP 8128-320-A, Preliminary-Motor Controllers Freedom 2100 Motor Control Center

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) D13041.0, Test SSDG Emergency Shutdown-PORT

Coast Guard Maintenance Procedure Card (MPC) D13041.0, Test SSDG Emergency Shutdown-STBD

Coast Guard Maintenance Procedure Card (MPC) D13135.0, Replace SSDG PORT FWD FLTR/SEP

Coast Guard Maintenance Procedure Card (MPC) D13135.0, Replace SSDG PORT AFT FLTR/SEP

Coast Guard Maintenance Procedure Card (MPC) D13135.0, Replace SSDG STBD FWD FLTR/SEP Drains

Coast Guard Maintenance Procedure Card (MPC) D13135.0, Replace SSDG STBD AFT FLTR/SEP

Coast Guard Maintenance Procedure Card (MPC) M00700.0, Check/Service SSDG Hoses-PORT

Coast Guard Maintenance Procedure Card (MPC) M00700.0, Check/Service SSDG Hoses-STBD

Coast Guard Maintenance Procedure Card (MPC) M00800.0, Check/Service SSDG (Hull Group) Hoses

Coast Guard Maintenance Procedure Card (MPC) D13012.0, Inspect SSDG Engine Wiring Harness-PORT

Coast Guard Maintenance Procedure Card (MPC) D13012.0, Inspect SSDG Engine Wiring Harness-STBD

Coast Guard Maintenance Procedure Card (MPC) D13038.0, Inspect SSDG Mounts-PORT

Coast Guard Maintenance Procedure Card (MPC) D13038.0, Inspect SSDG Mounts-STBD

Coast Guard Maintenance Procedure Card (MPC) D13319.0, Inspect SSDG Turbocharger-PORT

Coast Guard Maintenance Procedure Card (MPC) D13319.0, Inspect SSDG Turbocharger-STBD

Coast Guard Maintenance Procedure Card (MPC) D13520.0, Test SSDG Coolant-PORT

Coast Guard Maintenance Procedure Card (MPC) D13520.0, Test SSDG Coolant-STBD

Coast Guard Maintenance Procedure Card (MPC) D13523.0, Replace SSDG Coolant Filter-PORT

Coast Guard Maintenance Procedure Card (MPC) D13523.0, Replace SSDG Coolant Filter-STBD

Coast Guard Maintenance Procedure Card (MPC) D13615.0, Wash SSDG ENG Sea WTR SYS-PORT

Coast Guard Maintenance Procedure Card (MPC) D13615.0, Wash SSDG ENG Sea WTR SYS-STBD

Coast Guard Maintenance Procedure Card (MPC) L11001.0, Inspect SSDG Zinc Anode-PORT

Coast Guard Maintenance Procedure Card (MPC) L11001.0, Inspect SSDG Zinc Anode-STBD

Coast Guard Maintenance Procedure Card (MPC) D13018.0, INSP/CLN EDG Wiring Harness

Coast Guard Maintenance Procedure Card (MPC) D13050.0, Inspect EDG Mounts

Coast Guard Maintenance Procedure Card (MPC) D13160.0, Inspect EDG F/O PMP Mount Hardware

Coast Guard Maintenance Procedure Card (MPC) D13325.0, Replace EDG Air Filter

Coast Guard Maintenance Procedure Card (MPC) D13328.0, Inspect EDG Intake Piping

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) D13400.0, INSP/CLN EDG ENG Crankcase Breather

Coast Guard Maintenance Procedure Card (MPC) D13542.0, INSP/CHK EDG Radiator Press Cap

Coast Guard Maintenance Procedure Card (MPC) D13543.0, Inspect EDG Radiator

Coast Guard Maintenance Procedure Card (MPC) D13714.0, Test EDG Emergency Shutdown

Coast Guard Maintenance Procedure Card (MPC) D13800.0, Inspect EDG Drive Belt

Coast Guard Maintenance Procedure Card (MPC) D13802.0, Inspect EDG Cooling Fan

Coast Guard Maintenance Procedure Card (MPC) D13804.0, Inspect EDG Cooling Fan Belt Tensioner

Coast Guard Maintenance Procedure Card (MPC) D13808.0, INSP/CLN EDG Gen Windings

Coast Guard Maintenance Procedure Card (MPC) B60010.0, Test Door Switches-Cutout Relays

Coast Guard Maintenance Procedure Card (MPC) B60012.0, Adjust Door Contact Closure Switch

Coast Guard Maintenance Procedure Card (MPC) D13000.0, Test Generator Emergency Stop

Coast Guard Maintenance Procedure Card (MPC) D13016.0, Test GEN Reverse Power Function

Coast Guard Maintenance Procedure Card (MPC) D20040.0, Check/Service Shore Tie Cable

Coast Guard Maintenance Procedure Card (MPC) D21001.0, INSP/CLN SWBDS/ Emergency SWBDS

Coast Guard Maintenance Procedure Card (MPC) D40018.0, Test EMG Fluorescent Lighting

Coast Guard Maintenance Procedure Card (MPC) D70026.0, INSP/CLN Automatic Bus Transfer

Coast Guard Maintenance Procedure Card (MPC) D70027.0, INSP/CLN Manual Bus Transfer

Coast Guard Maintenance Procedure Card (MPC) D70028.0, Test Manual Bus Transfer

Coast Guard Maintenance Procedure Card (MPC) D70031.0, Test Automatic Bus Transfer

Coast Guard Maintenance Procedure Card (MPC) E75022.0, Test Break Glass STA Alarm Dialer

Coast Guard Maintenance Procedure Card (MPC) E75024.0, Test EOT

Coast Guard Maintenance Procedure Card (MPC) E75035.0, Test Door/Hatch Switch

Coast Guard Maintenance Procedure Card (MPC) E75036.0, Test Bilge Level Switch Alarm

Coast Guard Maintenance Procedure Card (MPC) M00900.0, Check/Service, EDG Flex Hoses

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

None

3.1.2 Tech Rep.

Not applicable.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.1.3 **Protective measures.** The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 **Interferences.** The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

3.2 **Perform preventive maintenance tasks described in Table 2.** The Contractor shall perform all maintenance described in Table 2. If a discrepancy is identified while performing the various inspections associated with tasks described in Table 2 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	Both Ship Service Diesel Generators, Test, Inspect, Clean, Service, or Renew - . Test the port and starboard SSDG emergency shutdown(s). (2) ea. Air shutdown pull cable(s) are located in the engine room. The (6) pull button stop switches are on the P/S generator switchboard, P/S generator local control panel(s) and pilot house – Submit a CFR. Use MPC D13000.0, and D13041.0 as reference. Renew (2) ea. (4 total) port and starboard SSDG's forward and aft fuel filter/separator element(s) in accordance with MPC D13135.0. Inspect all port and starboard SSDG's flexible hoses, hose clamps, hose fittings, chafing gear, pipe hangers and hose tags – Submit a CFR. Use MPC M00700.0 and MPC M00800.0 as reference. Inspect the port and starboard SSDG's wire harness/cable(s) for heat damage, cracked insulation, broken/damaged connectors, insulation creep at connector(s), and electrical connections for tightness. Submit a CFR. Use MPC D13012.0 as reference. Test the port and starboard SSDG's engine coolant in accordance with MPC D13520.0. Renew both port and starboard SSDG coolant filter(s) (1) ea. (2 total) in accordance with MPC D13523.0. Inspect the port and starboard generator and engine mounts (8 ea.) (16 total), look for cracks, swelling, and blistering in metal and rubber components. Check and tighten loose fasteners to torque specs. Measure mount height at four corners and compare to original stamped height. Submit CFR. Use MPC D13038.0 as reference. Inspect the port and starboard SSDG Turbocharger(s), verify mounting nuts and V-clamp are torqued correctly. Inspect for leaks or damage. Use MPC D13319.0 as reference. Clean and inspect the port and starboard SSDG's seawater system. Flush potable water through the SSDG's engine seawater system until the water exiting the system runs clear. Inspect three for each generator (6 total; after cooler inlet, after cooler outlet and heat exchanger) in accordance with MPC L11001.0 and D13615.0.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

2	Emergency Diesel Generators (EDG), Check/Service, Inspect/Clean and Test – Test the EDG's air shutdown and 3 emergency stop switches in accordance with MPC D13714.0 and D13041.0. Inspect and clean EDG wiring harness, use MPC D13018.0.0. Inspect EDG engine mounts, look for cracks, swelling, and blistering in metal and rubber components. Check and tighten loose fasteners to torque specs. Measure mount height at four corners and compare to original stamped height. Submit CFR. Use MPC D13050.0 as reference. Inspect EDG F/O injection pump mount hardware. Use MPC D13160.0 as reference. Inspect and the EDG air intake piping and EDG engine crankcase breather tube and replace EDG air filter. Use MPC D13328.0, D13400.0 and D13325.0 as reference Inspect and clean the EDG radiator and radiator press cap in accordance with MPC D13542.0 and D13543.0. Inspect the EDG cooling fan, drive belt and cooling fan belt tensioner in accordance with MPC D13802.0, D13802.0, and D13804.0 Inspect and clean EDG windings in accordance with MPC D13808.0. Clean and inspect the generator vent grill, filters, terminal box, exciter windings, field windings, diodes, insulating boards, internal wiring and check connections for tightness Inspect all EDG flexible hoses, hose clamps, hose fittings, chafing gear, pipe hangers and hose tags – Submit a CFR. Use MPC M00900.0 as reference.
3	Ship's Service and Emergency Switchboards, Inspect, Clean and Test – Clean and inspect the ships service swbd, emergency swbd and port & stbd MCCs. Inspect wiring and components for overheating, damage and deterioration. Check connections for tightness, exercise all circuit breakers and verify proper operation. Use MPC D21001.0 as reference. Test both SSDG and EDG Reverse Power Function – use MPC D13016.0 as reference. Clean, inspect and test the (4 ea.) automatic bus transfer(s) and (2 ea.) manual bus transfer(s). Inspect wiring for cracked frayed or broken insulation. Inspect all connections for tightness. Inspect and test each transfer switch for proper operation, transfer switch contacts for pitting, misalignment and overheating in accordance with MPC D70026.0, D70031.0, D70027.0 and D70028.0. Submit CFR. Check and service shore tie cable in accordance with MPC D20040.0. Lay out cable and inspect for cracks, flat spots, bulges, chafing and punctures. Inspect pier side of plug for heat damage to pins, bent pins, damaged housing, bent plug retaining ring and or missing plug hardware. Inspect ship side plug for broken latches, damaged housing, broken safety shutter or missing cover. Wipe cable clean and clean both shore and pier side plugs. Submit CFR.
4	Alarms and Switches Test (4) ea. break glass station alarm dialers in accordance with MPC E75022.0, by unscrewing the glass retainer until alarm activates at MCMS. Reset the alarm at the pilothouse dialer panel. Submit CFR. Test a total of (56) ea. emergency fluorescent lighting fixtures by pressing fixture test button in accordance with MPC D40018.0. Test (3) ea. door switch and cut out relay in accordance with MPC D60010.0, to ensure no light is detected when doors are opened. Adjust door limit switch in accordance with MPC D60012.0 as necessary. Test the engine order telegraph system in accordance with MPC D75024.0, by initiating an engine order from the bridge console and acknowledging the light and buzzer/bell sound on at the bridge and engine room.

4. NOTES

None

WORK ITEM 4: Electrical System Maintenance (AFC45 ODMS), Perform

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Gasket	P/N: 3883220 NSN: 5330-01-391-5262	1 ea.	84.56
N	Separator, Water, Liquid Fuel (Fuel Filter)	P/N: FS1009 NSN: 4330-01-530-1107	1 ea.	17.59
N	Filter Element Fluid,	P/N: LF14000NN NSN: 2940-01-486-0989	1 ea.	26.75
N	Filter Element Fluid	P/N: 3937743 NSN: 2940-01-497-1469	2 ea.	6.51
N	Parts Kit, Engine Water Pump	P/N: 5260394 NSN: 2930-01-585-9285	1 kt.	379.11
N	Cover, Electrical Connector	P/N: 65002-033 NSN: 5935-01-047-8130	1 ea.	5.21
N	Jack, Telephone	P/N: 9000S6505F74209 NSN: 5935-00-258-8947	1 ea.	23.60
N	O-Ring	P/N: M83461/1-339 NSN: 5331-01-162-4706	1 ea.	.62

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154-WPC-202-301, Machinery Control and Monitoring System
Coast Guard Drawing 154-WPC-202-302, Machinery Control and Monitoring System, I/O Schedule
Coast Guard Drawing 154 WPC-256-301, Main and Auxiliary Cooling System Diagram
Coast Guard Drawing 154 WPC-259-201, Exhaust Piping System Arrangement
Coast Guard Drawing 154 WPC-259-301, Exhaust Piping System Diagram
Coast Guard Drawing 154-WPC-310-301, Electrical One Line Diagram
Coast Guard Drawing 154-WPC-313-301, DC System Wiring Diagram
Coast Guard Drawing 154-WPC 320-301, 450V System Deck Plan
Coast Guard Drawing 154-WPC 324-301, Generator and Switchboard Drawing
Coast Guard Drawing 154-WPC 324-303, Emergency Switchboard Wiring Diagram
Coast Guard Drawing 154-WPC 330-301, 120V System Deck Plan
Coast Guard Drawing 154-WPC 422-301, Electrical Navigation Aids
Coast Guard Drawing 154-WPC 423-301, Electronic Navigation System
Coast Guard Drawing 154-WPC-433-301, Announcing Systems
Coast Guard Drawing 154-WPC 436-301, Fire Detection System
Coast Guard Drawing 154-WPC 513-201, Machinery Ventilation Arrangement
Coast Guard Drawing 154-WPC-521-301, Firemain System and Magazine Sprinkler Diagram
Coast Guard Drawing 154 WPC 551-301, Compressed Air System Diagram
Coast Guard Drawing 154 WPC 625-201, Window Arrangement
Coast Guard Drawing 154-WPC 633-301, Cathodic Protection System

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures
Coast Guard Technical Publication (TP) 8001B, Cathodic Protection System – Model CA44227
Coast Guard Technical Publication (TP) 8005, Seawater Service Pump 3 x 2.5 x 10
Coast Guard Technical Publication (TP) 8007, Fire Pump 2 x 1.5 x 10
Coast Guard Technical Publication (TP) 8011A, Fire/Gas Detection and Control System – Model PRO-2000X2S
Coast Guard Technical Publication (TP) 8012, Fire and Gas Damper – Model FDB2
Coast Guard Technical Publication (TP) 8017C, Preliminary-Straight Line Heavy Duty Wiper Twin and Triple Blade
Coast Guard Technical Publication (TP) 8032, NAV-IS Combined Ship's Log and Meteorological System
Coast Guard Technical Publication TP 8051, Ship Service Diesel Generator (SSDG) Series QSM11-DM

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Technical Publication TP 8054, Emergency Generator Series 6BTA5.9-DM
Coast Guard Technical Publication TP 8075A, Ship Service Switchboard-Model 2009-41R1000
Coast Guard Technical Publication TP 8076A, Emergency Switchboard – P/N 2009-41R2000
Coast Guard Technical Publication (TP) 8079A, C4ISR Maintenance and Systems Operational Manual
Coast Guard Technical Publication (TP) 8120, Hydrogen Sulfide Gas Detector -Model S4000TH
Coast Guard Technical Publication (TP) 8121, Air Compressor – CA Series, Model ES-20
Coast Guard Technical Publication (TP) 8123, Heating, Ventilation and Air Conditioning (HVAC) Equipment, Model FRC-514-P1
Coast Guard Technical Publication (TP) 8126A, Alarm and Announcing System – Software Functional Specification, P/N 90-415-L3
Coast Guard Technical Publication (TP) 8138, Fast Lube Oil Change System (FLOCS)-Model FLOCS-15 Electric Operation and Service Manual
Coast Guard Technical Publication (TP) 8150, Navigation Light Panel - Model NLSM5D13SNUG120ALDWLDPA-PFA
Coast Guard Technical Publication (TP) 8151, 12” 350 Watt Searchlight - Model XY3EDE-24ARF3 (154’ WPC)
Coast Guard Technical Publication (TP) 8155, Silencer Spark Arrestor, 3”- Model SSUS-03X-90007662
Coast Guard Technical Publication TP 8156, Silencer Five Inch Spark Arrestor-Model ES2Y-5
Coast Guard Technical Publication (TP) 8910, Preliminary-Technical Repair Standard for Emergency Diesel GenSet Series 6BTA5.9-DM
Coast Guard Maintenance Procedure Card (MPC) A52018.D, INSP/CHK EDG Fire Damper
Coast Guard Maintenance Procedure Card (MPC) D13007.D, Adjust SSDG Valve Lash
Coast Guard Maintenance Procedure Card (MPC) D13017.D, Test EDG Insulation Resistance
Coast Guard Maintenance Procedure Card (MPC) D13020.D, INSP/CHK SSDG Generator
Coast Guard Maintenance Procedure Card (MPC) D13030.D, Inspect EDG Terminal Leads
Coast Guard Maintenance Procedure Card (MPC) D13116.D, Replace SSDG Fuel Filter
Coast Guard Maintenance Procedure Card (MPC) D13215.D, Replace SSDG LO and Filter
Coast Guard Maintenance Procedure Card (MPC) D13221.D, Replace EDG Oil and Filter
Coast Guard Maintenance Procedure Card (MPC) D13416.D, INSP/CLN SSDG EXHST Soot Collector
Coast Guard Maintenance Procedure Card (MPC) D13418.D, Inspect SSDG Exhaust System
Coast Guard Maintenance Procedure Card (MPC) D13420.D, Inspect EDG Silencer and EXH SYS
Coast Guard Maintenance Procedure Card (MPC) D13528.D, INSP/CLN SSDG Heat Exchanger
Coast Guard Maintenance Procedure Card (MPC) D13532.D, Test EDG Coolant
Coast Guard Maintenance Procedure Card (MPC) D13613.D, Replace SSDG Raw Water Pump Impeller
Coast Guard Maintenance Procedure Card (MPC) D13901.D, INSP/CHK EDG Fan Hub
Coast Guard Maintenance Procedure Card (MPC) M20012.D, Test Electrical Receptacles
Coast Guard Maintenance Procedure Card (MPC) D20041.D, CHK/Service Shore Power Connection Box

