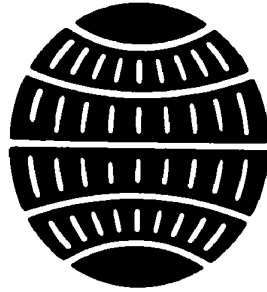


CHAPTER 29



ELECTRICIAN'S MATE (EM)

NAVPERS 18068F-29H
Change 105

Updated: January 2026

TABLE OF CONTENTS

ELECTRICIAN'S MATE (EM)

SCOPE OF RATING	EM-3
GENERAL INFORMATION	EM-4
ELECTRICAL SYSTEMS MANAGER	EM-5
MOTORS AND GENERATORS	EM-5
PROPULSION	EM-5
SAFETY	EM-5
TECHNICAL ADMINISTRATION	EM-6
ELECTRICAL SYSTEMS TECHNICIAN	EM-7
AUXILIARY ELECTRICAL EQUIPMENT	EM-7
ELECTRICAL INSTALLATIONS	EM-9
ELEVATORS AND CONVEYORS	EM-9
LIFTING EQUIPMENT	EM-9
LIGHTING SYSTEMS	EM-10
MOTORS AND GENERATORS	EM-10
NETWORKED LOGIC CONTROL SYSTEMS	EM-11
POWER DISTRIBUTION	EM-12
PROPULSION	EM-13
SAFETY	EM-13
SMALL CRAFT	EM-14
TECHNICAL ADMINISTRATION	EM-14
ELECTRICAL SYSTEMS MAINTAINER	EM-15
AUXILIARY ELECTRICAL EQUIPMENT	EM-15
ELECTRICAL INSTALLATIONS	EM-17
ELEVATORS AND CONVEYORS	EM-17
LIFTING EQUIPMENT	EM-18
LIGHTING SYSTEMS	EM-18
MOTORS AND GENERATORS	EM-18
NETWORKED LOGIC CONTROL SYSTEMS	EM-19
POWER DISTRIBUTION	EM-19
PROPULSION	EM-20
SAFETY	EM-20
SMALL CRAFT	EM-21
TECHNICAL ADMINISTRATION	EM-21

NAVY ENLISTED OCCUPATIONAL STANDARDS

FOR

ELECTRICIAN'S MATE (EM)



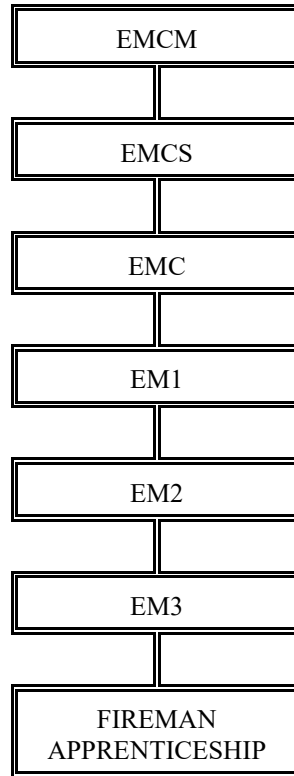
SCOPE OF RATING

Electrician's Mates (EM) operate and control generators, switchboards, control equipment, and electrical/electronic equipment associated with engineering plants; operate and perform organizational and intermediate maintenance on power and lighting circuits, electrical fixtures, motors, generators, voltage and frequency regulators, controllers, distribution switchboards and other electrical/electronic equipment; test for short circuits, grounds or other casualties; repair and/or rebuild electrical equipment, including solid state circuitry elements.

These Occupational Standards are to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 29.

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**Electrical Systems Manager****Job Code****002839****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

ELECTRICAL SYSTEMS MANAGER

Short Title (14 Characters)

ELEC SYS MANGR

Pay Plan

Enlisted

Career Field

EM

Other Relationships and Rules

UXXX and 7XXX series and other NECs as assigned

Job Description

Electrical Systems Manager direct operations and maintenance of shipboard electrical power systems, including switchboards, generators, distribution panels, and associated equipment; provide training for command personnel; coordinate the shipboard electrical safety and tag-out program; perform audits of divisional and/or departmental programs; evaluate trend analyses, and implement process improvements; perform risk management; manage work critical for movement of Naval tactical and command forces; and mentor/train Electrical Systems Technicians and Electrical Systems Maintainers.

