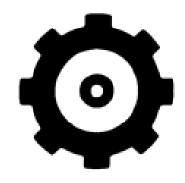
CHAPTER 30



ENGINEMAN (EN)

NAVPERS 18068F-30H Change 103

Updated: July 2025

TABLE OF CONTENTS ENGINEMAN (EN)

SCOPE OF RATING	EN-3
GENERAL INFORMATION	EN-4
DIESEL ENGINE SYSTEMS MANAGER	EN-5
ENGINEERING MANAGEMENT	EN-5
MECHANICAL MAINTENANCE	EN-6
MECHANICAL SYSTEMS OPERATIONS	EN-7
DIESEL ENGINE SYSTEMS TECHNICIAN	EN-8
ENGINEERING MANAGEMENT	EN-8
MECHANICAL MAINTENANCE	EN-9
MECHANICAL SYSTEMS OPERATIONS	EN-11
DIESEL ENGINE SYSTEMS MAINTAINER	EN-13
ENGINEERING MANAGEMENT	EN-13
MECHANICAL MAINTENANCE	EN-13
MECHANICAL SYSTEMS OPERATIONS	EN-16

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

ENGINEMAN (EN)



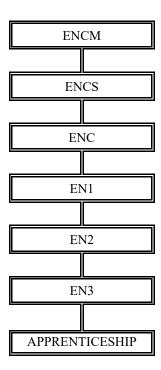
SCOPE OF RATING

Enginemen (EN) control the operation of diesel engines used for ship propulsion and to generate electrical power and align fuel, water, and air piping systems; clean, lubricate, adjust, test, and perform other preventive maintenance on diesel engines, reduction gears, air compressors, hydraulic or pneumatic clutches, steering engines, and Controllable Pitch Propeller (CPP) systems; repair or overhaul diesel engines, pumps, compressors, heat exchangers, and control devices used with diesel engines; and make entries into and analyze machinery operating records and reports.

This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) in Chapter 30.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title Diesel Engine Systems Manager

Job Code 003102

Job FamilyNOCShort Title (30 Characters)Short Title (14 Characters)Installation, Maintenance, and RepairTBDDIESEL ENGINE SYS MGRDIESEL SYS MGR

Enlisted EN NEC UXXX series and other NECs as assigned

Job Description

Diesel Engine Systems Managers provide overall management by reviewing, approving, and managing engine operations and programs aboard Navy ships; manage personnel during the operation and maintenance of main propulsion diesel engine and reduction gears used for ship propulsion and auxiliary machinery, such as ship's service diesel engine generators and oil purifiers; provide guidance and technical knowledge in the maintenance of auxiliary machinery, desalinization plants (reverse osmosis), and compressed air producing plants; manage personnel in the alignment process of piping systems for fuel, oil, water, and air; manage the operation of ship's main propulsion diesel engine used for ship's propulsion and service systems and the operation of ship's service diesel engine generators used to produce electrical power; manage personnel responsible for cleaning, adjusting, testing, and the performance of other preventive maintenance on ship's main propulsion diesel engine, ship's service diesel engine generators, and other auxiliary machinery, pumps and associated valves; provide guidance and technical knowledge in the repair and replacement of valves, pumps, heat exchangers, compressors, 24 volt engine control systems, and hydraulic or pneumatic control devices; and manage and analyze machinery operating; utilize mastered trade/skill qualifications to mentor Diesel Engine Systems Technicians and Diesel Engine Systems Maintainers.

DoD Relationship O*NET Relationship

Group TitleDoD CodeOccupation TitleSOC CodeJob FamilyAuxiliaries165200First Line Supervisors of Mechanics, 49-1011.00Installation, Maintenance, and Repairers

Skills **Abilities** Systems Evaluation Deductive Reasoning Coordination Oral Comprehension Critical Thinking Selective Attention Troubleshooting Information Ordering Reading Comprehension Written Comprehension Systems Analysis Inductive Reasoning Quality Control Analysis Problem Sensitivity Operation Monitoring Written Expression Writing Near Vision Operation and Control Glare Sensitivity