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) D33012.D, INSP/CLN Transformer
Coast Guard Maintenance Procedure Card (MPC) D40010.D, INSP/CLN Searchlight Assembly
Coast Guard Maintenance Procedure Card (MPC) D42006.D, INSP/CLN Navigation Light Panel
Coast Guard Maintenance Procedure Card (MPC) D81009.D, INSP/CLN Batteries
Coast Guard Maintenance Procedure Card (MPC) D83012.D, INSP/CLN Battery Charger
Coast Guard Maintenance Procedure Card (MPC) E70008.D, Test Alarm Actuation System
Coast Guard Maintenance Procedure Card (MPC) E75005.D, Test Refrigerant Detection System
Coast Guard Maintenance Procedure Card (MPC) E75020.D, Test H2S Sewage Detection System
Coast Guard Maintenance Procedure Card (MPC) E75030.D, Test Alarm SYST Actuation PNL
Coast Guard Maintenance Procedure Card (MPC) E77005.D, INSP/CLN Phone System, Sound Powered
Coast Guard Maintenance Procedure Card (MPC) G00005.D, INSP/CLN Temperature & Humidity Sensor
Coast Guard Maintenance Procedure Card (MPC) L12014.0, Test Reference Electrodes
Coast Guard Maintenance Procedure Card (MPC) L12016.D, INSP/CLN ICCP Control Cabinet
Coast Guard Maintenance Procedure Card (MPC) M21015.D, Test Fire Pump MTR and Controller
Coast Guard Maintenance Procedure Card (MPC) M24022.D, Inspect Aux/SW Pump Motor Contrlr
Coast Guard Maintenance Procedure Card (MPC) M51023.D, Check Air Compressor Press SW
Coast Guard Maintenance Procedure Card (MPC) M70002.D, Inspect Window Wiper Blade
Coast Guard Maintenance Procedure Card (MPC) M70003.D, Inspect Window Wiper Drive Belt
Coast Guard Maintenance Procedure Card (MPC) M70025.D, INSP/CLN Window and Window Heaters
Coast Guard Maintenance Procedure Card (MPC) N30000.D, Test Fire Detection System
Coast Guard Maintenance Procedure Card (MPC) S00400.D, Test Non-Critical Temp Gauges

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. If a discrepancy is identified while performing the various inspections associated with tasks described in Table 2 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	BOTH SHIP'S SERVICE GENERATORS, INSPECT, CLEAN, ADJUST & TEST – Inspect both SSDG terminal leads, test stator phase windings insulation resistance, check rectifier diodes and surge suppressor (varistor). Submit CFR. Use D13020 as reference. Check/Adjust both SSDG's Valve Lash. Remove crankcase breather tubes. Remove cap screws, washers and noise isolators from rocker lever cover. Check cylinder number 1 for closed intake valve & closed exhaust valve. Adjust SSDG Valve Lash IAW Chapter B & C of D13007. Renew both SSDG's Fuel Filters, use D13116 as reference. Drain L/O of both SSDG's, Renew (2) Lube Oil Filters, and Renew L/O on both SSDG's, IAW Chapters B, C, & D of MPC D13215. On both SSDG's, Remove exhaust blankets to gain access to soot collector, inspect exhaust blankets, clean soot collector, and reinstall exhaust blankets. Use D13416 as reference. Remove exhaust blankets at the expansion joints and flanges, inspect exhaust blankets, inspect exhaust piping system, expansion joints and flanges, and reinstall exhaust blankets. Use D13418 as reference. Replace both SSDG's Raw Water Pump Impeller, use D13613 as reference. Remove cover plate and hardware, remove impeller using impeller puller, lubricate impeller and press in new impeller. Install cover plate and hardware. Inspect and clean both SSDG's Heat Exchangers, use D13528 as reference. Disconnect sensor wiring from heat exchangers and clean sensor. Inspect heat exchangers for leaks and damage. Inspect machinery log for evidence of engine overheating. Submit a CFR. Reconnect sensor wiring.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

2	EMERGENCY DIESEL GENERATOR, INSPECT, CLEAN, ADJUST & TEST – Inspect EDG terminal leads and test stator phase windings insulation resistance. Submit CFR. Use D13017 and D13030 as reference. Drain EDG L/O, Renew (2) Lube Oil Filters, and Renew L/O IAW Chapters B, C & D of MPC D13221. <i>2b 2h = 4</i> Inspect/check both EDG Fire Dampers IAW Chapter B & C of MPC A52018.D. Remove port and starboard louvers and demisters, inspect the port and starboard damper blades and frames. Clean and lubricate the vane screw drive and linkage pivot points. Re-install the louvers and demisters. Test EDG Fire Dampers operation from the Machinery Control and Monitoring System (MCMS) remote control. Inspect EDG Silencer and EXH SYS IAW D13420.D. Remove exhaust blankets at the expansion joints and flanges, inspect exhaust blankets, exhaust piping system, expansion joints and flanges. Clean soot collector-silencer/spark arrester and reinstall exhaust blankets. Inspect/check the EDG Fan Hub IAW Chapters B & C of MPC D13901.D. Inspect the fan hub for leaks, cracks damage and measure the fan hub end play. Test EDG Coolant IAW Chapters B, C, D & E of MPC D13532.D. Collect Coolant Sample, Test the Supplemental Cooling Additive (SCA) Concentration, Measure Freeze Point using a Refractometer and Correct Supplemental Coolant Additive Level.
3	SHORE TIE RECEPTACLE, GENERAL RECEPTACLES, SOUND POWER PHONES, TRANSFORMERS, BATTERIES, BATTERY CHARGERS, INSPECT, CLEAN AND TEST – Disconnect shore tie cable at both ends, secure power and open ship's shore tie connection box, look for evidence of water intrusion, overheating, missing hardware, and check receptacle pins for corrosion/dirt. Submit a CFR. Use MPC D20041 as reference. Secure power to general receptacle being tested, check continuity from ground terminal to ship's ground (should be 1 ohm or less). Check tension of each receptacle using a tension tester (tension should be 8 ounces or more). Press TEST button on GFCI to trip circuit. Press RESET button to reset GFCI receptacle. Submit a CFR. Use MPC D20012.D as reference. Open, clean and inspect each sound powered phone jack box, inspect wiring and connections, inspect o-rings and lightly lubricate with silicone compound. Operate 3-way switch in the pilot house, select one jackbox outstation in each group (JP, JV and JZ) circuit. Conduct a sound check for each jackbox station. Submit a CFR. Use MPC E77005.D as reference. Inspect and clean (7) transformers throughout the ship, inspect for signs of overheating, corrosion, damaged insulation, and loose connections. Submit a CFR. Use MPC D33012.D as reference. Inspect and clean (9) different battery banks throughout the ship. Inspect batteries for broken or loose terminal post, cracks in battery housing, leaks from battery housing ripples on top and sides of battery housing. Inspect battery cables for corroded conductors, overheating, swollen cables, and broken conductors, cracked, split or damaged insulation. Clean all battery terminals and lugs with wire brush. Perform battery diagnostic test IAW paragraph 9 on page 7 of MPC D81009.D. Inspect and clean (10) battery chargers throughout the ship. Check for loose terminal lugs and corrosion, vacuum and wipe down internal components. Use D83012.D as reference.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

4	ALARMS, SENSORS & CONTROLL PANELS, INSPECT, CLEAN AND TEST – Test and inspect the ship's fire detection system. Test and inspect (5) ea flame detectors, (13) ea thermal sensors, (18) ea smoke detectors, (9) ea manual pull stations, and (5) ea visual and audible alarms. Use MPC N30000.D as reference. Test all functions of the announcing system, to include all topside speakers, loud hailers and talk back functions. Use E70008.D as reference. Test the ship's Actuation panel for General, Chemical and Collision alarms over the 1MC system. Use E75030.D as reference. Test and calibrate eight refrigeration leak detectors and associated alarm system throughout the ship. Use E75005.D as reference. Test and inspect the sewage detection system and alarm indicators at three different locations. Use E75020.D as reference. Test (16) non-critical gages using S00400.D as reference. Inspect and clean the temperature and relative humidity sensors. Look for loose fasteners, cracked/broken louvers, obstructions, frayed wires, and deteriorating insulation. Use G00005.D as reference. Test the reference electrodes located in the engine room at the ICCP control cabinet. Check continuity readings from electrode to the ship's hull. Use L12014.D as reference. Inspect and clean ICCP control cabinet, clean each module, inspect cabinet for evidence of overheating and bad insulation. Use L12016.D as reference. Inspect and clean the Navigation Light Panel, look for burnt/ damaged components, corrosion, and wires overheating. Clean the internal and external panel enclosure. Use D42006.D as reference.
5	PUMP MOTOR CONTROLLERS, INSPECT AND TEST – Inspect the forward and aft fire pump and seawater controller connections for tightness, frayed, cracked or overheating insulation, and burnt components. Clean and vacuum internal components. Meg the T1, T2, and T3 motor leads to ground. Submit CFR. Use MPC M21015.D and M24022.D as reference. Inspect and test the Forward Aux air compressor pressure switch. Check connections for tightness, clean switch and switch cover, look for excessive pitting or corrosion. Observe compressor cut-in and cut-out pressure settings for two complete cycles, adjust as necessary. Use MPC M51023.D as reference.
6	PILOT HOUSE COMPONENTS, INSPECT & CLEAN – Inspect and Clean the (3) Searchlight Assemblies. Clean the power supply components, inspect for damaged insulation, check terminal connections for corrosion, cracks, and tightness. Inspect and clean searchlight interior components for dirt, dust and debris. Clean the reflector and both sides of front cover glass. Apply new silicone compound to the rack and pinion gears. D40010.D as reference. Submit CFR. Inspect the pilothouse windows, window heaters, window wipers and wiper blades. Inspect the windows for cracks, chipping, deterioration, and missing hardware. Test pilothouse window heaters, inspect for heat rise. Inspect wiper operation, wiper drive belt, washer pump operation and window blade for loose fasteners, broken components, cracking, grease cuts and glazing. Use M70025.D, M70002.D and M70003 as reference.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 5: Auxiliary Machinery Maintenance, Perform (AFC-30)**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests on auxiliary equipment.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	*Spectrometer, Diffraction Grating (Fluidscan)	PN: FLSC1000, CAGE: 1BL81 NSN: 6650-01-615-3416	1 Ea.	1000.00
N	*Viscometer, Tube Type	PN: PV3000, CAGE: 1BL81 NSN: 6630-01-622-2461	1 Ea.	1000.00
N	Filter Element, Air Conditioning	PN: 913512-0, CAGE: R3249 NSN: 4130-22-624-6556	1 Ea.	19.12
N	Filter Element, Air Conditioning	PN: 913513-0, CAGE: R3249 NSN: 4130-22-625-4264	1 Ea.	21.12
N	Filter Element, Intake Air Cleaner	PN: M-ST55R-1, CAGE: 5C2D8 NSN: 2940-01-659-8819	1 Ea.	49.50
N	Filter Element, Air Conditioning	PN: EFA200R5, CAGE: 0BGN0 NSN: 4130-01-583-3193	2 Ea.	23.07
N	Oil Kit Supplies, Auxiliary HPU	PN: INV-10 CAGE: 1GBG6 NSN: N/A	4 Kt	50.00
N	Bottle, Oil Sample, Auxiliary HPU	PN: M44054 TYPEIII, CAGE: 81348 NSN: 8125-01-193-3440	4 Ea.	24.19
N	Breather, Filter, Steering, Aux HPU's	PN: BR110, CAGE: 62983 NSN: 4310-01-495-5609	3 Ea.	128.37
N	Filter Element, Fluid Steering, Aux HPU's	PN: KZX10, CAGE: 08832 NSN: 4330-01-622-3142	1 Ea.	229.48

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 200-301, Rev -, Machinery Arrangement Drawings
Coast Guard Drawing 154 WPC 320-302, Rev B, Motor Controller Diagrams
Coast Guard Drawing 154 WPC 512-301, Rev A, HVAC System Diagram
Coast Guard Drawing 154 WPC 512-302, Rev D, HVAC Control System
Coast Guard Drawing 154 WPC 513-001, Rev C, Machinery Ventilation Diagram
Coast Guard Drawing 154 WPC 516-201, Rev E, HVAC Refrigerant Piping A&D
Coast Guard Drawing 154 WPC 516-301, Rev A, HVAC Refrigerant Piping Diagram
Coast Guard Drawing 154 WPC 556-201, Rev C, Cutter Boat Launch & Recovery Hydraulic Sys
Arrangement
Coast Guard Drawing 154 WPC 556-202, Rev C, Fin Stabilizer Hydraulic System A&D
Coast Guard Drawing 154 WPC 556-203, Rev A, Steering System Hydraulic Arrangement
Coast Guard Drawing 154 WPC 556-301, Rev -, Cutter Boat Launch & Recovery Hydraulic
System Diagram
Coast Guard Drawing 154 WPC 556-302, Rev -, Fin Stabilizer Hydraulic System Diagram
Coast Guard Drawing 154 WPC 556-303, Rev A, Steering System Hydraulic Diagram
Coast Guard Drawing 154 WPC 568-201, Rev A, Bow Thruster System A&D

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8096A, SWBS 252, Aug 2018, Bow Thruster – Model
60 LK With Operator Panel and Motor Drive – Installation, Service, and Operation Manual
Coast Guard Technical Publication (TP) 8010A, SWBS 565, April 2018, Fin Stabilizer System –
Model QC-1500 With MPU20 Hydraulic System
Coast Guard Technical Publication (TP) 8090A, SWBS 583, April 2018, Launch and Recovery
Auxiliary Hydraulic System
Coast Guard Technical Publication (TP) 8092A, SWBS 561, Sept. 2018, Steering Hydraulic
System – Operations and Maintenance Manual
Coast Guard Technical Publication (TP) 8096A, SWBS 252, Aug 2018, Bowthruster – Model 60
LK with Operator Panel and Motor Drive – Installation, Service, and Operation Manual
Coast Guard Technical Publication (TP) 8123, SWBS 514, Heating, Ventilation and Air
Conditioning (HVAC) Equipment, Model – FRC-514-P1
Coast Guard Technical Publication (TP) 8180, SWBS 513, Ventilation System, Engine Room –
Model EVC1-PT
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014,
Requirements for Preservation of Ship Structures
Coast Guard Maintenance Procedure Card (MPC) H20010.0 LUBE STEERING BOW
THRUSTER MOTOR
Coast Guard Maintenance Procedure Card (MPC) H31001.0 TEST FIN STABILIZER
VISCOSITY/FLUIDSCAN

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) H31071.0 INSPECT FIN HPU TANK
BREATHING

Coast Guard Maintenance Procedure Card (MPC) J00007.0 LUBE AIR HANDLING UNIT FAN
BEARING

Coast Guard Maintenance Procedure Card (MPC) J00008.0 INSP/CLN AIR HANDLING UNIT
FILTERS

Coast Guard Maintenance Procedure Card (MPC) J00011.0 REPLACE AIR HANDLING UNIT
FILTERS

Coast Guard Maintenance Procedure Card (MPC) J00012.0 REPLACE INTAKE AIR FILTER –
GENERATOR ROOM

Coast Guard Maintenance Procedure Card (MPC) J00029.0 A/C FLEX CONNECTORS
INSPECT

Coast Guard Maintenance Procedure Card (MPC) J00057.0 TEST HVAC FIRE DAMPER
BLADES (FDB) C-100

Coast Guard Maintenance Procedure Card (MPC) J00069.0 INSP/CLN HVAC MOTOR
CONTROLLERS