DoD Relationship**Group Title**

Electric Power

DoD Code

166200

O*NET Relationship**Occupation Title**

Electrical and Electronics
Repairers, Commercial and
Industrial Equipment

SOC Code

49-2094.00

Job Family

Installation, Maintenance, and
Repair

Skills*Quality Control Analysis**Reading Comprehension**Monitoring**Coordination**Instructing**Management of Material Resources**Operations Analysis**Speaking**Equipment Maintenance**Learning Strategies***Abilities***Written Comprehension**Information Ordering**Selective Attention**Problem Sensitivity**Speech Clarity**Oral Expression**Deductive Reasoning**Near Vision**Inductive Reasoning**Static Strength***MOTORS AND GENERATORS****Paygrade**

E7

Task Type

CORE

Task Statements

Conduct closeout inspections on Ship's Service Generator (SSG)

E7

CORE

Supervise maintenance on Ship's Service Generator (SSG) electrical components

PROPULSION**Paygrade**

E6

Task Type

CORE

Task Statements

Perform preventive maintenance on precipitator components

SAFETY**Paygrade**

E7

Task Type

CORE

Task Statements

Conduct operational test on casualty power systems

E7

CORE

Conduct preventive maintenance on shore power rigging and unrigging

E7

CORE

Supervise electric plant dynamic testing

E7

CORE

Supervise shore power rigging and unrigging

E5

CORE

Supervise work on energized equipment

E7

CORE

Validate closeout of load centers, switchboards, and generators

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze technical manuals
E7	CORE	Approve wire removals and replacements form
E6	NON-CORE	Authorize Quality Assurance (QA) repair forms
E5	CORE	Conduct electrical safety training
E6	CORE	Conduct tag-out training
E5	CORE	Conduct training on electrical and electronic fundamentals and components
E6	CORE	Develop temporary procedures on electrical systems
E7	NON-CORE	Manage classified and controlled materials
E7	CORE	Manage electrical safety program
E7	CORE	Manage tag-out program
E5	CORE	Train Repair Party Electricians (RPE)
E7	CORE	Validate Formal Work Packages (FWP) for motor rewind
E5	NON-CORE	Validate Quality Assurance (QA) repair forms
E7	CORE	Validate temporary procedures on electrical systems
E7	CORE	Validate working drawings
E7	CORE	Verify accuracy of administrative programs (e.g., tag-out, electrical safety, electrical tool issue, etc.)
E7	CORE	Verify completion of electrical checks on Master Light Off Checklist Sheet (MLOCS)

Job Title**Electrical Systems Technician****Job Code****003302****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

ELECTRICAL SYSTEMS TECHNICIAN

Short Title (14 Characters)

ELEC SYS TECH

Pay Plan

Enlisted

Career Field

EM

Other Relationships and Rules

UXXX and 7XXX series and other NECs as assigned

Job Description

Electrical Systems Technicians perform operations, troubleshooting, and corrective maintenance on electrical distribution systems, motors and controllers, electrical generators, lighting systems, alarm and indicating systems, machinery vibration analysis equipment, other electrical and electronic control and support equipment, propulsion plant and auxiliary equipment and other equipment essential for the movement of Naval tactical forces; and interpret electrical schematics, diagrams and blueprints associated with those systems.

DoD Relationship**Group Title**

Electric Power

DoD Code

166200

O*NET Relationship**Occupation Title**

Electrical and Electronics
Repairers, Commercial and
Industrial Equipment

SOC Code

49-2094.00

Job Family

Installation, Maintenance, and
Repair

Skills*Systems Analysis**Critical Thinking**Installation**Equipment Selection**Repairing**Systems Evaluation**Equipment Maintenance**Reading Comprehension**Quality Control Analysis**Technology Design***Abilities***Finger Dexterity**Visualization**Deductive Reasoning**Fluency of Ideas**Selective Attention**Written Comprehension**Control Precision**Information Ordering**Speed of Closure**Oral Expression***AUXILIARY ELECTRICAL EQUIPMENT****Paygrade****Task Type****Task Statements**