ENGINEERING MANAGEMENT

Paygrade	Task Type	Task Statements
E7	NON-CORE	Approve Quality Assurance (QA) repair forms
E7	CORE	Evaluate engineering management programs
E4	CORE	Input data into Diesel Readiness Systems (DRS)
E5	CORE	Maintain engineering records and logs
E7	CORE	Manage Diesel Readiness Systems (DRS) data inputs
E6	CORE	Manage environmental pollution control programs
E4	NON-CORE	Prepare Current Ship's Maintenance Project (CSMP) inputs
E5	CORE	Prepare fuel, oil, and water reports
E5	NON-CORE	Prepare Quality Assurance (QA) repair forms
E7	CORE	Prepare shipwide full power and economy trials
E6	CORE	Supervise auxiliary cooling water system repairs
E6	CORE	Supervise compressed air system repairs
E6	CORE	Supervise control air systems repairs (e.g., brake, clutch, engine, etc.)
E6	CORE	Supervise Control Pitch Propeller (CPP) system repairs

ENGINEERING MANAGEMENT (CONT'D)

		ENGINEERING MANAGEMENT (CONT D)
<u>Paygrade</u> E6	<u>Task Type</u> CORE	<u>Task Statements</u> Supervise diesel engines repairs
E6	CORE	Supervise diesel engines support system repairs (e.g., jacket water, lube oil, fuel oil, etc.)
E6	CORE	Supervise fuel oil and lube oil purification system repairs
E6	CORE	Supervise fuel oil and lube oil transfer system repairs
E6	CORE	Supervise fuel oil stripping system repairs
E6	CORE	Supervise heat exchanger repairs
E6	CORE	Supervise high purity reverse osmosis system repairs
E7	CORE	Supervise jacking gear repairs
E6	CORE	Supervise machinery clutches and brake repairs
E6	CORE	Supervise machinery transmission repairs
E6	CORE	Supervise main propulsion shaft repairs (e.g., jet drive, outdrive, etc.)
E6	CORE	Supervise Main Reduction Gear (MRG) system repairs
E6	CORE	Supervise oily waste water system repairs
E6	NON-CORE	Supervise potable water system repairs
E6	CORE	Supervise reducing station repairs (e.g., air, water systems, hydraulics, etc.)
E6	CORE	Supervise reverse osmosis system repairs
E6	CORE	Supervise stern tube cooling system repairs
E6	CORE	Supervise system valve repairs (e.g., diaphragm, gate, check, etc.)
E6	CORE	Supervise systems pumps repairs (e.g., water, fuel, oil, etc.)
E7	NON-CORE	Update Casualty Reports (CASREP)
E7	NON-CORE	Validate Casualty Reports (CASREP)
E6	NON-CORE	Validate Current Ship's Maintenance Project (CSMP) input
E6	CORE	Validate Engineering Operational Sequencing System (EOSS) manuals
E7	CORE	Validate engineering records and logs
E6	CORE	Validate fuel, oil, and water reports
E5	NON-CORE	Verify Current Ship's Maintenance Project (CSMP) input
E5	CORE	Verify Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Verify engineering records and logs
E6	NON-CORE	Verify Quality Assurance (QA) repair forms
E6	CORE	Inspect fluid samples
E5	CORE	Maintain precision instruments
E5	CORE	Repair Main Reduction Gear (MRG) systems
E5	CORE	Troubleshoot auxiliary cooling water systems
E5	CORE	Troubleshoot compressed air systems
E5	CORE	Troubleshoot control air systems (e.g., brake, clutch, engine, etc.)
E5	CORE	Troubleshoot Control Pitch Propeller (CPP) systems
E5	CORE	Troubleshoot diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)

MECHANICAL MAINTENANCE

<u>Paygrade</u>	Task Type	Task Statements
E5	CORE	Troubleshoot diesel engines
E5	CORE	Troubleshoot fuel oil and lube oil transfer systems
E5	CORE	Troubleshoot fuel oil stripping systems
E5	CORE	Troubleshoot heat exchangers
E5	CORE	Troubleshoot high purity reverse osmosis systems
E5	CORE	Troubleshoot jacking gears
E5	CORE	Troubleshoot machinery clutches and brakes
E5	CORE	Troubleshoot machinery transmissions
E5	CORE	Troubleshoot main propulsion shafts (e.g., jet drive, outdrive, etc.)
E6	CORE	Troubleshoot Main Reduction Gear (MRG) systems
E5	CORE	Troubleshoot oily waste water systems
E5	NON-CORE	Troubleshoot potable water systems
E5	CORE	Troubleshoot reducing stations (e.g., air, water systems, hydraulics, etc.)
E5	CORE	Troubleshoot reverse osmosis systems
E5	CORE	Troubleshoot stern tube cooling systems
E5	CORE	Troubleshoot system valves (e.g., diaphragm, gate, check, etc.)
E5	CORE	Troubleshoot systems pumps (e.g., water, fuel, oil, etc.)
E5	NON-CORE	Verify pressure/temperature alarms and set points
		MECHANICAL SYSTEMS OPERATIONS
Paygrade	Task Type	Task Statements
E4	CORE	Conduct diesel engine operations
E4	CORE	Conduct diesel engine support system operations (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Conduct Main Reduction Gear (MRG) system operations