Coast Guard Maintenance Procedure Card (MPC) J00070.0 WEEKLY-HVAC MTR CNTR
FILTER INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J30004.0 HVAC C1 AND C2 CONTROL
PANEL INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) K00010.0 TEST AUX HYD FLUID SYS
HAND PUMP

Coast Guard Maintenance Procedure Card (MPC) K20005.0 AUX HPU SYS INSPECT

Coast Guard Maintenance Procedure Card (MPC) K20008.0 AUXILIARY HPU OIL
ANALYSIS TEST

Coast Guard Maintenance Procedure Card (MPC) K20009.0 TEST AUXILIARY HPU OIL
VISCOSITY

Coast Guard Maintenance Procedure Card (MPC) K20010.0 AUX HPU BREATHING REPLACE

Coast Guard Maintenance Procedure Card (MPC) K20012.0 AUX HPU HIGH PRESS FLTR
REPLACE

Coast Guard Maintenance Procedure Card (MPC) K20018.0 HPU ELECTRIC STERN GATE
MOTOR

Coast Guard Maintenance Procedure Card (MPC) K20040.0 BOW THRUSTER HPU OIL
ANALYSIS TEST

Coast Guard Maintenance Procedure Card (MPC) K20041.0 BOW THRUSTER
VISCOSITY/FLUIDSCAN TEST

Coast Guard Maintenance Procedure Card (MPC) K20042.0 AUX HYD FLUID TANK
BREATHING INSPECT

Coast Guard Maintenance Procedure Card (MPC) K21003.0 STEER HPU HYDRAULIC
SYSTEM, INSPECT

Coast Guard Maintenance Procedure Card (MPC) K21005.0 STEERING HPU OIL ANALYSIS
TEST

Coast Guard Maintenance Procedure Card (MPC) K21006.0 STEERING HYDRAULIC POWER
UNIT (HPU) VISC/FLUIDSCAN TEST

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) K21021.0 STEERING HPU BREATHER REPLACE

Coast Guard Maintenance Procedure Card (MPC) K21028.0 EMERGENCY MANUAL STEERING TEST

Coast Guard Maintenance Procedure Card (MPC) M00100.0 STEERING SYSTEM HOSES CHECK/SERVICE

Coast Guard Maintenance Procedure Card (MPC) M00200.0 FIN STABILIZER SYSTEM HOSES CHECK/SERVICE

Coast Guard Maintenance Procedure Card (MPC) M00300.0 HPU RHIB NOTCH SYSTEM HOSES CHECK/SERVICE

OTHER REFERENCES

Fluidscan Q1000, Operation and User Maintenance Manual

SpectroVisc Q3000 Kinematic User's Guide, P/N: PV3010, Version 1.1/2012

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 Perform preventive maintenance tasks described in Table 2. Task 1

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. **Submit a CIR** after completing all inspections detailed in Task 1. If a discrepancy is identified while performing the other various inspections associated with tasks other than Task 1, submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	EQUIPMENT INSPECTIONS: During the first 7 days of the availability, and in the presence of the COR or a Coast Guard Inspector, perform the following tests and inspections. Submit a CIR detailing all discrepancies found in Task 1 tests and inspections.
1.a	Perform operational test and visual inspection the of HVAC Fire Damper Blades (FDB) C-100. Refer to J00057.0 for procedure. NOTE: C-100 fire damper is located in the HVAC equipment room. (MPC J00057.0)
1.b	Perform operational test and visual inspection of the auxiliary hydraulic system. Test raise and lower operation of stern door. Inspect return and case drain filter differential gauges. Needle in yellow or red zone indicates filter needs to be replaced. Perform visual inspection of HPU, reservoir, retrieval winch, cylinders, and piping system for leaks. (MPC K20005.0)
1.c	Perform operational test and visual inspection of the auxiliary hydraulic power unit hand pump. Verify stern door can be raised and lowered using hand pump located at the hydraulic power unit. Ensure auxiliary hydraulic power system is not energized during test operation and cross-connect valves from the fin stabilizer hydraulic system are closed. Return system to readiness condition following test. (MPC K00010.0)
1.d	Perform operational test and visual inspection of all components of the steering gear hydraulic system. Inspect for leaks or damage to include the HPU, helm pump, cylinders, manifolds, hoses, and piping systems. Perform normal operational test of steering system using #1 and #2 steering pumps. Perform operational test of the manual steering system using the manual helm pump in the engine room. (MPC K21003.0)
1.e	Perform operational test of emergency manual steering system with the steering HPU secured. Using the manual helm pump located in the starboard steering gear room (3-40-1-E), rotate port and starboard rudders individually to 5 degrees left and 5 degrees right to demonstrate satisfactory operation. Identify any discrepancies with operation or movement of rudders. (MPC K21028.0)
2	HPU FILTER AND BREATHER INSPECTIONS AND RENEWALS:
2.a	Visually inspect Fin Stabilizer HPU Tank Breather, P/N D-101. (MPC H31071.0)
2.b	Renew Steering Gear HPU Tank Breathers, P/N BR110 (MPC K21003.0) (MPC K21021.0)
2.c	Renew Auxiliary HPU Tank Breather, P/N BR110 (MPC K20042.0) (MPC K20010.0)
2.d	Renew Auxiliary HPU High Pressure Filter, P/N KZX10 (MPC K20012.0)
3	FLEX HOSE INSPECTIONS:
3.a	Perform visual inspection of air conditioning (A/C) flex hoses in the engine room for leakage. Inspect end fittings for pitting, discoloration, cracks, and corrosion. Inspect connector supports for broken welds, loose or damaged clamps, and deteriorated rubber inserts. Inspect hoses for broken or cut wires, kinks or twists, bulges, swelling, flattening, or other damage. (MPC J00029.0).

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.b	Perform visual inspection of installed steering gear hose assemblies listed in Table 3. Identify any discrepancies including bulges, cuts, kinks, or other damage that may lead to failure or hinder satisfactory operation. Identify any hoses that are beyond their service lives. (MPC M00100.0)
3.c	Perform visual inspection of installed fin stabilizer HPU hose assemblies listed in Table 4. Identify any discrepancies including bulges, cuts, kinks, or other damage that may lead to failure or hinder satisfactory operation. Identify any hoses that are beyond their service lives. (MPC M00200.0)
3.d	Perform visual inspection of installed RHIB HPU hose assemblies listed in Table 5. Identify any discrepancies including bulges, cuts, kinks, or other damage that may lead to failure or hinder satisfactory operation. Identify any hoses that are beyond their service lives. (MPC M00300.0)
4	OIL ANALYSIS:
4.a	Perform viscosity and fluid composition tests of the bow thruster hydraulic system using Government-furnished handheld spectrometer and viscometer equipment. Refer to MPC K20041.0 for procedure. (MPC K20041.0)
4.b	Perform viscosity and fluid composition tests of the fin stabilizer hydraulic system using Government-furnished handheld spectrometer and viscometer equipment. Refer to MPC H31001.0 for procedure. (MPC H31001.0)
4.c	Perform viscosity and fluid composition tests of the Auxiliary hydraulic system using Government-furnished handheld spectrometer and viscometer equipment. Refer to MPC K20009.0 for procedure. (MPC K20009.0)
4.d	Perform viscosity and fluid composition tests of the Steering hydraulic system using Government-furnished handheld spectrometer and viscometer equipment. Refer to MPC K21006.0 for procedure. (MPC K21006.0) 1b 1d(8h) = 8hrs
4.e	Collect sample of Bow Thruster lube oil for analysis using government furnished oil kit. Ensure fluid temperature is minimum 45 degrees F. prior to sampling. Sample shall be taken from fill and vent tube. Submit sample to ALS lab in accordance with oil kit instructions. (MPC K20040.0)
4.f	Collect sample of Fin Stabilizer HPU oil for analysis using government furnished oil kit. Ensure fluid temperature is minimum 45 degrees F. prior to sampling. Sample shall be taken from fill and vent tube. Submit sample to ALS lab in accordance with oil kit instructions. (MPC H31001.0)
4.g	Collect sample of the Auxiliary HPU oil for analysis using government furnished oil kit. Ensure fluid temperature is minimum 45 degrees F. prior to sampling. Sample shall be taken from fill and vent tube. Submit sample to ALS lab in accordance with oil kit instructions. (MPC K20008.0)
4.e	Collect sample of Steering Gear HPU oil for analysis using government furnished oil kit. Ensure fluid temperature is minimum 45 degrees F. prior to sampling. Sample shall be taken from fill and vent tube. Submit sample to ALS lab in accordance with oil kit instructions. (MPC K21005.0)
5	HVAC MAINTENANCE:
5.a	Remove fan access cover from the air handling unit (AHU) to gain access to the fan unit assembly. Apply fresh ball bearing grease, P/N: SHELL 71032, to the two (upper and lower) grease fittings on the fan unit. Clean excess/residual grease from the fittings using a clean rag. Reinstall fan cover on the AHU and access hatch. (MPC J00007.0).
5.b	Renew AHU filters, P/N's: 913513-0 and 913512-0. Ensure filters seat properly in the filter frames. Using suitable vacuum cleaner, remove debris from filter compartment. Close filter compartment door. Verify the differential pressure across the AHU is less than 200 Pa on the differential pressure switch. Verify no air leaks from the filter compartment access door. (MPC J00008.0) (MPC J00011.0)
5.c	Open access cover for the Vacon frequency converter/variable speed drives 15A1, 15A3, 15A5, 15A7, and 13A2. Check electrical connections for tightness. Tighten loose connections (as required). Using a suitable fiber bristle brush, clean the interior, fan, and heat sink. Repeat for all remaining HVAC AC drives (5 total). NOTE: AC drives are

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

	located in the engine room, passage 1-23-0-L, galley, and in HVAC equipment room (forward and aft). (MPC J00069.0)
5.d	Open access cover for HVAC control panel C1. Renew filter, PN: EFA200R5. Clean the interior using a suitable fiber bristle brush and vacuum. Visually inspect interior for corrosion, discoloration, blistering, or bulging of components. Visually inspect interior wiring for frayed, chipped, or cracked insulation. Inspect electrical and mechanical connections for tightness. Close access cover. Repeat for HVAC control panel C2. (MPC J00070.0, J30004.0)
6	MISCELLANEOUS:
6.a	Apply fresh grease, P/N: SKF LGMT 3, to the bow thruster motor through the grease fitting (MPC H20010.0)
6.b	Renew intake air filter, PN: M-ST55R-1, for the Engine Room Ventilation System. CAUTION: The filter must be installed with the white side against the mist eliminator (upstream) and the green side facing the fan (downstream). NOTE: The filter is located on the backside of the generator room air supply mist eliminator. (MPC J00012.0)
6.c	Perform resistance test on Auxiliary HPU motor controller L1, L2, and L3 terminals. Record motor serial number and resistance of each terminal to ground. (MPC K20018.0)

TABLE 3: STEERING HOSE LIST

CMS Code	Nomenclature	Type	Service Life (Years)	Sat Yes/No
M00101	MANF TO PIPE LINE A-PORT	CBM	N/A	
M00102	MANF TO PIPE LINE A-STBD	STD	8	
M00103	MANF TO PIPE LINE B-PORT	STD	8	
M00104	MANF TO PIPE LINE B-STBD	CBM	N/A	
M00105	PIPE LINE B TO CYL4-PORT	STD	8	
M00106	PIPEG LINE B TO CYL1-STBD	STD	8	
M00107	CYL4 LN B CRSVR TO CYL3-PORT	STD	8	
M00108	CYL1 LN B CRSVR TO CYL2-STBD	STD	8	
M00109	PIPING LINE A TO CYL4-PORT	STD	8	
M00110	PIPING LINE A TO CYL1 STBD	CBM	N/A	
M00111	CYL4 LN A CRSVR TO CYL3-PORT	STD	8	
M00112	CYL1 LN A CRSVR TO CYL2-STBD	CBM	N/A	
M00113	PIPING LINE A TO CYL3-PORT	CBM	N/A	
M00114	PIPING LINE A TO CYL2-STBD	STD	8	
M00115	PIPING LINE B TO CYL3-PORT	STD	8	
M00116	PIPING LINE B TO CYL2-STBD	STD	8	

TABLE 4: FIN STABILIZER HOSE LIST

CMS Code	Nomenclature	Sat Yes/No
M00201	HPU TO PORT FIN PIPE PRESS LN	
M00202	HPU TO PORT FIN PIPE PRESS LN	
M00203	PIPE TO PORT PRESS FILTER	
M00204	FILTER TO PORT SERVO MANF	
M00205	PORT SERVO MANF TO CYL LINE A	
M00206	PORT SERVO MANF TO CYL LINE B	
M00207	HPU TO PORT FIN PIPE RET LINE	
M00208	HPU TO STBD FIN PIPE PRESS LINE	
M00209	PIPE TO STBD ACCUMULATOR	
M00210	PIPE TO STBD PRESSURE FILTER	
M00211	FILTER TO STBD SERVO MANF	
M00212	STBD SERVO MANF TO CYL LINE A	
M00213	STBD SERVO MANF TO CYL LINE B	
M00214	HPU TO STBD FIN PIPE RET LINE	
M00215	HPU TO RHIB PIPING PRESS LINE	
M00216	PIPING TO RHIB PRESS FLTR IN	
M00217	RHIB PRESS FLTR OUT TO PIPE	
M00218	RHIB RET to FIN LINE-B	
M00219	PORT FIN CYL CRSVR LINE A	
M00220	PORT FIN CYL CRSVR LINE B	
M00221	STBD FIN CYL CRSVR LINE A	
M00222	STBD FIN CYL CRSVR LINE B	
M00223	HPU SEAWATER INLET-A	
M00224	HPU SEAWATER OUTLET	

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

M00225	PUMP SUC TO RES TANK PIPING	
M00226	PUMP DISCH TO PRESS MANF	
M00227	PUMP CASE TO HEAT EXCHR	
M00228	PORT FIN CYL LINE A TO COV	
M00229	PORT FIN CYL LINE B TO COV	
M00230	STBD FIN CYL LINE A TO COV	
M00231	STBD FIN CYL LINE B TO COV	
M00232	RHIB RET to FIN LINE-A	
M00233	FILTER TO PORT SERVO MANF-A	
M00234	FILTER TO STBD SERVO MANF-A	
M00235	FIN RTN TO HEAT EXCHR	
M00236	HPU SEAWATER INLET-B	

TABLE 5: RHIB HOSE LIST

CMS Code	Nomenclature	Sat Yes/No
M00301	HPU TO WINCH FWD PIPE	
M00302	HPU TO WINCH AFT PIPE	
M00303	PIPE TO DECK WINCH FWD HOSE	
M00304	PIPE TO DECK WINCH AFT HOSE	
M00305	HPU TO DOOR CYL FWD PIPE	
M00306	HPU TO DOOR CYL AFT PIPE	
M00307	HPU DECK TO PORT RAM FWD	
M00308	HPU DECK TO PORT RAM AFT	
M00309	HPU DECK TO STBD RAM FWD	
M00310	HPU DECK TO PORT RAM AFT	
M00311	HPU TO WINCH BRAKE PIPING	
M00312	WINCH BRAKE PIPING TO WINCH	

4. NOTES

This section not applicable to this work item.