E4

CORE

Adjust capstan electrical components

E4

CORE

Adjust electrical winch components

E5

CORE

Adjust electrically-operated valve components

E4

CORE

Adjust galley equipment electrical components

E4

CORE

Adjust scullery equipment electrical components

E5

CORE

Align degaussing system components

E5

CORE

Conduct preventive maintenance on degaussing system components

E5

CORE

Conduct preventive maintenance on steering control system electrical and electronic components

E5

CORE

Repair air compressor electrical components

E5

CORE

Repair air conditioning system electrical components

E5

CORE

Repair battery service and support system

E4

CORE

Repair chilled water electrical system components

E5

CORE

Repair Collection, Holding, and Transfer (CHT) system electrical components

E6

CORE

Repair degaussing system components

E5

NON-CORE

Repair dehydrator electrical components

E5

CORE

Repair electrically-operated valve components

E4

CORE

Repair galley equipment electrical components

AUXILIARY ELECTRICAL EQUIPMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Repair laundry equipment electrical components
E4	CORE	Repair mess deck equipment electrical components
E4	CORE	Repair potable water system electrical components
E5	CORE	Repair refrigeration system electrical components
E4	NON-CORE	Repair salinity indicating system components
E4	CORE	Repair scullery equipment electrical components
E4	CORE	Repair ship's heating system electrical components
E5	CORE	Repair ship's steering control system electrical components
E5	CORE	Repair ventilation system electrical components
E4	CORE	Repair waste management electrical components
E4	CORE	Repair welding equipment electrical components
E5	CORE	Replace air compressor electrical and electronic components
E5	CORE	Replace air conditioning system electrical and electronic components
E5	CORE	Replace battery service and support system
E4	CORE	Replace capstan electrical components
E4	CORE	Replace chilled water electrical and electronic components
E5	CORE	Replace Collection, Holding, and Transfer (CHT) system electronic and electrical components
E6	CORE	Replace degaussing system components
E5	NON-CORE	Replace dehydrator electrical components
E4	CORE	Replace electrical winch components
E5	CORE	Replace electrically-operated valve components
E4	CORE	Replace galley equipment electrical components
E4	CORE	Replace laundry equipment electrical and electronic components
E4	CORE	Replace mess deck equipment electrical components
E4	CORE	Replace potable water system electrical components
E5	CORE	Replace refrigeration system electrical components
E4	NON-CORE	Replace salinity indicating system components
E4	CORE	Replace scullery equipment electrical components
E4	CORE	Replace ship's heating system electrical and electronic components
E5	CORE	Replace ship's steering control system electrical and electronic components
E5	CORE	Replace ventilation system electrical and electronic components
E4	CORE	Replace waste management electrical and electronic components
E4	CORE	Replace welding equipment electrical and electronic components
E5	CORE	Test electrically-operated valve components
E5	CORE	Troubleshoot air compressor electrical and electronic components
E5	CORE	Troubleshoot air conditioning system electrical and electronic components
E5	CORE	Troubleshoot battery service and support systems
E4	CORE	Troubleshoot chilled water electrical and electronic components

AUXILIARY ELECTRICAL EQUIPMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Troubleshoot Collection, Holding, and Transfer (CHT) system electronic and electrical components
E6	CORE	Troubleshoot degaussing system components
E5	NON-CORE	Troubleshoot dehydrator electrical components
E5	CORE	Troubleshoot electrically-operated valve components
E4	CORE	Troubleshoot galley equipment electrical components
E4	CORE	Troubleshoot laundry equipment electrical and electronic components
E4	CORE	Troubleshoot mess deck equipment electrical components
E4	CORE	Troubleshoot potable water system electrical components
E5	CORE	Troubleshoot refrigeration system electrical components
E4	NON-CORE	Troubleshoot salinity indicating system components
E4	CORE	Troubleshoot scullery equipment electrical components
E4	CORE	Troubleshoot ship's heating system electrical and electronic components
E5	CORE	Troubleshoot ship's steering control system electrical and electronic components
E5	CORE	Troubleshoot ventilation system electrical and electronic components
E4	CORE	Troubleshoot waste management electrical and electronic components
E4	CORE	Troubleshoot welding equipment electrical components

ELECTRICAL INSTALLATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Disconnect electrical equipment
E4	CORE	Inspect cableways
E4	CORE	Install hardwired electrical equipment
E4	CORE	Install permanent cables
E4	CORE	Isolate damaged electrical equipment
E4	CORE	Remove dead-ended cables
E5	CORE	Repair damaged electrical equipment
E4	NON-CORE	Solder electrical leads to equipment