Job Title **Diesel Engine Systems Technician**

Job Code 003179

NOC TBD Short Title (14 Characters) **Short Title (30 Characters) Job Family** Installation, Maintenance, and Repair DIESEL ENGINE SYS TEC DIESEL SYS TEC

Pay Plan Career Field Other Relationships and Rules

Enlisted NEC UXXX Series and other NECs assigned

Job Description

Diesel Engine Systems Technicians repair, maintain, and service internal-combustion engines, machinery, and components used aboard Navy ship's; provide technical knowledge during the operation and the maintenance of main propulsion diesel engine and reduction gears used for ship propulsion and auxiliary machinery, such as ship's service diesel engine generators, and oil purifiers; provide guidance and technical knowledge in the maintenance of auxiliary machinery, desalinization plants (reverse osmosis), and compressed gas producing plants; align piping systems for fuel, oil, water, and air; control the operation of ship's main propulsion diesel engine, service systems, and the operation of ship's service diesel engine generators; clean, adjust, test, and perform other preventive maintenance on ship's main propulsion diesel engine, ship's service diesel engine generators, and other auxiliary machinery, pumps and associated valves; repair or replace valves, pumps, heat exchangers, compressors, and hydraulic or pneumatic control devices; make entries in and analyze machinery operating records and reports; perform work under limited supervision and use mastered skill/trade to mentor Diesel Engine Systems Maintainers.

O*NET Relationship **DoD Relationship**

SOC Code DoD Code Occupation Title Job Family Group Title

Auxiliaries 165200 Motorboat Mechanics and Service 49-3051.00 Installation, Maintenance, and Repair

Technicians

Skills Abilities

Equipment Selection Deductive Reasoning Operation and Control Manual Dexterity Equipment Maintenance Written Comprehension Systems Evaluation Problem Sensitivity Visualization Repairing

Reading Comprehension Information Ordering Troubleshooting Oral Comprehension Operation Monitoring Selective Attention Coordination Mathematical Reasoning Critical Thinking Written Expression

ENGINEERING MANAGEMENT

Paygrade	Task Type	Task Statements
E4	CORE	Input data into Diesel Readiness Systems (DRS)
E5	CORE	Maintain engineering records and logs
E4	NON-CORE	Prepare Current Ship's Maintenance Project (CSMP) inputs
E5	CORE	Prepare fuel, oil, and water reports
E5	NON-CORE	Prepare Quality Assurance (QA) repair forms
E4	CORE	Report accuracy of Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Supervise auxiliary cooling water system repairs
E6	CORE	Supervise compressed air system repairs
E6	CORE	Supervise control air systems repairs (e.g., brake, clutch, engine, etc.)
E6	CORE	Supervise Control Pitch Propeller (CPP) system repairs
E6	CORE	Supervise diesel engines repairs
E6	CORE	Supervise fuel oil and lube oil transfer system repairs
E6	CORE	Supervise fuel oil stripping system repairs
E6	CORE	Supervise heat exchanger repairs

ENGINEERING MANAGEMENT CONT'D)

Paygrade	Task Type	Task Statements
E7	CORE	Supervise jacking gear repairs
E6	CORE	Supervise machinery clutches and brake repairs
E6	CORE	Supervise machinery transmission repairs
E6	CORE	Supervise main propulsion shaft repairs (e.g., jet drive, outdrive, etc.)
E6	CORE	Supervise oily waste water system repairs
E6	NON-CORE	Supervise potable water system repairs
E6	CORE	Supervise reducing station repairs (e.g., air, water systems, hydraulics, etc.)
E6	CORE	Supervise reverse osmosis system repairs
E6	CORE	Supervise system valve repairs (e.g., diaphragm, gate, check, etc.)
E6	CORE	Validate Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Validate fuel, oil, and water reports
E5	NON-CORE	Verify Current Ship's Maintenance Project (CSMP) input
E5	CORE	Verify Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Verify engineering records and logs
E6	NON-CORE	Verify Quality Assurance (QA) repair forms