WORK ITEM 6: Auxiliary Machinery Maintenance, Perform (AFC-45)**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests on auxiliary equipment.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Filter, Air, with Desiccant (Breather)	PN: D-101, CAGE: 5M246 NSN: 4330-01-591-9017	1 Ea.	96.41
N	Filter Element, Fluid, LP, Auxiliary, Steering HPU's	PN: KZX10, CAGE: 08832 NSN: 4330-01-504-9506	4 Ea.	20.88
N	Filter Element, Fluid, HP, Steering HPU's	PN: KZX10, CAGE: 08832 NSN: 4330-01-622-3142	4 Ea.	229.48
N	Filter Element, Fluid (Return) Fin Stabilizer	PN: 7625, CAGE: 08832 NSN: 4330-00-229-4157	1 Ea.	32.26
N	Filter Element, Fluid (HP) Fin Stabilizer	PN: 932675Q, CAGE: 05779 NSN: 4330-01-593-3905	1 Ea.	210.71
N	O-Ring, Fin Stabilizer HP Filter	PN: N92246, CAGE: D9182 NSN: 5331-01-119-8756	1 Ea.	6.69
N	O-Ring, Fin Stabilizer LP Filter	PN: LFT-908 NSN: 5331-01-334-9566	1 Ea.	1.85
N	Electrodes, HVAC Humidifier	PN: B-3204021, CAGE: C3210 NSN: 5997-12-409-1012	3 EA	120.56
N	Kit, O-ring, HVAC Humidifier	PN: B-3216073, CAGE: C3210 NSN: 5331-12-409-1958	1 KT	31.95
N	System, Drain, HVAC Humidifier	PN: B-3401017, CAGE: C3210 NSN: 4720-12-395-6335	1 EA	90.13
N	**Belt, V, HVAC AHU Motor	PN: XPZ710, CAGE: R0088, NSN: 3030-22-617-5431	2 EA	5.42

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Filter Element, Air Conditioning (23 x 8), HVAC Fan Coil Unit	PN: 0150009, CAGE: C0342 NSN: 4130-12-393-7877	2 Ea.	21.87
N	Filter Element, Air Conditioning (35 x 8), HVAC Fan Coil Unit	PN: 0150010, CAGE C0342 NSN: 4130-12-394-4256	1 Ea.	29.95
N	Filter Element, Air Conditioning (30 x 10), HVAC Fan Coil Unit	PN: 0150013, CAGE: C0342 NSN: 4130-12-392-4982	2 Ea.	34.20
N	Gasket and Seal Set, HVAC Condenser	PN: SPCP0003, CAGE: A0147 NSN: 5330-15-207-8850	1 Ea.	316.60
N	Gasket and Seal Set, HVAC Condenser	PN: SPCP 029, CAGE: A0147 NSN: 5330-15-207-8849	1 Ea.	398.00
N	O-ring, Fin Stabilizer HPU magnet	PN: QMRNIN31012, CAGE: 5MNY6 NSN: 5331-01-623-9125	1 Ea.	0.75
N	**Magnet, Fin Stabilizer HPU	PN: SLX-13, CAGE 61028 NSN: 5340-01-623-7006	1 Ea.	193.48
N	**Magnet, Aux HPU	PN: HDM-9, CAGE 60128 NSN: 5340-01-617-9536	3 Ea.	37.87

****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 200-301, Rev -, Machinery Arrangement Drawings
 Coast Guard Drawing 154 WPC 320-301, Rev C, 450V System Deck Plan
 Coast Guard Drawing 154 WPC 320-302, Rev B, Motor Controller Diagrams
 Coast Guard Drawing 154 WPC 512-301, Rev A, HVAC System Diagram
 Coast Guard Drawing 154 WPC 512-302, Rev D, HVAC Control System
 Coast Guard Drawing 154 WPC 513-201, Rev 1, Machinery Ventilation Arrangement
 Coast Guard Drawing 154 WPC 513-301, Rev C, Machinery Ventilation Diagram
 Coast Guard Drawing 154 WPC 516-201, Rev E, HVAC Refrigerant Piping A&D
 Coast Guard Drawing 154 WPC 516-301, Rev A, HVAC Refrigerant Piping Diagram
 Coast Guard Drawing 154 WPC 556-201, Rev C, Cutter Boat Launch & Recovery Hydraulic Sys Arrangement
 Coast Guard Drawing 154 WPC 556-202, Rev C, Fin Stabilizer Hydraulic System A&D
 Coast Guard Drawing 154 WPC 556-203, Rev A, Steering System Hydraulic Arrangement
 Coast Guard Drawing 154 WPC 556-301, Rev -, Cutter Boat Launch & Recovery Hydraulic System Diagram
 Coast Guard Drawing 154 WPC 556-302, Rev -, Fin Stabilizer Hydraulic System Diagram
 Coast Guard Drawing 154 WPC 556-303, Rev A, Steering System Hydraulic Diagram
 Coast Guard Drawing 154 WPC 568-201, Rev A, Bow Thruster System A&D

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8096A, SWBS 252, Aug 2018, Bow Thruster – Model 60 LK With Operator Panel and Motor Drive – Installation, Service, and Operation Manual

Coast Guard Technical Publication (TP) 8010A, SWBS 565, April 2018, Fin Stabilizer System – Model QC-1500 With MPU20 Hydraulic System

Coast Guard Technical Publication (TP) 8090A, SWBS 583, April 2018, Launch and Recovery Auxiliary Hydraulic System

Coast Guard Technical Publication (TP) 8092A, SWBS 561, Sept. 2018, Steering Hydraulic System – Operations and Maintenance Manual

Coast Guard Technical Publication (TP) 8096A, SWBS 252, Aug 2018, Bowthruster – Model 60 LK with Operator Panel and Motor Drive – Installation, Service, and Operation Manual

Coast Guard Technical Publication (TP) 8123, SWBS 514, Heating, Ventilation and Air Conditioning (HVAC) Equipment, Model – FRC-514-P1

Coast Guard Technical Publication (TP) 8180, SWBS 513, Ventilation System, Engine Room – Model EVC1-PT

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Coast Guard Maintenance Procedure Card (MPC) H31002.D FIN HPU HYDRAULIC SYSTEM INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) H31010.D WASH FIN STABILIZER HPU MAGNET

Coast Guard Maintenance Procedure Card (MPC) H31018.D FIN STABILIZER HYDRAULIC POWER UNIT (HPU) RETURN FILTER REPLACE

Coast Guard Maintenance Procedure Card (MPC) H31038.D FIN ACCUMULATOR CHECK/SERVICE

Coast Guard Maintenance Procedure Card (MPC) H31062.D FIN HPU HIGH PRESSURE FLTR REPLACE

Coast Guard Maintenance Procedure Card (MPC) H31064.D REPLACE FIN HYD FLUID TANK BREATHER

Coast Guard Maintenance Procedure Card (MPC) H31067.D FIN HPU RES MAG O-RING REPLACE

Coast Guard Maintenance Procedure Card (MPC) J00032.D HVAC UNIT HUMIDIFIER INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J00034.D AIR HANDLER UNIT (AHU) MOTOR INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J00035.D HVAC AHU MOTOR BELTS REPLACE

Coast Guard Maintenance Procedure Card (MPC) J00040.D HVAC FAN COIL UNIT INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J00050.D HVAC EXH RETURN AIR MOTOR INSPECT

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) J00056.D HVAC FDB C-100 FIRE DAMPER
MOT INSPECT

Coast Guard Maintenance Procedure Card (MPC) J00064.D HVAC EVAPORATOR COIL
INSPECT AND CLEAN

Coast Guard Maintenance Procedure Card (MPC) J20014.D AXIAL EXHAUST FAN MOTOR
INSPECT

Coast Guard Maintenance Procedure Card (MPC) J20020.D FIRE DAMPER TEST

Coast Guard Maintenance Procedure Card (MPC) J20026.D MOISTURE ELIMINATOR
INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J20050.D VENTILATION VFD INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) J20066.D VENTILATION FAN INSPECT

Coast Guard Maintenance Procedure Card (MPC) J20069.D FORCED AIR HEATERS
TEST/CHECK

Coast Guard Maintenance Procedure Card (MPC) J31003.D ELECTRIC HEATER UNITS
TEST/CHECK

Coast Guard Maintenance Procedure Card (MPC) K20013.D AUX HPU MANIFOLD RETURN,
CASE DRAIN FILTER REPLACE

Coast Guard Maintenance Procedure Card (MPC) K20014.D AUX HPU MAGNET WASH

Coast Guard Maintenance Procedure Card (MPC) K20015.D AUX HPU MAGNET REPLACE

Coast Guard Maintenance Procedure Card (MPC) K20034.D BOW THRUSTER MOTOR
CONTROLLER INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) K20036.D BOW THRUSTER CONTROL
PANEL INSP/CLN

Coast Guard Maintenance Procedure Card (MPC) K21017.D WASH STEERING GEAR HPU
MAGNET

Coast Guard Maintenance Procedure Card (MPC) K21018.D STEERING HPU RETURN
FILTER REPLACE

Coast Guard Maintenance Procedure Card (MPC) K21023.D STEERING HPU MAGNET
REPLACE

Coast Guard Maintenance Procedure Card (MPC) K21056.D STEERING HPU HIGH
PRESSURE FILTER REPLACE

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 Perform preventive maintenance tasks described in Table 2. Task 1

3.1.2 Tech Rep.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3.1 Protective measures, hydraulic systems. Maintain existing hydraulic system cleanliness and take all necessary precautions to prevent the introduction of contaminants into the hydraulic systems. Immediately after disconnecting or removing components from the hydraulic system, seal all openings to the rest of the system using caps for externally threaded connection points, bolt-on blanks, or taped-on discs/covers made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. **Submit a CIR** after completing all inspections detailed in Task 1. If a discrepancy is identified while performing the other various inspections associated with tasks other than Task 1, submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1.	EQUIPMENT INSPECTIONS AND TESTS:
1.a	Perform operational inspection and servicing of fin stabilizer hydraulic system. Verify startup pressure is between 24-34 bar (350-500 psi). Verify system working pressure is 152 bar (2,206 psi). Adjust startup and working pressures if not in range. Verify hydraulic pressure is relieved during shutdown procedures. Inspect accumulator charging port for leaks using suitable leak detection fluid. Check and adjust accumulator pressure as required to 1300 +/- 100 psi. (MPC H31038.D)
1.b	Perform inspection of HVAC return air motor. Remove dirt from all motor components with rag and brush. Inspect motor for damage or loose mounting hardware. Tighten any loose hardware. Inspect electrical cable motor junction box for damage and repair any damage found. NOTE: Return air motor is located behind the forward access panel to the HVAC equipment room. (MPC J00050.D)
1.c	Perform inspection of HVAC FDB C-100 fire damper motor. Remove dirt from all motor components with rag and brush. Inspect motor for damage or loose mounting hardware. Tighten any loose hardware. Inspect electrical cable motor junction box for damage and repair any damage found. NOTE: fire damper motor is located behind the forward access panel to the HVAC equipment room. (MPC J00056.D)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

1.d	Perform inspection of port and starboard engine room exhaust fan motors. Remove dirt from all motor components with rag and brush. Inspect motor for damage or loose mounting hardware. Tighten any loose hardware. Inspect electrical cable motor junction box for damage and repair any damage found. (MPC J20014.D)
1.e	Perform operational inspection of ventilation fans listed in Table 3 for irregular noise or vibration. Perform visual inspection for loose wire connections or hardware. Tighten hardware as needed. (MPC J20066.D)
1.f	Perform operation inspection and maintenance of fin stabilizer system. Cycle fin stabilizers from side to side and observe differential pressure gauge for the HPU filter to verify satisfactory operation. Wipe clean hydraulic system components to include hydraulic pump and motor assembly, reservoir, valve assemblies, filter assemblies, accumulator, piping system, electrical control box exterior, and electrical junction boxes. Record system hydraulic fluid reservoir level and compare with last recorded reading. Inspect hydraulic system, to include piping and hoses, for leaks. Wipe dirt from motor components. Inspect motor and pump for damage or loose fasteners. Inspect motor/pump coupling for damage or deterioration. Inspect HPU cooler for leaks or loose mounting fasteners. Tighten loose fasteners as required. (MPC H31002.D)
1.g	Perform inspection and servicing of HVAC humidifier system. Disassemble and clean steam cylinder located inside the humidifier cabinet. Unplug and renew electrodes (3 ea). Renew disturbed o-rings. Moisten o-rings with water prior to installation. Unbolt and remove the pump, disassemble and clean residue. Renew pump drain hoses. Reassemble and reinstall all components. (MPC J00032.D).
1.h	Perform operational inspection of air handler unit (AHU) motor. Inspect running motor for abnormal noises or excessive vibrations. Verify belts track properly on pulleys and inspect for any damage or deterioration. Inspect electrical connections for damage. Inspect motor mounts for tightness. Clean motor, belts, and AHU with damp, clean rag. (MPC J00034.D)
1.i	Perform inspections and servicing of fan coil units (FCU's). Renew air filters on fan coil units in locations listed in Table 4. Check condensate drain for clogging and clean as necessary. Vacuum return and outlet air grilles. Check motor mount fasteners for tightness, tighten as required. Inspect wiring for damage. (MPC J00040.D)
1.j	Perform inspections and preventative maintenance on air conditioning (A/C) units 1 and 2 condensers. Drain condensers into suitable containers. Disassemble condenser units. Renew endbell gaskets, PN SPC P029 for A/C unit 1 (starboard), PN SPCP0003 for A/C unit 2 (port). Perform internal inspection for damage or corrosion. Clean tubes using suitable condenser tube-cleaning equipment (P/N: RAM-PTC-60, CAGE: 52219 or equal). Reassemble components. Perform leak test in accordance with paragraph 3.4 (MPC J00062.D).
1.k	Perform inspections and cleaning of HVAC evaporator coil. Remove cover to gain access to coil outlet compartment. Brush contaminants from coil and vacuum to remove any debris from the compartment. Straighten any bent fins using suitable straightener (P/N: 18400, CAGE: 45225 or equal). Clean coils using suitable cleaner (P/N: TRIPLE-D-AER, CAGE: 3CDK8 or equal). Repeat for inlet side of coil. Reinstall access covers. NOTE: the evaporator coil is located inside the air handling unit in the HVAC equipment room. (MPC J00064.d)
1.l	Perform inspections and cleaning of moisture eliminators identified in Table 5. Clean moisture eliminator screens using potable water and scrub brush. Remove any blockage from drains. Inspect for damaged or missing hardware, corrosion, or damage to screens. If heavy debris is encountered: Remove moisture eliminator from opening. Remove interior moisture eliminator from frame and clean using potable water from the backside to the front. Reinstall in frame and apply sealant (PN 5200, CAGE: 1A9T3 or equal) around sealing edge of access panel. Reinstall in opening and tighten fasteners. (MPC J20026.D)
1.m	Perform inspections and cleaning of variable frequency drive (VFD) assemblies in the engine room (4 ea) and generator room (2 ea). Remove the fan module, access cover, and finger guard to conduct maintenance. Clean fan module and unit with clean cloth. Vacuum interior of unit. Inspect components and wiring for corrosion or damage. Inspect electrical and mechanical connections for tightness. Reinstall all components. (MPC J20050.D)
1.n	Perform inspection and cleaning of bow thruster motor controller. Clean and vacuum interior of motor controller cabinet. As required, tighten fasteners to the following torque values: DC-link bus bar fasteners to 16 in-lbs; 24 VDC terminal fasteners to 4.4 in-lb; and control module protective conductor connection to 26.5 in-lbs. NOTE: Bow thruster

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

	motor controller is located in the forward auxiliary machinery space. (MPC K20034.D)
1.o	Perform inspection and cleaning of bow thruster control panel. Clean and vacuum interior of control panel cabinet. Check connections for tightness and cleanliness. Verify joystick operates freely. Verify all lamps are energized using the 'LAMP TEST' button. Verify 'DIMMER' switches control brightness. NOTE: Bow thruster control panel is located in the pilothouse, compartment 01-19-0-C. (MPC K20036.D).
1.p	Perform inspection and cleaning of fin stabilizer HPU reservoir magnet. Remove and inspect magnet for evidence of metal particles. Renew o-ring, PN: QMRNIN31012. Inspect magnet for damage or deformation. Place magnet near steel surface to ensure magnet works effectively. (MPC H31010.D) (MPC H31067.D)
1.q	Perform inspection and cleaning of auxiliary HPU reservoir magnet. Remove and inspect magnet for evidence of metal particles. Inspect magnet for damage or deformation. Place magnet near steel surface to ensure magnet works effectively. (MPC K20014.D)
1.r	Perform inspection and cleaning of port and starboard steering gear HPU reservoir magnets. Remove and inspect magnet for evidence of metal particles. Inspect magnet for damage or deformation. Place magnet near steel surface to ensure magnet works effectively. (MPC K21017.D)
1.s	Perform inspection and operational testing of forced air heaters listed in Table 6. Open access cover and check electrical connections for tightness. Tighten any loose connections. Test for satisfactory operation in both 'FAN' and 'HEAT' modes. Adjust thermostat to verify heater engages properly. (MPC J20069.D)
1.t	Perform inspection and operational testing of electric heater units located in head compartments listed in Table 7. Open access panel and check electrical connections for tightness. Clean and vacuum heater elements and enclosure. Test for satisfactory operation. (MPC J31003.D)
1.u	Test remote operation of fire dampers listed in Table 8 from the pilothouse. Cycle each damper between fully open and fully closed. Verify physical damper position is correct and Machinery Control and Monitoring (MCMS) display correctly indicates damper position. (MPC J20020.D)
2	HPU FILTER AND BREATHER RENEWALS:
2.a	Renew Fin Stabilizer HPU Tank Breather, P/N D-101. (MPC H31071.0) (MPC H31064.D)
2.b	Replace Auxiliary HPU Manifold Return and Pump Case Drain filters, P/N KZ10 (K20013.D).
2.c	Replace Steering Gear HPU Return filters, P/N KZ10 (MPC K21018.D).
2.d	Replace Steering Gear HPU Pressure filters, P/N KZX10 (MPC K21056.D).
2.e	Renew Fin Stabilizer HPU Return filter and O-ring, P/N's 7625 and LFT-908 (MPC H31018.D)
2.f	Renew Fin Stabilizer HPU High Pressure filter and O-ring, P/N's 932675Q and N92246 (MPC H31062.D)

3.3 Conditional repair task requirements. If the KO approves a change request that specifies growth repairs to correct discrepancies, the Contractor shall conform to SFLC Std Spec 0000, the requirements specified in the change request, and the following requirements, as applicable.