ELEVATORS AND CONVEYORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Repair conveyor electrical components
E5	CORE	Repair elevator and dumbwaiter electrical components
E5	CORE	Replace conveyor electrical and electronic components
E5	CORE	Replace elevator and dumbwaiter electrical components
E5	CORE	Troubleshoot conveyor electrical and electronic components
E5	CORE	Troubleshoot elevator and dumbwaiter electrical components

LIFTING EQUIPMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Repair capstan electrical components
E5	CORE	Repair crane electrical components

LIFTING EQUIPMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Repair electrical winch components
E5	CORE	Repair hoist electrical components
E5	CORE	Repair windlass electrical components
E5	CORE	Replace crane electrical and electronic components
E5	CORE	Replace windlass electrical components
E4	CORE	Troubleshoot capstan electrical components
E5	CORE	Troubleshoot crane electrical and electronic components
E4	CORE	Troubleshoot electrical winch components
E5	CORE	Troubleshoot hoist electrical components
E5	CORE	Troubleshoot windlass electrical components

LIGHTING SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Adjust flight deck lighting and landing aids system components
E4	CORE	Repair flight deck lighting and landing aids system components
E4	CORE	Repair general lighting system components
E4	CORE	Repair navigation and signal lighting system components
E4	CORE	Replace flight deck lighting and landing aids system components
E4	CORE	Replace general lighting system components
E4	CORE	Replace navigation and signal lighting system components
E4	CORE	Troubleshoot flight deck lighting and landing aids system components
E4	CORE	Troubleshoot general lighting system components
E4	CORE	Troubleshoot navigation and signal lighting system components

MOTORS AND GENERATORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct preventive maintenance on generator governor system electrical and electronic components
E5	CORE	Conduct preventive maintenance on Ship's Service Generator (SSG) electrical components
E5	CORE	Conduct preventive maintenance on static converter components
E5	CORE	Conduct preventive maintenance on static inverter components
E5	CORE	Repair Direct Current (DC) generators
E5	CORE	Repair Direct Current (DC) motors
E6	CORE	Repair generator governor system electrical components
E6	CORE	Repair Ship's Service Generator (SSG) electrical components
E5	CORE	Repair static converter components
E5	CORE	Repair static inverter components
E4	CORE	Replace Alternating Current (AC) motors
E5	CORE	Replace Direct Current (DC) generators
E5	CORE	Replace Direct Current (DC) motors

MOTORS AND GENERATORS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Replace generator governor system electrical and electronic components
E4	CORE	Replace motors bearings
E6	CORE	Replace Ship's Service Generator (SSG) electrical components
E6	CORE	Test generator governor system electrical and electronic components
E4	CORE	Troubleshoot Alternating Current (AC) motors
E5	CORE	Troubleshoot Direct Current (DC) generators
E5	CORE	Troubleshoot Direct Current (DC) motors
E6	CORE	Troubleshoot generator governor system electrical and electronic components
E6	CORE	Troubleshoot Ship's Service Generator (SSG) electrical components
E5	CORE	Troubleshoot static converter components
E5	CORE	Troubleshoot static inverter components

NETWORKED LOGIC CONTROL SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct preventive maintenance on Machinery Control System (MCS) electrical and electronic components
E5	CORE	Conduct preventive maintenance on Programmable Logic Controllers (PLC)
E5	NON-CORE	Configure Machinery Control System (MCS) electrical and electronic components
E4	CORE	Configure Programmable Logic Controllers (PLC) hardware
E5	CORE	Repair digital and analog controls circuits
E5	NON-CORE	Repair Machinery Control System (MCS) electrical components
E5	CORE	Replace Programmable Logic Controllers (PLC) Hardware
E5	CORE	Replace digital and analog controls circuits
E5	NON-CORE	Replace Machinery Control System (MCS) electrical and electronic components
E5	CORE	Replace Programmable Logic Controllers (PLC) components
E5	CORE	Replace Programmable Logic Controllers (PLC) Field devices (e.g., Transducers, Resistance Temperature Detector (RTD), Magnetic pickups, etc.)
E5	CORE	Test digital and analog controls circuits
E5	CORE	Test Programmable Logic Controllers (PLC) Field devices (e.g., Transducers, Resistance Temperature Detector (RTD), Magnetic pickups, etc.)
E5	CORE	Troubleshoot digital and analog controls circuits
E5	NON-CORE	Troubleshoot Machinery Control System (MCS) electrical and electronic components
E5	CORE	Troubleshoot Programmable Logic Controllers (PLC)
E5	CORE	Troubleshoot Programmable Logic Controllers (PLC) Field devices (e.g., Transducers, Resistance Temperature Detector (RTD), Magnetic pickups, etc.)