MECHANICAL MAINTENANCE

<u>Paygrade</u>	Task Type	Task Statements
E4	CORE	Conduct preventative maintenance fuel oil and lube oil purification systems
E4	CORE	Conduct preventative maintenance on auxiliary cooling water systems
E4	NON-CORE	Conduct preventative maintenance on Civil Engineering Support Equipment (CESE)
E4	CORE	Conduct preventative maintenance on compressed air systems
E4	CORE	Conduct preventative maintenance on Controllable Pitch Propeller (CPP) systems
E4	CORE	Conduct preventative maintenance on diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Conduct preventative maintenance on diesel engines
E4	CORE	Conduct preventative maintenance on fuel oil and lube oil transfer systems
E4	CORE	Conduct preventative maintenance on fuel oil stripping systems
E4	CORE	Conduct preventative maintenance on high purity reverse osmosis systems
E4	CORE	Conduct preventative maintenance on jacking gears
E4	CORE	Conduct preventative maintenance on machinery clutches and brakes
E5	CORE	Conduct preventative maintenance on machinery transmissions
E4	CORE	Conduct preventative maintenance on main propulsion shafts (e.g., jet drive, outdrive, etc.)
E4	CORE	Conduct preventative maintenance on Main Reduction Gear (MRG) systems
E4	NON-CORE	Conduct preventative maintenance on oily waste water systems
E4	NON-CORE	Conduct preventative maintenance on potable water systems
E4	CORE	Conduct preventative maintenance on reducing stations (e.g., air, water systems, hydraulics, etc.)

<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements Conduct preventative maintenance on reverse osmosis systems
E4	CORE	Conduct preventative maintenance on stern tube cooling systems
E4	CORE	Conduct preventative maintenance on system valves (e.g., diaphragm, gate, check, etc.)
E4	CORE	Conduct preventative maintenance on systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Conduct preventive maintenance on heat exchangers
E4	CORE	Draw fluid samples
E4	CORE	Inspect flange shields
E6	CORE	Inspect fluid samples
E5	CORE	Maintain precision instruments
E4	CORE	Perform precision measurements
E4	CORE	Perform tank level soundings
E4	CORE	Repair auxiliary cooling water systems
E4	CORE	Repair compressed air systems
E5	CORE	Repair control air systems (e.g., brake, clutch, engine, etc.)
E4	CORE	Repair Control Pitch Propeller (CPP) systems
E4	CORE	Repair diesel engines
E4	CORE	Repair diesel engines support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Repair fuel oil and lube oil purification systems
E4	CORE	Repair fuel oil and lube oil transfer systems
E4	CORE	Repair fuel oil stripping systems
E4	CORE	Repair heat exchangers
E4	CORE	Repair high purity reverse osmosis systems
E5	CORE	Repair jacking gears
E5	CORE	Repair machinery clutches and brakes
E5	CORE	Repair machinery transmissions
E4	CORE	Repair main propulsion shafts (e.g., jet drive, outdrive, etc.)
E5	CORE	Repair Main Reduction Gear (MRG) systems
E4	CORE	Repair oily waste water systems
E4	NON-CORE	Repair potable water systems
E4	CORE	Repair reducing stations (e.g., air, water systems, hydraulics, etc.)
E4	CORE	Repair reverse osmosis systems
E4	CORE	Repair stern tube cooling systems
E4	CORE	Repair system valves (e.g., diaphragm, gate, check, etc.)
E4	CORE	Repair systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Replace flange shields
E4	NON-CORE	Replace pressure/temperature alarms and set points
E4	CORE	Test fluid samples
E5	CORE	Troubleshoot auxiliary cooling water systems