3.3.1 HVAC AHU Motor Belts Replace (MPC J00035.D).

3.3.2 Fin HPU Res Magnet Replace (MPC H31066.D)

3.3.3 Auxiliary HPU Magnet Replace (MPC K20015.D)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.3.4 Steering Gear HPU Magnet Replace (MPC K21023.D)

3.4 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor shall test the system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

TABLE 3: CENTRIFUGAL VENTILATION FANS

COMP. NUMBER	COMPARTMENT NAME	QTY
3-27-0-E	ENGINE ROOM	6 EA
3-36-0-E	GENERATOR ROOM	2 EA
3-3-0-E	FORWARD AUXILIARY SPACE	1 EA
1-10-0-E	EMERGENCY GENERATOR ROOM	1 EA
3-40-2-E	PORT STEERING GEAR ROOM	1 EA
3-40-1-E	STARBOARD STEERING GEAR ROOM	1 EA

TABLE 4: HVAC FCU AIR FILTER LOCATIONS

FILTER P/N	QTY	SIZE	LOCATION
0150013	1 EA	30 x 10	AFT PILOTHOUSE FCU
0150013	1 EA	30 x 10	C4ISR FCU
0150010	1 EA	35 x 8	GALLEY FCU
0150009	1 EA	23 x 8	STBD PILOTHOUSE FCU
0150009	1 EA	23 x 8	PORT PILOTHOUSE FCU

TABLE 5: MOISTURE ELIMINATORS

LOCATION	TYPE
PORT ENGINE ROOM	INTAKE
STARBOARD ENGINE ROOM	INTAKE
PORT ENGINE ROOM	EXHAUST

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

STARBOARD ENGINE ROOM	EXHAUST
EMERGENCY GENERATOR ROOM	INTAKE
GALLEY (AFT)	DEMISTER
GALLEY (FWD)	DEMISTER
GENERATOR ROOM	INTAKE
GENERATOR ROOM	EXHAUST
MAIN DIESEL ENGINE	COMB
MAIN DIESEL ENGINE	COMB
HVAC EQUIPMENT ROOM	DEMISTER

TABLE 6: FORCED AIR HEATERS

LOCATION	SIZE
EMERGENCY GENERATOR ROOM	2.5 KW
FORWARD AUXILIARY SPACE (PORT)	4.0 KW
FORWARD AUXILIARY SPACE (STBD)	4.0 KW
ENGINE ROOM (PORT)	8.0 KW
ENGINE ROOM (STBD)	8.0 KW
GENERATOR ROOM (PORT)	2.25 KW
GENERATOR ROOM (STBD)	2.25 KW
STEERING GEAR ROOM (PORT)	1.5 KW
STEERING GEAR ROOM (STBD)	1.5 KW

TABLE 7: ELECTRIC HEATER UNITS

COMPARTMENT

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

1-12-0-L
1-15-1-L
1-23-1-L
2-12-2-L
2-13-2-L
2-14-2-L
2-23-1-L

TABLE 8: FIRE DAMPER LOCATIONS

LOCATION/ DESCRIPTION	DESIGNATOR
MAIN ENGINE ROOM EXHAUST (PORT)	1-28-2
MAIN ENGINE ROOM EXHAUST (STBD)	1-28-1
SHIP'S SERVICE DIESEL GENERATOR (SSDG) EXHAUST (PORT)	3-38-2
SHIP'S SERVICE DIESEL GENERATOR (SSDG) EXHAUST (STBD)	3-38-1
MAIN ENGINE ROOM INTAKE (PORT)	3-34-2
MAIN ENGINE ROOM INTAKE (STBD)	3-34-1
MAIN ENGINE ROOM EXHAUST COMPARTMENT (PORT)	1-29-7
MAIN ENGINE ROOM EXHAUST COMPARTMENT (STBD)	1-29-3

4. NOTES

This section not applicable to this work item.

WORK ITEM 7: MTU Systems Maintenance (AFC30 ODMS), Perform**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Filter Element, Fluid	P/N: X57508300091 2910-12-405-1513	4 ea.	\$90.56

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES**COAST GUARD DRAWINGS**

Coast Guard Drawing 154 WPC-202-301, Machinery Control and Monitoring System
 Coast Guard Drawing 154 WPC-202-302, Machinery Control and Monitoring System, I/O Schedule
 Coast Guard Drawing 154 WPC 251-301, Combustion Air Diagram
 Coast Guard Drawing 154 WPC-513-301, Machinery Ventilation Diagram
 Coast Guard Drawing 154 WPC 601-302, General Arrangement

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014,
Requirements for Preservation of Ship Structures

Coast Guard Technical Publication (TP) 8012, Fire and Gas Damper – Model FDB2

Coast Guard Technical Publication (TP) 8019, Preliminary-Main Propulsion Diesel Engine MTU
20V4000M93L

Coast Guard Technical Publication (TP) 8026, Preliminary-ZF Marine Transmission Model ZF
23560 C/D

Coast Guard Technical Publication (TP) 8183, Preliminary-MCS-5 Automation System
Fluidscan Q1000, Operation and User Maintenance Manual

SpectroVisc Q30000 Kinematic User's Guide Version 1.1/2012

Coast Guard Maintenance Procedure Card (MPC) A15005.0, Test, Full Power Trial-PORT

Coast Guard Maintenance Procedure Card (MPC) A15005.0, Test, Full Power Trial-STBD

Coast Guard Maintenance Procedure Card (MPC) A41015.0, Test, R/G Lube Oil Analysis-PORT

Coast Guard Maintenance Procedure Card (MPC) A41015.0, Test, R/G Lube Oil Analysis-STBD

Coast Guard Maintenance Procedure Card (MPC) A41016.0, Test, R/G Lube Oil
Viscosity/Fluidscan-PORT

Coast Guard Maintenance Procedure Card (MPC) A41016.0, Test, R/G Lube Oil
Viscosity/Fluidscan-STBD

Coast Guard Maintenance Procedure Card (MPC) A51116.0, Test, MDE Jacket Water Analysis-
PORT

Coast Guard Maintenance Procedure Card (MPC) A51116.0, Test, MDE Jacket Water Analysis-
STBD

Coast Guard Maintenance Procedure Card (MPC) A52010.0, Insp/Lube, Intake Damper Fusible
Link-PORT

Coast Guard Maintenance Procedure Card (MPC) A52010.0, Insp/Lube, Intake Damper Fusible
Link-STBD

Coast Guard Maintenance Procedure Card (MPC) A52050.0, Test, MDE REM OP FIRE DAMP
VAL-PORT

Coast Guard Maintenance Procedure Card (MPC) A52050.0, Test, MDE REM OP FIRE DAMP
VAL-STBD

Coast Guard Maintenance Procedure Card (MPC) A53004.0, Replace, MDE Fuel Filter-PORT

Coast Guard Maintenance Procedure Card (MPC) A53004.0, Replace, MDE Fuel Filter-STBD

Coast Guard Maintenance Procedure Card (MPC) A54012.0, Test, MDE Daily Oil Viscosity-
PORT

Coast Guard Maintenance Procedure Card (MPC) A54012.0, Test, MDE Daily Oil Viscosity-
STBD

Coast Guard Maintenance Procedure Card (MPC) A54020.0, Test, MDE Oil Analysis-PORT

Coast Guard Maintenance Procedure Card (MPC) A54020.0, Test, MDE Oil Analysis-STBD

Coast Guard Maintenance Procedure Card (MPC) A54030.0, Test, Emergency Shutoff Valves-
PORT

Coast Guard Maintenance Procedure Card (MPC) A54030.0, Test, Emergency Shutoff Valves-
STBD

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) A61005.0, Test, MDE Emergency Shutdowns-PORT

Coast Guard Maintenance Procedure Card (MPC) A61005.0, Test, MDE Emergency Shutdowns-STBD

Coast Guard Maintenance Procedure Card (MPC) A61010.0, Test, MDE Overspeed Trip-PORT

Coast Guard Maintenance Procedure Card (MPC) A61010.0, Test, MDE Overspeed Trip-STBD

Coast Guard Maintenance Procedure Card (MPC) B00007.0, Inspect, MDE Mounts-PORT

Coast Guard Maintenance Procedure Card (MPC) B00007.0, Inspect, MDE Mounts-STBD

Coast Guard Maintenance Procedure Card (MPC) M00400.0, Chk/Service, MDE Hoses-PORT

Coast Guard Maintenance Procedure Card (MPC) M00400.0, Chk/Service, MDE Hoses -STBD

Coast Guard Maintenance Procedure Card (MPC) M00500.0, Chk/Service, MDE Hose (Hull Group)-PORT

Coast Guard Maintenance Procedure Card (MPC) M00500.0, Chk/Service, MDE Hose (Hull Group)-STBD

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

None

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. If a discrepancy is identified while performing the various inspections

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

associated with tasks described in Table 2 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	BOTH MAIN DIESEL ENGINE'S, TEST, INSPECT, CLEAN, SERVICE - . Test the port and starboard MDE emergency shutdown(s) (3 ea. 6 total) and the overspeed trip (2 ea.) by pressing the overspeed test button at each local operating panel (LOP). Submit a CFR. Use MPC A61005.0, and MPC A61010.0 as reference. Test both MDE's emergency shutoff valves (9 ea. 18 total). Operate and verify that the valves complete through a full cycle of operation (open/shut/open) or (shut/open/shut). Verify that the indicator at the MCMS matches the local indication on the valve and that the valve operates smoothly with no binding. Submit a CFR. Inspect both MDE's flexible hoses (37 ea.) (54 hoses total). Inspect each hose pipe hangers and chafing gear for damage. Submit a CFR. Renew any unsatisfactory hoses, renew hose tags and update hose log. Use MPC M00400.0 and M00500.0 as reference. Inspect the port and starboard MDE engine mounts (4 ea.) (8 total), look for cracks, swelling, and blistering in metal and rubber components. Check and tighten loose fasteners to torque specs (85ft-lb). Measure dimension of buffer clearance with thickness gauge, measure the damper mount dimension using Vernier calipers. Submit CFR. Use MPC B00007.0 as reference. Inspect MDE's fuel filter assemblies (2 ea.) and renew the port and starboard MDE fuel filters (4 total). Use MPC A53004.0 as reference. Test the pH and inhibitor concentration of the port and starboard MDE's engine coolant in accordance with MPC A51116.0. Conduct both MDE daily oil viscosity test using a viscometer and conduct an engine oil analysis, submit to lab. Use A54012.0 and A54020.0 as reference. Inspect and lubricate both MDE fusible link(s). Remove the thermos intermediate link assembly from the damper, clean and lubricate the fusible link with grease. Reinstall the thermos intermediate link into damper housing. Use MPC A52010.0 as reference. Inspect and test the port and starboard MDE remote operated fire damper(s) from the MCMS workstation. Verify that the fire dampers open and close correctly. Use MPC A52050.0 as reference. Inspect the intake damper flex hoses for cracking, leakage, twisting. Use MPC A52054.0 as reference. Conduct MDE's full power trial IAW MPC A15005.0. Complete the following pier side prior to getting underway: Complete the daily inspection, Test Main Diesel Engine (MDE) emergency shutdown, Conduct the MDE over speed test. Record the following for inclusion on the cover sheet: Forward and aft draft readings. Conduct a MDE full power trial IAW Chapter B of MPC A15005.0.
2	BOTH REDUCTION GEAR'S, CHECK/SERVICE, INSPECT/CLEAN and TEST – Conduct both R/G oil viscosity test using a viscometer, fluidscan using a spectrometer and conduct an engine oil analysis, submit to lab. Use A41015.0 and A541016.0 as reference.

4. NOTES

None

WORK ITEM 8: MTU Systems Maintenance (AFC45 ODMS), Perform**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform various inspections, preventive maintenance, and tests.

TABLE 1

Known Required Corrective Maintenance Tasks		
Task	CSMP Number (CG use only)	Description of Work Scope
1	None	None
2	None	None

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Nut, Plain, Hexagon	P/N: 00000000403 5310-12-363-5601	40 ea.	\$1.07
N	O-Ring	P/N: X52405500190 5331-12-385-7293	20 ea.	\$17.51
N	Screw, Adjusting, Valve Tappet	P/N: X52499100259 2815-12-387-6859	40 ea.	\$26.25
N	Filter Element, Fluid	P/N: 23540465 2940-12-387-0088	4 ea.	\$8.56
N	Gasket Set	P/N: 23540471 5330-12-387-1074	4 kt.	\$132.99
N	Gasket Set,	P/N: XP52718300064 5330-12-401-1766	4 kt.	\$132.99
N	Paper, Filter, Gasket, Set	P/N: XP52718300060 5330-12-400-4805	4 kt.	\$132.99
N	Gasket	P/N: 007603018101 5330-12-156-4526	2 ea.	\$0.26
N	Gasket	P/N: 007603026104 5330-12-156-4838	4 ea.	\$1.58
N	Filter Element, Intake Air Clean	P/N: 0501.210.028 2940-12-393-7646	4 ea.	\$425.03
N	Gasket	P/N: 0634.313.201 5331-12-392-3843	4 ea.	\$10.39

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Gasket	P/N: 0634.801.063 5330-12-156-4527	4 ea.	\$1.05
N	Gasket	P/N: 0634.801.237 5330-12-156-4532	4 ea.	\$4.08
N	O-Ring	PN: 69,45X3,53MMN429 5331-12-330-4292	2 ea.	\$4.82
N	Packing, Preformed	PN: X00004639 5330-12-386-7180	2 ea.	\$164.83

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 202-301, Machinery Control & Monitoring System (MCMS)
Cable Block Diagram

Coast Guard Drawing 154 WPC 202-302, Machinery Control and Monitoring System, I/O
Schedule

Coast Guard Drawing 154 WPC 251-301, Combustion Air Diagram

Coast Guard Drawing 154 WPC 259-201, Exhaust Piping System Arrangement

Coast Guard Drawing 154 WPC 259-301, Exhaust Piping System Diagram

Coast Guard Drawing 154 WPC 513-301, Machinery Ventilation Diagram

Coast Guard Drawing 154 WPC 540-301, Lube Oil Service and Transfer System Diagram

Coast Guard Drawing 154 WPC 601-302, Rev C, General Arrangement

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014,
Requirements for Preservation of Ship Structures

Coast Guard Technical Publication (TP) 8019, Preliminary-Main Propulsion Diesel Engine MTU
20V4000M93L

Coast Guard Technical Publication (TP) 8026, Preliminary-ZF Marine Transmission Model ZF
23560 C/D

Coast Guard Technical Publication (TP) 8081, Stern Tube Seal with Emergency Packing Gland

Coast Guard Technical Publication (TP) 8138, Fast Lube Oil Change System (FLOCS)-Model
FLOCS-15 Electric Operation and Service Manual

Coast Guard Maintenance Procedure Card (MPC) A15015.D, Insp/Adj, MDE Valve Clearance-
PORT

Coast Guard Maintenance Procedure Card (MPC) A15015.D, Insp/Adj, MDE Valve Clearance-
STBD

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Coast Guard Maintenance Procedure Card (MPC) A41005.D, Service, R/G Oil and Filter-PORT
Coast Guard Maintenance Procedure Card (MPC) A41005.D, Service, R/G Oil and Filter-STBD
Coast Guard Maintenance Procedure Card (MPC) A43007.D, Insp/Cln, Stern Tube Shaft Seal-PORT
Coast Guard Maintenance Procedure Card (MPC) A43007.D, Insp/Cln, Stern Tube Shaft Seal-STBD
Coast Guard Maintenance Procedure Card (MPC) A52025.D, Inspect, MDE Exhaust System-PORT
Coast Guard Maintenance Procedure Card (MPC) A52025.D, Inspect, MDE Exhaust System-STBD
Coast Guard Maintenance Procedure Card (MPC) A52027.D, Insp/Cln, MDE Soot Collector-PORT
Coast Guard Maintenance Procedure Card (MPC) A52027.D, Insp/Cln, MDE Soot Collector-STBD
Coast Guard Maintenance Procedure Card (MPC) A54002.D, Insp/Cln, MDE Centrifugal Oil Filter-PORT
Coast Guard Maintenance Procedure Card (MPC) A54002.D, Insp/Cln, MDE Centrifugal Oil Filter-STBD
Coast Guard Maintenance Procedure Card (MPC) A54006.D, Insp/Cln, MDE Lube Oil Indicator Filter-PORT
Coast Guard Maintenance Procedure Card (MPC) A54006.D, Insp/Cln, MDE Lube Oil Indicator Filter-STBD
Coast Guard Maintenance Procedure Card (MPC) A54024.D, Replace, MDE Oil-PORT
Coast Guard Maintenance Procedure Card (MPC) A54024.D, Replace, MDE Oil-STBD

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

None

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

When performing the tasks specified in Table 2 below, the maintenance procedure cards (MPCs) listed contain suggested procedural details that may be used to meet the requirements specified herein and may be referred to. Other equivalent procedures, that are also compliant with all rules, laws, and regulations, may also be used to meet the requirements.

3.2 Perform preventive maintenance tasks described in Table 2. The Contractor shall perform all maintenance described in Table 2. If a discrepancy is identified while performing the various inspections associated with tasks described in Table 2 submit a CFR describing the discrepancy and all recommended repairs. Then submit a final CFR confirming completion of all tasks.

TABLE 2

PREVENTATIVE MAINTENANCE TASKS	
Task	Description of Work Scope
1	BOTH MAIN DIESEL ENGINE'S, TEST, INSPECT, CLEAN, SERVICE - . Drain and dispose of both MDE lube oil, MDE heat exchanger oil, and MDE gearcase oil using the Fast Lube Oil Change System (FLOCS). Dispose of all removed fluids in accordance with all applicable Federal, state, and local regulations. Renew the MDE oil filter(s). Use a clean FLOCS to fill MDE's (approx. 84 gals each). Check engine oil dipstick frequently to avoid overfilling. Clean and inspect MDE lube oil indicator filter and filter housing. Use MPC A54024.D and A54006.D as reference. Inspect and clean both MDE's centrifugal oil filter IAW MPC A54002.D. Disassemble the centrifugal filters, measure the residue on filter sleeve, clean the rotor cover, rotor tube, rotor base and conical disk. Blow dry the rotor assembly components. Inspect the rotor base, rotor cover and housing sealing rings. Submit a CFR. Inspect and clean both MDE soot collectors IAW MPC A52027.D. Remove MDE soot collector exhaust blankets and inspect for damage. Clean soot collector by tapping the sides of the collector with a mallet. Remove clean out plugs and vacuum out soot. Inspect interior of soot collector, clean plug threads and coat with antiseize. Submit a CFR. Reinstall clean out plugs and blankets. Inspect the port and starboard MDE exhaust system IAW MPC A52025.D. Remove the port/stbd MDE exhaust blankets at expansion joints, flanges, and the water injection ring. Remove and inspect the fiberglass E-Mat wrapped around MDE 8 inch turbo expansion joints, and the four protective shrouds from the turbo expansion joints. Inspect piping, water injection rings, silencer exhaust hangers, expansion joints and measure components. Submit CFR. Reinstall all removed components. Inspect the port and starboard stern tube shaft assemblies IAW MPC A43007.D. Inspect wear of stern tube shaft seal, Check inflatable seal by inflating seal to 60-62 psi, wait 10 minutes, verify the seal pressure stays between 58-62 psi. Check drive clamp ring butt screw(s), torque to 27 ft-lb. Inspect and adjust both MDE valve clearance in accordance with MPC A15015.D. Remove cylinder head covers. Attach barring tool onto ring gear on flywheel housing, rotate the engine with the barring tool. Align the OT/A1 mark on the forward side of the flywheel ring gear with the pointer on the back of the engine block. Inspect valve clearance. Adjust MDE valve clearance on TDC valves. Inspect the opposite side valves of TDC, adjust the opposite valves of TDC. Remove engine barring tool, reinstall cylinder head cover.
2	BOTH REDUCTION GEAR'S, SERVICE – Renew R/G lube oil and filter(s) of both R/G's in accordance with MPC A41005.D. Use the Fast Lube Oil Change System (FLOCS) to remove the dirty oil and renew the clean oil (approx. 47 gals). Dispose of all removed fluids in accordance with all applicable Federal, state, and local regulations. Renew 2 ea. (4 total) oil filter elements.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

4. NOTES

None

WORK ITEM 9: Hull Plating, Inspect (DD1)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to:

- Conduct an inspection of shell plate and inaccessible voids (para 3.2)

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 111-301, Rev A, Shell Expansion

Coast Guard Drawing 154 WPC 997-001, Rev -, Docking Plan

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- “3.2.3 Report.”

3.1.2 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.4 Refer to Coast Guard Drawings listed in Section 2 (References) for guidance.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.2 Hull shell plate and inaccessible void inspections.

3.2.1 Shell plate visual inspection. In the presence of the COR or Coast Guard Inspector, the Contractor shall visually inspect all hull plating external surfaces below the water line for discrepancies (e.g. damage, deformation, corrosion, pitting, etc.)

TABLE 1 – DRAIN PLUGS FOR U/W INACCESSIBLE VOIDS

Void	FRAME	SIDE
Fairing Plate (4ea)	44	P/S
Skeg	38 to 42	CL
Transducer Wells, Depth Sounder Void	28	P/S

3.2.2 Void Leak test. In the presence of the Coast Guard Inspector, the Contractor shall remove and dispose of all drain plugs for all voids and appendages listed in Table 1 above. Verify that no liquids drain from the voids/appendages, which may indicate a hull leak. Dispose of drained liquids in accordance with all Federal, state, and local laws and regulations:

CAUTION

Some liquids that are drained may be may be classified as hazardous materials or hazardous waste depending on state and local regulations. The vessel environmental coordinator may assist with determination of waste category.

3.2.3 Report. Submit a CIR detailing all discrepancies found and provide recommended repairs.

3.2.4 Plug renewal. Upon completion of all work on voids, the Contractor shall chase all female threads for each corresponding plug removed, renew all plugs (either 316 stainless steel or Monel, as applicable), and coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.

3.3 Conditional repair task requirements for voids/appendages. If the KO approves a Change Request that specifies growth repairs to correct discrepancies, the Contractor shall perform the work specified in the Change Request and conform to the following requirements, as applicable.

3.3.1 Void air test. Perform an air test of the void(s) specified in the Change Request, in accordance with SFLC Std Spec 0740, Appendix C. Within the time limit specified in the Change Request, Submit a CFR detailing discrepancies and recommended repairs.

4. NOTES

None

WORK ITEM 10: Propulsion Shafting System, Inspect and Repair (DD1)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform:

- propeller visual inspections (3.2.1)
- propeller 3-D Scans (3.2.2)
- shaft bearing visual inspections and measurements (3.2.3)
- shaft seals expendables renewal (3.2.4)
- stern-tube zinc anode renewal (3.2.6).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PART NO.	QTY	COST (\$/UNIT)
Y	**Propeller Shaft	NSN: 2010-01-605-7516	2	103,000
Y	**LH Propeller	NSN: 2010-01-628-0276 PN: 531915	1	190,000
Y	**RH Propeller	NSN: 2010-01-627-9761 531914	1	190,000
N	**Stave Kit (each kit contains 8 reg. Romor staves, 2 rubber locking staves, 2 Romor staves w/keeper slot)	NSN: 3120-01-605-7400 P/N: 80920203000003	4	2430
N	**FWD Bearing Split External Retaining Ring Kit (each kit contains 1ea retaining ring, 10ea socket head cap screws)	NSN: 3120-01-605-7345 P/N: 80920203000004	2	1970
N	**AFT Bearing Split External Retaining Ring Kit (each kit contains 1ea retaining ring, 10ea socket head cap screws)	NSN: 3120-01-605-7510 P/N: 80920203000005	2	2575
N	**Kit, Installation Part-Replacement (see note 4.1 for kit contents)	NSN: 2010-01-629-4693 P/N: 950700	2	1900
Y	*Kit, Propeller – Removal/Installation Tools and Equipment (see note 4.2 for kit contents)	NSN: 2010-01-632-2198/ P/N: 999120	1	22,970
N	Shaft Seal Overhaul Kit (see table 7-5 of TP-8081, pg 7-9, “Service Kit C”)	NSN: 5330-01-618-5276 P/N: H76214-8	2	4896
N	Anodes, Zinc (stern tube)	NIIN: 01-644-5483 P/N: Z0020202H3	16	50

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 161-301, Rev B, Skegs and Stern Tubes Support Structures
Coast Guard Drawing 154 WPC 243-201, Rev A, Main Propulsion Shafting A&D
Coast Guard Drawing 154 WPC 204-301, Rev E, Equipment Removal Plan
Coast Guard Drawing 154 WPC 245-304, Rev -, Propeller Plans and Data Six Blade Propeller

COAST GUARD PUBLICATIONS

Coast Guard Technical Publications (TP) 6632, Reduction Gear – Model ZF 280-1
Coast Guard Technical Publications (TP) 8081, Stern Tube Seal with Emergency Packing Gland
– Type PSE, Model H76214 with Emergency Packing Glad Model 78479
Coast Guard Technical Publication (TP) 8913, Sep 2014, Technical Repair Standard For
Propellers
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements

OTHER REFERENCES

American Bureau of Shipbuilding (ABS) Rules for Survey After Construction, Part 7

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- “3.2.5 Submit report.”

NOTE

Similar qualifications to those specified below in paragraph 3.1.2 are specified in the work item titled to those applicable “Hull Plating, Inspect (DD1)”

3.1.2 Qualifications for performing Three-dimensional (3-D) Coordinate Measuring Machine (CMM) requirements. If requested by the KO, submit evidence that one or more on-site technicians has successfully operated the 3-D CMM being used in this contract during at least one prior similar contract and has prior experience performing all tasks specified under the paragraph titled “3-D Scan” below.

3.1.3 Qualifications for performing shaft seal maintenance and repairs. If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the shaft face seal, or a similar model of face seal manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to disassemble/reassemble the shaft face seal. 3.2.4, 3.3.4

3.1.4 Qualifications for performing propulsion system alignment. . If requested by the KO, submit evidence that one or more on-site technicians has successfully performed alignment measurements using and optical or laser system.3.6

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.1.5 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.6 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Mandatory recurring maintenance. Using the references listed under Section 2 as guidance, the Contractor shall accomplish the following:

3.2.1 Propeller visual inspections.

3.2.1.1 Ensure the propellers are thoroughly cleaned to a bright metal finish to facilitate visual inspections.

3.2.1.2 Visually inspect each propeller for all discrepancies such as:

- blade bends, deformation, torn material, and/or missing material;
- out-of-tolerance discontinuities per ABS Part 7, Appendix Section 10, Table 1;
- other operationally-adverse abnormalities.

3.2.2 New or re-used propellers 3-dimensional (3-D) scans.

3.2.2.1 Using portable 3-dimensional coordinate measuring machine (CMM) technology, accurate to 0.001", scan all visible hub and blade surfaces of each re-used (cleaned) or new Government-furnished propeller.

NOTE

No propeller failing visual inspection shall be scanned. If a propeller fails visual inspection scan the A-Condition Government-furnished propeller.

3.2.2.2 Using the point cloud data collected, develop CAD models of the propellers' as-scanned conditions.

3.2.2.3. Propeller scan comparison versus design. Using Coast Guard Drawing 154 WPC 245-304 as guidance, develop a propeller CAD model based on the drawing. Using the obtained propeller scan and the design CAD model, digitally inspect the propeller for all applicable ISO 484/2, Class I measurements. Provide a report within one week of collecting scan data of activation of the Change Request authorizing this task herein. The report shall indicate all (if any) out-of-tolerance measurements per ISO 484/2, Class I. Each out-of-tolerance measurement shall be identified (type, location and value) and provided with a comparison against the allowable parameters. All out-of-tolerance measurements shall be shown in a tabulated format accompanied with a model image showing the measurements.

3.2.2.4 For each propeller, via editable/unprotected compact disc (CD), submit to the USCG all point cloud data and subsequent CAD models. Label the CDs, serialized by propeller serial number and inspection date. Within two weeks of scan completion, all CDs shall be sent to the following address:

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

United States Coast Guard
SFLC-Patrol Boat Product Line
ATTN: SES Chief
300 East Main Street
Norfolk, VA 23510

3.2.2.5 Renew each Government-furnished propeller zinc plate and associated fasteners.

3.2.3 Shaft and stern tube cleaning, bearing visual inspections and measurements.

3.2.3.1 Remove growth and fouling from all accessible stern tube and shaft areas prior to performing inspections. Then, with the rope guards and all stern tube access covers removed, visually inspect the shaft bearing staves for excessive and/or abnormal wear in the propeller and forward bearings.

3.2.3.2 Measure, to the greatest extent practicable, and record the clearance between the bearings and shafts, comparing obtained values to those shown in Coast Guard Drawing 154 WPC 243-201, General Notes 20 and 21.

NOTE

In areas where bearing-shaft diametrical clearances are greater than half the figures shown on Coast Guard Drawing 154 WPC 243-201, General Notes 20 and 21, as applicable, the worn staves shall be renewed.

3.2.3.3 Following propulsion system inspections and all authorized repairs (if any), renew all stern tube access cover anodes (including forward access anodes as shown on Coast Guard Drawing 161-301, Sheet 4, Section 27-F). Reinstall the rope guards and stern tube access covers.

3.2.4 Shaft seals expendables renewal. Using TP 8081 as guidance, renew the expendable shaft seal components using the Government-furnished shaft seal service kits (Kit C). Ensure the non-expendable seal pieces are thoroughly cleaned and inspected prior to renewing the expendable pieces.

3.2.5 Submit report. For each inspection required under 3.2 and subparagraphs, **Submit a CIR** detailing all findings and proposed action(s), if any, for each inspection, for concurrence.

NOTE

Should inspections reveal discrepancies that must be corrected, the language beneath paragraph 3.3 describes requirements/standards (e.g. shaft removal and inspection requirements, bearing renewal requirements, etc.), that will be invoked if an applicable Change Request is released, pending the specific discrepancies identified.

3.3 Conditional inspection and repair task requirements. If a Change Request has been authorized and released by the KO and specifies growth repairs to correct discrepancies, the Contractor shall perform the work specified in the Change Request and conform to the following requirements, as applicable.

3.3.1 Removed shaft inspection. Using Coast Guard Drawings 154 WPC 204-301, 154 WPC 243-201, 154 WPC 245-301, TP 8081 and TP 8913 as guidance, accomplish the following:

3.3.1.1 Remove the propulsion shaft and associated interferences.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.3.1.2 Mount the removed shaft in a lathe, supported by lathe centers or rollers within 24 inches of each end, only, and remove any minor memory set in shaft by spinning in lathe for 2hrs at a slow rotation.

3.3.1.3 After two hours of rotation, conduct propulsion shaft run-out measurements via dial indicator to determine shaft straightness. Take measurements at the small and large ends of the propeller taper, the fore and aft ends of each bearing position, three equally spaced locations between the bearings, and four equally spaced locations forward of the forward bearing. Mark the position of the maximum run-out on the periphery of the shaft for each measurement taken. TIRs are limited to 0.005” in the shaft taper, .008” in bearing areas and 0.015” in all remaining locations.

3.3.2 Propeller renewal. Using Coast Guard Drawings 154 WPC 204-301, 154 WPC 245-304, and TP 8913 as guidance, renew the propeller with the Government-furnished propeller. Perform the 3-D scan on the new propeller after installation and submit reports as specified above in the paragraph titled “New or re-used propellers 3-dimensional (3-D) scans”.

3.3.3 Propulsion shaft bearing stave renewal.

3.3.3.1 Forward bearing stave renewal. Using the procedure per Coast Guard Drawing 154 WPC 243-201, Sheet 1, Section B, renew worn bearing staves in the forward bearing.

3.3.3.2 Propeller bearing stave renewal. Using the procedure per Coast Guard Drawing 154 WPC 243-201, Sheet 1, Section B, renew worn bearing staves in the propeller bearing.

3.3.4 Shaft seal renewal. Using TP 8081 as guidance, the Contractor shall renew the shaft seal with the Government-furnished shaft seal.

3.3.5 Reduction gear to shaft coupling alignment inspection. Using Coast Guard TP 6632 as guidance, with the vessel waterborne and liquid laden for 24 hours, inspect and measure the angular and parallel alignment between the shaft coupling and reduction gear coupling. If necessary, provide recommendations for alignment correction. Submit a CFR.

3.3.6 Shaft line alignment survey. Conduct the alignment check via optical or laser methods; measure and record the vertical and horizontal bearing positions and seal flange position. Make a definitive alignment assessment and provide a report on the alignment condition. If necessary, provide recommendations (movement magnitude/direction) for alignment correction. Submit a CFR.

NOTES

Piano wire may NOT be used unless done in conjunction with either the optical or laser method.

Minimize thermal effects by performing the following late in the evening or before sunrise.

3.4 Government’s option for equipment renewal. The Government reserves the right to furnish new Government-furnished equipment to be installed in place of existing at no additional cost to the Government. The Contractor shall turn over the existing equipment to the Coast Guard PA, for final disposition.