Paygrade	Task Type	Task Statements
E5	CORE	Troubleshoot compressed air systems
E5	CORE	Troubleshoot control air systems (e.g., brake, clutch, engine, etc.)
E5	CORE	Troubleshoot Control Pitch Propeller (CPP) systems
E5	CORE	Troubleshoot diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E5	CORE	Troubleshoot diesel engines
E5	CORE	Troubleshoot fuel oil and lube oil transfer systems
E5	CORE	Troubleshoot fuel oil stripping systems
E5	CORE	Troubleshoot heat exchangers
E5	CORE	Troubleshoot high purity reverse osmosis systems
E5	CORE	Troubleshoot jacking gears
E5	CORE	Troubleshoot machinery clutches and brakes
E5	CORE	Troubleshoot machinery transmissions
E5	CORE	Troubleshoot main propulsion shafts (e.g., jet drive, outdrive, etc.)
E6	CORE	Troubleshoot Main Reduction Gear (MRG) systems
E5	CORE	Troubleshoot oily waste water systems
E5	NON-CORE	Troubleshoot potable water systems
E5	CORE	Troubleshoot reducing stations (e.g., air, water systems, hydraulics, etc.)
E5	CORE	Troubleshoot reverse osmosis systems
E5	CORE	Troubleshoot stern tube cooling systems
E5	CORE	Troubleshoot system valves (e.g., diaphragm, gate, check, etc.)
E5	CORE	Troubleshoot systems pumps (e.g., water, fuel, oil, etc.)
E5	NON-CORE	Verify pressure/temperature alarms and set points
		MECHANICAL SYSTEMS OPERATIONS

Paygrade	Task Type	Task Statements
E4	CORE	Align auxiliary cooling water systems
E4	CORE	Align compressed air systems
E4	CORE	Align Control Pitch Propeller (CPP) systems
E4	CORE	Align diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Align diesel engines
E4	CORE	Align fuel oil and lube oil purification systems
E4	CORE	Align fuel oil and lube oil transfer systems
E4	CORE	Align fuel oil stripping systems
E4	CORE	Align high purity reverse osmosis systems
E4	CORE	Align main drainage systems
E4	CORE	Align Main Reduction Gear (MRG) systems
E4	CORE	Align oily waste water systems
E4	NON-CORE	Align potable water system
E4	CORE	Align reducing stations (e.g., air, water systems, hydraulics, etc.)

MECHANICAL SYSTEMS OPERATIONS (CONT'D)

Paygrade	Task Type	Task Statements
E4	CORE	Align reverse osmosis systems
E4	CORE	Align stern tube cooling systems
E4	CORE	Align systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Conduct auxiliary cooling water system operations
E4	CORE	Conduct compressed air system operations
E5	CORE	Conduct control air system operations (e.g., brake, clutch, engine, etc.)
E4	CORE	Conduct Controllable Pitch Propeller (CPP) system operations
E4	CORE	Conduct diesel engine operations
E4	CORE	Conduct diesel engine support system operations (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Conduct fuel oil and lube oil purification system operations
E4	CORE	Conduct fuel oil and lube oil transfer system operations
E4	CORE	Conduct fuel oil stripping system operations
E4	CORE	Conduct high purity reverse osmosis system operations
E4	CORE	Conduct jacking gear operations
E4	CORE	Conduct Main Reduction Gear (MRG) system operations
E4	CORE	Conduct oily waste water system operations
E4	NON-CORE	Conduct potable water system operations
E4	CORE	Conduct reverse osmosis system operations
E4	CORE	Conduct stern tube cooling system operations

Job Title **Diesel Engine Systems Maintainer**

Job Code 003653

NOC TBD **Short Title (14 Characters) Short Title (30 Characters) Job Family** Installation, Maintenance, and Repair DIESEL ENGINE SYS MAINT DIESEL SYS MNT

Pay Plan Career Field Other Relationships and Rules

Enlisted NEC UXXX Series and other NECs as assigned

Job Description

Diesel Engine Systems Maintainers operate and maintain main propulsion diesel engines, air compressors, and reduction gears used for ship propulsion and auxiliary machinery, such as ship's service diesel engine generators, pumps, and oil purifiers; maintain, desalinization plants (reverse osmosis), and compressed gas producing plants; align piping systems for fuel, oil, water, and air; control operation of ship's main propulsion diesel engine; control operation of ship's service diesel engine generators; clean, adjust, test, and perform other preventive maintenance on ship's internal-combustion engines and other auxiliary machinery, pumps, and associated valves; repair or replace valves, pumps, heat exchangers, compressors, and hydraulic or pneumatic control devices; make entries in machinery operating records and reports; and work under the supervision of Diesel Systems Managers and Diesel Systems Technicians.