3.5 Operational tests – post repairs. During sea trials, the Contractor shall demonstrate proper operation of both propeller shaft systems via sea trials throughout the entire range of running speeds and directions.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Verify no unusual noise, vibrations, binding, shaft seal anomalies, etc. exist in each propulsion system. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

4. NOTES

4.1 Contents of Government Furnished “Kit, Installation Part-Replacement” See Coast Guard Drawing 154WPC 245-304

QTY per prop	PC#	PN	Description	Matl	Price Ea	Price per set
1	3	950733	Anode Zinc Plate	Zinc	\$413.26	\$413.26
1	4	950724	Cover Plate	2205 SS	\$83.54	\$83.54
1	5	950726	Retaining Ring	304L SS	\$180.50	\$180.50
1	6	950746	"O" Ring Fwd End FW Cap	Buna-N	\$27.84	\$27.84
1	7	950744	"O" Ring Aft End FW Cap	Buna-N	\$27.16	\$27.16
4	8	950756	M16 X 2 X 50mm SS SHCS	SS	\$5.70	\$22.80
3	9	950755	M10 X 1.5 X 25mm SS SHCS	SS	\$1.46	\$4.37
2	10	950714	SS Hex "O" Ring Plug	SS	\$41.54	\$83.09
3	11	950738	Lifting Eye Bolt	Carbon Steel	\$60.98	\$182.93
6	12	950736	Plug - Lifting Hole	NiBrAl	\$73.72	\$442.32
1	13	950748	"O" Ring-Hub Fwd Propeller	Buna-N	\$11.34	\$11.34
3	14	950759	Anti Vibration Lock Washer	SS	\$10.76	\$32.28
8	15	950757	M6 X 1 X 20mm SS SHCS	SS	\$1.28	\$10.26

4.2 Contents of Government Furnished “Kit, Propeller – Removal/Installation Tools and Equipment”

QTY	PC#	PN	Description	Matl	Price Ea	Price per set
1		999130	SPANNER WRENCH			
1		950742	SPACER] INSTALLATION			
1		999122	HYD. INSTALLATION NUT			
1		999124	SKF HYDRAULIC PUMP 15,000 PSI			
2		999125	ENERPAC HYDRAULIC PUMP 10,000 PSI			
1		999142	MCDANIEL GAGE			
1		999144	HYD.SWIVEL FITTING			
1		999146	HYD. STRAIGHT FITTING			
2		999148	WASHER]HYD. FITTING			

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

2		999135	SKF QUICK CONNECTING NIPPLE			
2		999136	SKF QUICK CONNECTING COUPLING			
2		999137	10-FOOT WEAT HYDRAULIC HOSE			
1		999128	INSTRUCTION MANUAL			
			INST. ROD] HYD. INST. NUT (5/8 DIA X 9			

WORK ITEM 11: Rudder Assemblies, Inspect and Repair**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to remove, inspect, and reinstall the port and starboard rudder assemblies.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PART NO.	QTY	COST (\$/UNIT)
Y	**Rudder	NSN: 2040-01-618-2412	2	19,350
N	Shaft Seal Overhaul Kit (Service Kit A from TP-8153, pg 7-5, Table 7-2)	NSN: 5330-01-595-4647 PN: H785252-01-6	2	9722
N	Shaft Seal Overhaul Kit (Service Kit B from TP-8153, pg 7-5, Table 7-3)	NSN: 5330-01-596-7760 PN: H78525-01-7	2	6,170
N	Locknut PC5 154WPC 562-002	NSN: 5310-33-201-6431 PN: KM32	4	100.00
N	Lock Washer PC6 154WPC 562-002	NSN: 5310-33-201-5247 PN: MB 32	2	150.00
N	Upper Roller Bearing PC7 154WPC 562-002	NSN: 3110-01-597-3537 PN: 23032 CC/C2W33	2	502.11
N	Oil Seal PC8 154WPC 562-002	NSN: 5330-01-618-5091 PN: CR70028 CRWH1R	2	60.00
N	Lower Bearing PC9 154WPC 562-002	NSN: 3120-01-631-4104	2	\$1,162

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

2. REFERENCES**COAST GUARD DRAWINGS**

Coast Guard Drawing 154 WPC 204-301, Rev B, Equipment Removal Plan

Coast Guard Drawing 154 WPC 561-202, Rev -, Steering Arrangement & Details

Coast Guard Drawing 154 WPC 562-201, Rev A, Rudder Details

Coast Guard Drawing 154 WPC 562-202, Rev A, Rudder Arrangement & Details

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8153, Type EL + IS Rudderstock seal Model H 78525-01, Installation, Operation and Maintenance Manual

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014,
Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D5363, 2008; Standard Specification for Anaerobic Single-
Component Adhesives (An)

MIL-PRF-16173, Sep 2006, Corrosion Prevention Compound, Solvent Cut-Back, Cold-
Application

MIL-S-45180, 1998; Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

MIL-C-16173, Jan 1993, Corrosive Preventative Compound, Solvent Cutback, Cold Application

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- “3.2.4 Submit inspection and test report.”

3.1.2 Qualifications for performing rudder seal maintenance and repairs. If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the rudder face seal, or a similar model of face seal manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to disassemble/reassemble the rudder face seal.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3.1 Protective measures- rudder specific. Provide suitable covering to protect all exposed rudder and vessel components against contamination during the performance of the work specified herein. Ensure that rudder stock/shaft surfaces are supported in a minimum of two locations, at all times, until reinstallation.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Mandatory/recurring tasks. The Contractor shall:

3.2.1 Perform an initial inspection and witness an operational test. Prior to commencement of work, witness Coast Guard personnel perform an operational test of the steering gear and rudder systems to

demonstrate existing operational condition. Ensure the carrier housing is not deflecting while taking readings. Measure and record full port and full starboard rotation angles of both rudders, note all discrepancies. Verify that port and stbd rudder movement is synchronized, that both rudders move in tandem, and both hold the same respective rudder angles while rotating. Prior to disassembly and while the rudder indicator is at zero degrees, mark the tiller arm, steering arm, autopilot potentiometer base and wheel with alignment marks for reinstallation. Measure and record vertical and horizontal movement of the rudder.

NOTE

5 feet of clearance between the bottom of the rudder and the drydock floor is required for rudder removal. Rudder interior surfaces have been coated with a corrosion inhibitor, handle all fluids in accordance with all Federal, state and local regulations. Take care not to damage the installed lower bearings during the removal of the rudder stocks.

3.2.2 Remove, clean, inspect, internally preserve, and test both rudders. Referring to the documents listed in Section 2 as necessary, remove both rudders. Clean and visually inspect all exposed components and surfaces (e.g. rudder stock/shaft and blade surfaces, bearings, bearing housing, seals, and grease passages) for discrepancies (e.g. excessive wear or corrosion, cracked welds, deformation, etc.). Verify rudder stocks are not bent; make note of any evidence that a rudder blade was struck or otherwise hit bottom. Verify there are no cracked weld joints on rudder blades, bearing housings, and all other associated weldments. Inspect all associated machined surfaces (e.g. rudder stock journals/sleeves, keyways, lower bearing surfaces, etc.) for unusual or excessive wear; measure and record dimensions of those worn areas to the nearest 0.001”.

3.2.2.1 Pressurize rudder voids to 2 psig and hold for 10 minutes in accordance with SFLC Std Spec 0740, Appendix C, verify no leaks.

3.2.2.2 Perform a dye penetrant test in accordance with SFLC Std Spec 0740, Appendix C on all rudder stock threads, rudder nut threads, and associated keys and keyways; note all discrepancies.

3.2.3 Submit inspection and test report. Submit a CIR to document all noted discrepancies and measurement data taken above; include a description of recommended repairs if appropriate.

3.2.4 Preserve rudder internal surfaces. Preserve rudder internal surfaces by filling all appendage interior surfaces with a rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3. Drain, collect, and dispose of remaining compound in accordance with all applicable Federal, state, and local regulations. Chase all rudder blade plug female threads prior to reinstalling plugs. Renew drain plugs (with either stainless steel, Type 316 or Monel). Coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.

NOTE

Preservation of rudder blade external surfaces is covered under Work Item 16 U/W Body, Preserve (100%).

3.2.6 Renew components. Using TP 8053 as guidance, renew the expendable pieces of each rudder shaft seal (sea water seal) using Government-furnished seal service kits. Ensure the non-expendable seal pieces are thoroughly cleaned and inspected prior to renewing the expendable pieces. Renew both upper roller bearings and lower sleeve bearings using government furnished property.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.2.7 Reinstall rudder assemblies. Upon completion of all inspections and authorized maintenance and repairs, reassemble and reinstall the port and starboard rudder assemblies. Ensure each rudder is installed using original match-marks and is aligned to within plus or minus 1/2 degree of the pilothouse rudder angle indicator.

NOTE

3.3 Sub-paragraphs are describe requirements for performing conditional tasks that may be initiated by change request/modification pending inspections.

3.3 Conditional repair task requirements. If the KO approves a change request that specifies growth repairs to correct discrepancies, the Contractor shall conform to all aforementioned requirements, and the following requirements.

3.3.1 Lower bearing renewal. Pending inspection results lower bearing renewal may be authorized. The Government reserves the right to furnish new lower bearings. If the Government exercises this right, the Contractor shall dispose of the old bearings in accordance with all applicable Federal, state, and local regulations.

3.3.2 Rudder blade and stock assembly renewal. The Government reserves the right to furnish a new rudder assembly for installation in place of the existing rudder assembly. If the Government exercises this right, the Contractor shall turn over the designated components to the Coast Guard PA as an MTI items.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Final grooming and operational tests. After completion of reassembly work, prior to coming out of drydock, and in the presence of the COR/PE or Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the steering gear system (all modes of control) and rudders to prove all repairs to ensure the rudders travel smoothly throughout the full range of travel without chattering or binding and at the required rate of train. Steering gear shall be operated in all modes of control from all locations. Compare post-repair results with the pre-repair results to detect discrepancies. Ensure the rudders are aligned to mid ships before going back in the water. Correct all discrepancies. Submit a CFR to document fully satisfactory operation.

3.4.1 Sea trail tests. Test the steering and rudder system, after the vessel is waterborne, to ensure the rudders travel smoothly throughout the full range of travel without chattering or binding and at the required rate of train. The steering shall be operated in all modes of control from all locations. Compare waterborne results with the drydocked results to detect any abnormalities. While underway on sea trails, in the presence of a Coast Guard Inspector, monitor steering gear and rudder operation. Correct all discrepancies. Submit a CFR to document fully satisfactory operation.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 12: Stabilizing Fins, Inspect and Repair**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform repairs to the fin stabilizer system.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PART NO.	QTY	COST (\$/unit)
Y	**Fin Blade	NSN: 2040-01-598-8181 PN: 601-15-020S02-00-00-A	2	22,254.38

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by the vessel.

2. REFERENCES**COAST GUARD DRAWINGS**

Coast Guard Drawing 154 WPC 556-202, Rev C, Fin Stabilizer Hydraulic System A&D
 Coast Guard Drawing 154 WPC 556-302, Rev -, Fin Stabilizer Hydraulic System Diagram
 Coast Guard Drawing 154 WPC 565-201, Rev -, Fin Stabilizer System A&D
 Coast Guard Drawing 154 WPC 565-301, Rev -, Fin Stabilizer Control System
 Coast Guard Drawing 154 WPC 565-302, Rev B, Fin Stabilizer Control System COED

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
 Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures
 Coast Guard Technical Publication (TP) 8010, 16 JUL 2010, Fin Stabilizer System HPU20 Hydraulic Power Unit Quantum QC-1500 Operational and Maintenance Manual
 Coast Guard Technical Publication (TP) 8911A, 30 APR 2016, Technical Repair Standard, Depot Level, For Use On Fast Response Cutter (FRC-B), Sentinel Class, Fin Stabilizer System Quantum Model QC-1500 Overhaul Repair Procedures, Vol 1 & 2

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for paragraph 3.2.2.2 Submit inspection and test report.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Qualifications for performing work on Quantum Model QC-1500 fin stabilizer system. If requested by the KO, submit evidence that one or more on-site technicians has successfully performed disassembly/reassembly of the Quantum Model QC-1500 fin stabilizer hull unit, or a similar unit from the same manufacturer, on at least one prior project/contract.

NOTE

3.2 Sub-paragraphs are mandatory tasks and requirements.

3.2 Mandatory/recurring tasks. The Contractor shall:

3.2.1 Perform an initial inspection and witness an operational test. Prior to commencement of work, witness Coast Guard personnel perform an operational test of the fin stabilizer system to demonstrate existing operational condition. Observe all affected equipment while the system is operating to determine all discrepancies. Measure and record full clockwise and counterclockwise rotation angles of both fins. Note all discrepancies. Prior to disassembly, and while each fin indicator is at zero degrees, mark the alignment various components (e.g. tiller arms/yokes, feedback linkage adjustments, etc.) for proper reinstallation.

3.2.2 Remove, clean, inspect, internally preserve, and test both fins. The Contractor shall perform the following. Refer to all drawings, technical publications, and other documents beneath section 2 above, as applicable.

NOTE

Piece 20 in TP-8010 and TP-8911 (Shaft Retaining Ring) prevents the fin shaft from being lowered outboard unless first removed. Follow disassembly/reassembly instructions provided in TP-8010 and TP-8911.

3.2.2.1 Disassemble and inspect PORT and STBD Fin Assemblies (Hull Units). Disassemble each unit to gain access to all the components affecting lower bearing and seal (e.g. fin blade, lower seal, fin shaft, lower bearing, etc.). Clean and visually inspect all accessible fin system surfaces for damage, excessive wear, and excessive scale/dirt/etc. To the greatest extent practicable verify ChockFast bed is installed

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

correctly, fully intact, and not damaged. Measure and record fin shaft OD critical dimensions, at 12-6 o'clock and 3-9 o'clock positions, at the 4 locations along the shaft shown on page 1-2-25 of TP-8911A Vol 1. and make note of any discrepancies to shaft surface finish.

3.2.2.2 Submit inspection and test report. Submit a CIR to document a full description of each discrepancy. Include in the report recommended repairs including justification for those repairs, photographs of the discrepancies, and all measurement data taken.

3.2.2.3 Pressurize rudder voids to 2 psig and hold for 10 minutes in accordance with SFLC Std Spec 0740, Appendix C, verify no leaks.

3.2.2.4 Preserve internal fin surfaces. Preserve fin internal surfaces by filling all appendage interior surfaces with a rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3. Drain, collect, and dispose of remaining compound in accordance with all applicable Federal, state, and local regulations. Chase all fin blade plug female threads prior to reinstalling plugs. Renew drain plugs (with either stainless steel, Type 316 or Monel). Coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.

NOTE

Preservation of fin blade external surfaces is covered under Work Item 16 U/W Body, Preserve (100%).

3.2.2.5 Renew components. Using TP 8010 as guidance and Government-furnished property as listed in paragraph 1 above, renew upper bearings, lower bearings. Renew all disturbed seals and soft components (e.g. gaskets, o-rings, etc.).

3.2.3 Reinstall fin assemblies. Upon completion of all inspections and authorized maintenance and repairs, reassemble and reinstall the port and starboard fin blade assemblies. Ensure each fin is installed using original match-marks and is aligned to within plus or minus 1/2 degree of the pilothouse fin angle indicator.

3.2.4 Touch-up preservation requirements. Prepare and coat all new and disturbed interior and exterior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

NOTE

3.3 Sub-paragraphs are describe requirements for performing conditional tasks that may be initiated by change request/modification pending inspections.

3.3 Conditional repair task requirements. If the KO approves a change request that specifies growth repairs to correct discrepancies, the Contractor shall conform to all aforementioned requirements, and the following requirements.

3.3.1 Fin blade and stock assembly renewal. The Government reserves the right to furnish a new fin assembly for installation in place of the existing rudder assembly. If the Government exercises this right, the Contractor shall turn over the designated components to the Coast Guard PA as an MTI items.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Final operational tests. After completion of reassembly work, prior to coming out of drydock, and in the presence of the COR/PE or Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the fin stabilizer system (all modes of control) and fins to prove all repairs to ensure the fins travel smoothly throughout the full range of motion without chattering or binding and at the required rate of train. The fin hydraulic system shall be operated in all modes of control from all locations. Compare post-repair results with the pre-repair results to detect discrepancies. Ensure the fins are aligned to center position before going back in the water. Correct all discrepancies. Submit a CFR to document fully satisfactory operation.

3.4.1 Sea trail tests. Test the fin stabilizer system, after the vessel is waterborne, to ensure the fins travel smoothly throughout the full range of motion without chattering or binding and at the required rate of train. The fin stabilizer system shall be operated in all modes of control from all locations. Compare waterborne results with the drydocked results to detect any abnormalities. While underway on sea trails, in the presence of a Coast Guard Inspector, monitor fin stabilizer system operation. Correct all discrepancies. Submit a CFR to document fully satisfactory operation.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 13: Bow Thruster Propeller and Tunnel, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and perform maintenance on the bow thruster unit.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	**Set of bevel gears 19:28, Mfr: Schottel	NSN: 3020-01-618-1133 PN: 1088301	1st.	10,378.13
Y	**Propeller, Mfr: Schottel	NSN: PN: 1161329	1ea.	20,000.00

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by the vessel.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 204-301, Rev B, Equipment Removal Plan

Coast Guard Drawing 154 WPC 568-201, Rev A, Bow Thruster System A&D

Coast Guard Drawing 154 WPC 633-301, Rev A, Cathodic Protection System

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8096, SWBS 568, Sep 2011, Seawater Service Pump Bow Thruster Schottel Transverse Thruster 60 LK and Racci Operator Panel and Motor Drive Installation, Service, and Operation Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2014, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for paragraph 3.2.2.3 Submit inspection and test report.