DoD Relationship O*NET Relationship

Group Title DoD Code Occupation Title SOC Code Job Family

Auxiliaries 165200 Motorboat Mechanics and Service 49-3051.00 Installation, Maintenance, and Repair

Technicians

Skills **Abilities**

Equipment Selection Deductive Reasoning Operation and Control Manual Dexterity Problem Sensitivity Equipment Maintenance Systems Evaluation Written Comprehension

Visualization Repairing

Information Ordering Troubleshooting Reading Comprehension Mathematical Reasoning Operation Monitoring Written Expression Quality Control Analysis Near Vision Operations Analysis Extent Flexibility

ENGINEERING MANAGEMENT

<u>Paygrade</u> E4	<u>Task Type</u> CORE	<u>Task Statements</u> Input data into Diesel Readiness Systems (DRS)
E5	CORE	Maintain engineering records and logs
E4	NON-CORE	Prepare Current Ship's Maintenance Project (CSMP) inputs
E5	NON-CORE	Prepare Quality Assurance (QA) repair forms
E4	CORE	Report accuracy of Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Validate Engineering Operational Sequencing System (EOSS) manuals
E5	CORE	Verify Engineering Operational Sequencing System (EOSS) manuals
E6	CORE	Verify engineering records and logs
E6	NON-CORE	Verify Quality Assurance (QA) repair forms

MECHANICAL MAINTENANCE

<u>Paygrade</u>	Task Type	Task Statements
E4	CORE	Conduct preventative maintenance fuel oil and lube oil purification systems
E4	CORE	Conduct preventative maintenance on auxiliary cooling water systems
E4	NON-CORE	Conduct preventative maintenance on Civil Engineering Support Equipment (CESE)
E4	CORE	Conduct preventative maintenance on compressed air systems

<u>Paygrade</u> E4	Task Type CORE	Task Statements Conduct preventative maintenance on Controllable Pitch Propeller (CPP) systems
E4	CORE	Conduct preventative maintenance on diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Conduct preventative maintenance on diesel engines
E4	CORE	Conduct preventative maintenance on fuel oil and lube oil transfer systems
E4	CORE	Conduct preventative maintenance on fuel oil stripping systems
E4	CORE	Conduct preventative maintenance on high purity reverse osmosis systems
E4	CORE	Conduct preventative maintenance on jacking gears
E4	CORE	Conduct preventative maintenance on machinery clutches and brakes
E5	CORE	Conduct preventative maintenance on machinery transmissions
E4	CORE	Conduct preventative maintenance on main propulsion shafts (e.g., jet drive, outdrive, etc.)
E4	CORE	Conduct preventative maintenance on Main Reduction Gear (MRG) systems
E4	NON-CORE	Conduct preventative maintenance on oily waste water systems
E4	NON-CORE	Conduct preventative maintenance on potable water systems
E4	CORE	Conduct preventative maintenance on reducing stations (e.g., air, water systems, hydraulics, etc.)
E4	CORE	Conduct preventative maintenance on reverse osmosis systems
E4	CORE	Conduct preventative maintenance on stern tube cooling systems
E4	CORE	Conduct preventative maintenance on system valves (e.g., diaphragm, gate, check, etc.)
E4	CORE	Conduct preventative maintenance on systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Conduct preventative maintenance on heat exchangers
E4	CORE	Draw fluid samples
E4	CORE	Inspect flange shields
E6	CORE	Inspect fluid samples
E5	CORE	Maintain precision instruments
E4	CORE	Perform precision measurements
E4	CORE	Perform tank level soundings
E4	CORE	Repair auxiliary cooling water systems
E4	CORE	Repair compressed air systems
E5	CORE	Repair control air systems (e.g., brake, clutch, engine, etc.)
E4	CORE	Repair Control Pitch Propeller (CPP) systems
E4	CORE	Repair diesel engines
E4	CORE	Repair diesel engines support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Repair fuel oil and lube oil purification systems
E4	CORE	Repair fuel oil and lube oil transfer systems
E4	CORE	Repair fuel oil stripping systems
E4	CORE	Repair heat exchangers