3.1.2 Qualifications for performing bow thruster maintenance and repairs. If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the Schottel Transverse Thruster equipment/system, or a similar model of bow thruster manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to disassemble/reassemble the bow thruster.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

3.2 Sub-paragraphs are mandatory tasks and requirements.

3.2 Mandatory/recurring tasks. The Contractor shall:

3.2.1 Perform an initial inspection and witness an operational test. Prior to commencement of work, witness Coast Guard personnel perform an operational test of the bow thruster system to demonstrate existing operational condition. Observe all affected equipment while the system is operating to determine all discrepancies. Note all discrepancies.

3.2.2 Remove, clean, polish, inspect the bow thruster propeller and underwater gearbox. Perform the following. Refer to all drawings, technical publications, and other documents beneath section 2 above, as applicable.

3.2.2.1 Remove and inspect propeller. Remove the propeller as described Section 6.5 of TP 8096. Polish the propeller to a 63 RMS surface finish. Inspect the propeller for damage, excessive wear, and all other discrepancies.

3.2.2.2 Remove and inspect underwater gearbox. Remove the underwater gearbox as described Section 6.7 of TP 8096. Inspect all associated components (e.g. gears, gear teeth, for damage, excessive wear, and all other discrepancies. Inspect for discrepancies (e.g. coatings failures, corrosion, pitting, etc.) at the interface between the gearbox and hull plate inserts/bedplates, and on all surrounding structural surfaces.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.2.2.3 Submit inspection and test report. Submit a CIR to document a full description of each discrepancy. Include in the report recommended repairs including justification for those repairs, photographs of the discrepancies, and all measurement data taken.

3.2.3 Renew tunnel and lower unit zinc anodes using bolt-on anodes. Renew all tunnel zincs using “bolt on” zinc anodes.

3.2.4 Renew components. Renew the bearings that mate with the power input shaft and the propeller shaft. Renew all disturbed soft components (e.g. gaskets, o-rings, etc.). Renew all gear case oil.

3.2.5 Reinstall thruster lower unit assembly. Upon completion of all inspections and authorized maintenance and repairs, reassemble and reinstall the bowthruster lower unit and propeller.

3.2.6 Touch-up preservation requirements. Prepare and coat all new and disturbed interior and exterior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

NOTE

3.3 Sub-paragraphs are describe requirements for performing conditional tasks that may be initiated by change request/modification pending inspections.

3.3 Conditional repair task requirements. If the KO approves a change request that specifies growth repairs to correct discrepancies, the Contractor shall conform to all aforementioned requirements, and the following requirements.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the bow thruster system to be in satisfactory operating condition over entire range of RPM in both directions. Submit a CFR.

3.5 Sea trial test. During post docking sea trials test the bow thruster over entire range of RPM in both directions. Submit a CFR.

4. NOTES

4.1 Equipment operation. Coast Guard personnel will operate all shipboard machinery and equipment.

WORK ITEM 14: Impressed Current Cathodic Protection (ICCP) and Anti-Fouling System, Inspect and Maintain

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and maintain the impressed current cathodic protection (ICCP) system and the associated anti-fouling system.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	**Anode, Corrosion, Elliptical	NSN: 5340-99-400-2561 PN: PPEC1202-MM50	2 ea.	1,900.00
N	**Silver/Silver Chloride Reference Electrode Cell	NSN: 6630-99-553-5405 PN: PPR100019	2 ea.	1,625.00
N	Copper Anode, Anti-Fouling	NSN: 5342-99-133-5325 PN: PAAZRRY037FT	3 ea.	436.69

*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by the vessel.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 633-301, Rev B, Cathodic Protection System

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

Coast Guard Technical Publication (TP) 8001, Sep 2018, Cathodic Protection System

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. Submit a CIR for the inspections listed in the following paragraphs:

- 3.2.2 Clean and inspect dielectric shield.

3.1.2 Qualifications for performing ICCP/AF system maintenance and repairs. If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the installed Cathelco Limited ICCP/AF system, or a similar model of ICCP/AF system manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to maintain, repair, and test the system.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 The Contractor shall perform all inspections and tests in the presence of the COR or Coast Guard Inspector. Submit all findings and data to the Coast Guard Inspector on a Condition Found Report within one day of test completion.

NOTE

Suggested methods for performing the micro-ohmmeter measurements specified herein - use a spool of twisted pair insulated wire with appropriate alligator clips or plugs. Use one lead to monitor the voltage drop from the remote location and the other connects to the current source return. Make the test wiring of sufficient length to reach from the controller (belowdecks) to the anode under test (hull exterior). The specific gauge of the test wiring is not critical as long as the required test current can be injected, but generally is no thinner than No. 20 AWG and rarely is heavier than No. 16 AWG.

TABLE 1 – HULL ANODES

ID	FRAME	SIDE	COMPARTMENT
4 (13)	34½	Stbd	Engine Room (3-27-0-E)
3 (12)	34½	Port	Engine Room (3-27-0-E)

TABLE 2 – REFERENCE CELLS

ID	FRAME	SIDE	COMPARTMENT
1 (21)	9½	Stbd	Forward Auxiliary Space (3-3-0-E)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

2 (20)	9½	Port	Forward Auxiliary Space (3-3-0-E)
--------	----	------	-----------------------------------

TABLE 3 – ANTI-FOULING ANODES

ID	FRAME	SIDE	COMPARTMENT
1	34	Stbd	Engine Room (3-27-0-E)
2	34	Port	Engine Room (3-27-0-E)
3	10	Fwd	Forward Auxiliary Space (3-3-0-E)

3.2 Mandatory/recurring tasks.

3.2.1 While waterborne, and in conjunction with performing the specified in the work item titled “Sea Trial Performance, Support, Provide”, the Contractor shall witness Coast Guard personnel perform an initial operational test of the ICCP system to identify all operational discrepancies. Then after de-energizing the anodes for 2 to 3 hours, and in accordance with TP 8001 Section 5, verify no opens or shorts in both reference electrodes and anodes using a high impedance multi-meter. Include a description of all discrepancies noted, with recommended repairs, in critical inspection report specified in paragraph 3.2.3 below.

3.2.2 Perform inspections, testing, and maintenance. In dry dock, perform the following using (TP) 8001 and Coast Guard Drawing 154 WPC 633-301 as reference:

- Clean and inspect anodes, reference electrodes, and dielectric shield - Removing all marine growth and salt accumulation from all anode and reference electrodes external surfaces. Visually inspect all surfaces for discrepancies (e.g. pitting, dissolution, voids, corrosion, other damage, etc.). After protecting all anodes and electrodes, and in conjunction with the work item titled “U/W Body, Preserve 100%” sand or lightly sandblast the surrounding dielectric shield to remove all marine growth and loose paint. Visually inspect all dielectric shield surfaces for all discrepancies (e.g. damage, improper fairing shape, etc.).
- Perform various inspections, and conduction and insulation resistance tests – Test and verify proper conduction between the hull and all ICCP system ground terminals. Disconnect cables from all various components (e.g. anodes, reference electrodes, junction boxes, power units, anti-fouling system anodes, etc.) and, using a 500VDC megger, test to verify proper wire insulation resistance between each individual cable conductor and the hull. Inspect all associated components for excessive wear, damage, and corrosion. Inspect all accessible anode and reference electrode gland housings for leaks, condensation, corrosion, and all other discrepancies. Remove connection box or cofferdam covers as needed to gain access.
- Renew Anti-Fouling Anodes – Disconnect all sea chest mounted anti-fouling anodes, thoroughly clean the sleeve cavities, and install the new anodes. Renew O-rings and gland grommets.
- Propeller Shaft Earthing System Maintenance - Clean the contact surface on each propeller shaft and verify that the band clamps are tight. Clean and inspect the rigging, brushes and shunts. Remove the brushes from the brush holders and clean out dirt and other foreign debris. In the inspection report note remaining brush length. Renew any brush worn past 75 % of original length. Inspect brush shunt connections for tightness and corrosion. Apply conductive grease to prevent corrosion and torque all shunt fasteners.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

- Rudder Stock Inspections and Maintenance - Inspect the bonding strap between each rudder stock and the ship's structure for corrosion and continuity. Verify straps are at least No. 8 AWG flexible copper cable and are brazed to cable lugs on the rudder stock and fixed ship's structure. Apply conductive grease to all connections to prevent corrosion and torque all fasteners.
- Restore System – Pending correction of all discrepancies, restore all connections. Reseal all anode and reference electrode cables in bilge junction boxes. Tighten all loose packing gland nuts.

3.2.3 Submit a CIR detailing all discrepancies and provide a description of recommended repairs for each.

3.3 Conditional repair task requirements. If the KO approves a Change Request that specifies growth repairs to correct discrepancies, the Contractor shall perform the work specified in the Change Request and conform to the following requirements, as applicable.

NOTE

Surfaces being preserved are considered “critical-coated surfaces”. SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces”) and SFLC Std Spec 6310 apply.

3.3.1 Requirements for renewal of failed or damaged anodes and reference cells.

- Renew the items specified in the Change Request in accordance with (TP) 8001 and Coast Guard Drawing 154 WPC 633-301. Inspect all hidden underlying surfaces (e.g. hull surface, dielectric shield, etc.) revealed during the renewal process and submit CFR (3cond) detailing all discrepancies and recommended repairs.
- For reference electrodes, verify the rubber back of reference electrodes being renewed seal tightly against the hull; do not use mastic, resin, or filler. Apply anticorrosive compound to all disturbed studs and ring terminals.
- Prepare and preserve all previously coated surfaces exposed by the removal of the anode/electrode in accordance with, and in conjunction with, the “Underwater Body, Preserve (100%)” item, using the same coating system.
- Repeat all conduction and insulation resistance tests specified beneath “3.2 Mandatory/recurring tasks.” above for each renewed component. Repair all discrepancies, document testing results in final report.

3.3.2 Requirements for repair or renewal of the dielectric shield.

- Protect anodes from damage and contamination while sandblasting as well as during the application of dielectric shield compound and subsequent coatings. Mask the conductive surfaces of each anode whose dielectric shield is to be repaired. Blast all areas of the shield which have blistered, peeled, broken down, or been exposed to calcareous deposits. Chamfer and undercut the removal area so that outer surface of the remaining shield slightly overhangs the bare surface below, providing a mechanical lock for the new fairing compound.
- Apply the first dielectric shield layer within four hours of surface preparation using the system specified for “Underwater Water (U/W) Body and Boot-Top (U/W Body Dielectric Shield for ICCP Systems)” in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems).

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

- Ensure that the fairing compound is applied in accordance with the manufacturer's instructions and has a smooth and uniform finish when cured, with no porosity. New material shall be applied directly to the clean steel hull and not over any other coating, except at the feathered interface between old and new dielectric shielding.

NOTE

In cool weather the curing may be reduced by 1) warming the compound prior to mixing, 2) heating the cans for one hour in 70-80°F water, 3) storing in a warm area until application time, 4) applying heat to the hull, ensuring that radiant energy and temperature are controlled so that the material does not discolor or burn.

- Prepare and coat the new fairing compound in conjunction with the rest of the underwater body surfaces in accordance with the "Underwater Body, Preserve (100%)" work item. Apply the first layer while the fairing compound is still tacky for best adhesion.
- Do not energize the impressed current cathodic protection system until the dielectric shield has cured for at least 7 days.

3.4 Final operational tests. After refloating, the Contractor shall verify no hull leaks from the ICCP system hull penetrations at anodes and reference cell glands. Clean all cofferdam cover gaskets and mating sealing surfaces; and reinstall covers. After completion of all work, thoroughly test the ICCP system in the presence of the Coast Guard Inspector, demonstrating fully satisfactory operating condition. Submit a CFR confirming proper operation of the ICCP system.

3.5 Re-calibration and commissioning. No less than 28 days and no more than 42 days after undocking, a qualified ICCP/AF system technician shall re-calibrate and commission the system to ensure correct operation.

4. NOTES

4.1 Once the vessel has come out of Dry-Dock and the hull has had a new paint system applied or repaired, it is recommended that the ICCP System be left switched off for a period of 4 weeks. This will prevent impressing any current to the ship's hull where paint maybe weak or damaged and prevent any dis-bondment or blistering of the paint system. After 4 – 6 weeks, it is recommended that a Cathelco Approved service engineer attends the vessel to carry out a re-calibration and commissioning of the system to ensure correct operation. Cathelco cannot be held responsible for any damage to a newly applied paint system if the ICCP system is left switched on after leaving DryDock or without correctly being recalibrated and re-commissioned after undocking by a Cathelco Approved service engineer.

WORK ITEM 15: 6000 HR MDE Maintenance, Perform

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform maintenance tasks on the 154WPC MDEs at the 6000 operational hour interval.

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154WPC 085-201 Rev -, PROPULSION SYSTEM, SSDG, EDG
INSTALLATION DRAWINGS

Coast Guard Drawing 154WPC 200-301 Rev -, MACHINERY ARRANGEMENT
DRAWINGS

Coast Guard Drawing 154WPC 204-301 Rev E, EQUIPMENT REMOVAL PLAN

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014,
General Requirements

Coast Guard Technical Publication 8019 (TP-8019), Section D, Main Propulsion Engine MTU
20V4000M93L, Volume 4, Maintenance and Overhaul Manual MS2205/00E,
MS68001/02E, MA50075/02E, MA25014/01E, and MA20011/01E

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 Perform 6000 Engine Hour Maintenance (Both Port and Stbd Engines). The Contractor shall perform the following.

3.1.1 Refer to TP-8019 and Coast Guard Drawings 154WPC 085-201, 154WPC 200-301, 154WPC 204-301.

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

3.1.2 Qualifications. At least one technician on site shall be QL3 certified on MTU4000 series engines, shall possess a 1B dongle certification on ECU-7 series governor, and the Contractor shall have 20V4000 engine prior maintenance experience.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Maintenance Tasks. Perform the following.

NOTE

Ship's Force will perform electrical isolation, tag-out procedures, etc. Coordinate with Ship's Force and ensure all of this work is complete prior to performing any maintenance.

- During the course of disassembly and reassembly in conjunction with performing the tasks specified below renew all disturbed seals, gaskets, o-rings, rubber sleeves, and all other soft wearing parts.
- Remove and re-install all interferences, as required, to perform the following maintenance.
- Perform a sea trial and pre-test. Upon completion of the sea trial submit a CFR that includes a list of discrepancies and a minimum of 30 min of ECU engine data.
- Clean and inspect air flexible ducting leading to the air turbo inlets from the transition piece.
- Remove the exhaust blankets from all mixing tanks. Visually inspect all mixing tank exterior surfaces for discrepancies (e.g. leaks, damage, etc.). Submit a CFR detailing any discrepancies noted and recommended repairs.

NOTE

The charge air cooler is too large to be removed as a unit from the vessel. It must first be disassembled and the core must be removed separately.

- Clean the charge air cooler and inspect for leakage. Prior to disassembling the charge air cooler submit a CFR detailing a disassembly and removal plan. Initiate disassembly after the Coast Guard approves the plan.
- Drain and dispose of jacket water/coolant and engine oil, flush both systems in conjunction to remove all loose contaminates.
- Inspect each cylinder chamber on both engines and submit a CIR detailing the condition of each.
- Install a new high-pressure fuel sensor on each engine.
- Inspect centrifugal oil filter and check bearing for wear. (refer to MA25014, Instruction for overhaul of assemblies)

USCGC RICHARD DIXON (WPC-154) DRY DOCK AVAILABILITY FY2019

- Install two new starters on each engine.
- Clean each engine coolant/fuel cooler.
- Clean each engine oil cooler.
- Install a new coolant pump on each engine.
- Install a new raw water pump on each engine.
- Inspect all rocker arms and valve bridges for wear. Insert an endoscope through the pushrod bore to visually inspect swing followers and camshaft running surfaces.
- Install new thermostats and verify proper thermal actuation.
- Inspect engine mounts. Measure the buffer clearance of the resilient mounts and verify proper seating of securing screws. Check for cracks in the rubber elements, measure the size of any cracks found. Measure the height of each rubber elements. Submit a CFR detailing all findings and describe all recommended repairs.
- Renew all cylinder head wearing components (e.g. springs, seals, etc.) and repair all defects found to all other cylinder head components, i.e. overhaul all cylinder heads (e.g. repair individual defects, or provide new or remanufactured heads, etc.). Submit a report detailing the maintenance actions taken to each head.
- Renew all turbocharger wearing components (e.g. springs, seals, etc.) and repair all defects found to all other turbocharger components (e.g. repair individual defects, or provide new or remanufactured turbochargers, etc.). Submit a report detailing the maintenance actions taken to each turbocharger.
- All reports, except the final test report below, are due no later than 2/3 through the contract performance period.
- Install new fuel injectors.
- Inspect and clean oil indicator filter, install a new fuel filter.
- Install new jacket water/coolant, engine oil, and secondary fuel filters.
- Perform a final sea trial and post maintenance test, conducting a 2hr full power trial run. After completion of the sea trail submit a minimum of 30 minutes of ECU engine data. Submit a final report.

4. NOTES

None