<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements Repair high purity reverse osmosis systems
E5	CORE	Repair jacking gears
E5	CORE	Repair machinery clutches and brakes
E5	CORE	Repair machinery transmissions
E4	CORE	Repair main propulsion shafts (e.g., jet drive, outdrive, etc.)
E5	CORE	Repair Main Reduction Gear (MRG) systems
E4	CORE	Repair oily waste water systems
E4	NON-CORE	Repair potable water systems
E4	CORE	Repair reducing stations (e.g., air, water systems, hydraulics, etc.)
E4	CORE	Repair reverse osmosis systems
E4	CORE	Repair stern tube cooling systems
E4	CORE	Repair system valves (e.g., diaphragm, gate, check, etc.)
E4	CORE	Repair systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Replace flange shields
E4	NON-CORE	Replace pressure/temperature alarms and set points
E4	CORE	Test fluid samples
E5	CORE	Troubleshoot auxiliary cooling water systems
E5	CORE	Troubleshoot compressed air systems
E5	CORE	Troubleshoot control air systems (e.g., brake, clutch, engine, etc.)
E5	CORE	Troubleshoot Control Pitch Propeller (CPP) systems
E5	CORE	Troubleshoot diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E5	CORE	Troubleshoot diesel engines
E5	CORE	Troubleshoot fuel oil and lube oil transfer systems
E5	CORE	Troubleshoot fuel oil stripping systems
E5	CORE	Troubleshoot heat exchangers
E5	CORE	Troubleshoot high purity reverse osmosis systems
E5	CORE	Troubleshoot jacking gears
E5	CORE	Troubleshoot machinery clutches and brakes
E5	CORE	Troubleshoot machinery transmissions
E5	CORE	Troubleshoot main propulsion shafts (e.g., jet drive, outdrive, etc.)
E6	CORE	Troubleshoot Main Reduction Gear (MRG) systems
E5	CORE	Troubleshoot oily waste water systems
E5	NON-CORE	Troubleshoot potable water systems
E5	CORE	Troubleshoot reducing stations (e.g., air, water systems, hydraulics, etc.)
E5	CORE	Troubleshoot reverse osmosis systems
E5	CORE	Troubleshoot stern tube cooling systems
E5	CORE	Troubleshoot system valves (e.g., diaphragm, gate, check, etc.)

<u>Paygrade</u> E5	<u>Task Type</u> CORE	<u>Task Statements</u> Troubleshoot systems pumps (e.g., water, fuel, oil, etc.)
E5	NON-CORE	Verify pressure/temperature alarms and set points
-		
ъ .		MECHANICAL SYSTEMS OPERATIONS
<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements Align auxiliary cooling water systems
E4	CORE	Align compressed air systems
E4	CORE	Align Control Pitch Propeller (CPP) systems
E4	CORE	Align diesel engine support systems (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Align diesel engines
E4	CORE	Align fuel oil and lube oil purification systems
E4	CORE	Align fuel oil and lube oil transfer systems
E4	CORE	Align fuel oil stripping systems
E4	CORE	Align high purity reverse osmosis systems
E4	CORE	Align main drainage systems
E4	CORE	Align Main Reduction Gear (MRG) systems
E4	CORE	Align oily waste water systems
E4	NON-CORE	Align potable water system
E4	CORE	Align reducing stations (e.g., air, water systems, hydraulics, etc.)
E4	CORE	Align reverse osmosis systems
E4	CORE	Align stern tube cooling systems
E4	CORE	Align systems pumps (e.g., water, fuel, oil, etc.)
E4	CORE	Conduct auxiliary cooling water system operations
E4	CORE	Conduct compressed air system operations
E5	CORE	Conduct control air system operations (e.g., brake, clutch, engine, etc.)
E4	CORE	Conduct Controllable Pitch Propeller (CPP) system operations
E4	CORE	Conduct diesel engine operations
E4	CORE	Conduct diesel engine support system operations (e.g., jacket water, lube oil, fuel oil, etc.)
E4	CORE	Conduct fuel oil and lube oil purification system operations
E4	CORE	Conduct fuel oil and lube oil transfer system operations
E4	CORE	Conduct fuel oil stripping system operations
E4	CORE	Conduct high purity reverse osmosis system operations
E4	CORE	Conduct jacking gear operations
E4	CORE	Conduct Main Reduction Gear (MRG) system operations

Conduct oily waste water system operations

Conduct reverse osmosis system operations

Conduct stern tube cooling system operations

Conduct potable water system operations

E4

E4

E4

E4

CORE

CORE

CORE

NON-CORE