POWER DISTRIBUTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct preventive maintenance on electrical distribution switchboard components
E4	CORE	Perform shore power rigging and unrigging
E5	CORE	Repair Arc Fault Detector (AFD) system components
E5	CORE	Repair Automatic Bus Transfer (ABT) components
E4	CORE	Repair casualty power system components
E4	CORE	Repair Direct Current (DC) distribution circuits and components
E5	CORE	Repair electrical distribution switchboard components
E5	CORE	Repair electrical power monitoring systems
E4	CORE	Repair magnetic controllers
E4	CORE	Repair Manual Bus Transfer (MBT) components
E4	CORE	Repair neutral bonded Alternating Current (AC) distribution circuits and components
E4	CORE	Repair power distribution system components
E4	CORE	Repair ungrounded Alternating Current (AC) distribution circuits and components
E5	CORE	Repair Uninterruptable Power Supplies (UPS)
E5	CORE	Replace Automatic Bus Transfer (ABT) components
E4	CORE	Replace casualty power system components
E4	CORE	Replace Direct Current (DC) distribution circuits and components
E5	CORE	Replace electrical distribution switchboard components
E4	CORE	Replace neutral bonded Alternating Current (AC) distribution circuits and components
E5	CORE	Replace static converter components
E5	CORE	Replace static inverter components
E4	CORE	Replace ungrounded Alternating Current (AC) distribution circuits and components
E5	CORE	Troubleshoot Arc Fault Detector (AFD) system components
E5	CORE	Troubleshoot Automatic Bus Transfer (ABT) components
E4	CORE	Troubleshoot casualty power system components
E4	CORE	Troubleshoot Direct Current (DC) distribution circuits and components
E5	CORE	Troubleshoot electrical distribution switchboard components
E5	CORE	Troubleshoot electrical power monitoring systems
E4	CORE	Troubleshoot magnetic controllers
E4	CORE	Troubleshoot Manual Bus Transfer (MBT) components
E4	CORE	Troubleshoot neutral bonded Alternating Current (AC) distribution circuits and components
E4	CORE	Troubleshoot power distribution system components
E4	CORE	Troubleshoot ungrounded Alternating Current (AC) distribution circuits and components
E5	CORE	Troubleshoot Uninterruptable Power Supplies (UPS)

PROPULSION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Calibrate shaft speed sensing, indication, and Engine Order Telegraph (EOT) components
E5	CORE	Conduct preventive maintenance on boiler electrical and electronic components
E5	NON-CORE	Conduct preventive maintenance on shaft speed sensing, indication, and Engine Order Telegraph (EOT) components
E6	CORE	Perform preventive maintenance on precipitator components
E5	CORE	Repair boiler electrical components
E5	CORE	Repair engine electrical components
E6	CORE	Repair precipitator components
E5	NON-CORE	Repair shaft speed sensing, indication, and Engine Order Telegraph (EOT) components
E5	CORE	Replace boiler electrical and electronic components
E5	CORE	Replace engine electrical and electronic components
E6	CORE	Replace precipitator components
E5	NON-CORE	Replace shaft speed sensing, indication, and Engine Order Telegraphic (EOT) components
E5	NON-CORE	Test shaft speed sensing, indication, and Engine Order Telegraphic (EOT) components
E5	CORE	Troubleshoot boiler electrical and electronic components
E5	CORE	Troubleshoot engine electrical and electronic components
E6	CORE	Troubleshoot precipitator components
E5	NON-CORE	Troubleshoot shaft speed sensing, indication, and Engine Order Telegraph (EOT) components

SAFETY

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Calibrate measurement instruments (e.g., gauges, switches, thermostats, etc.)
E4	CORE	Conduct electrical safety checks on personnel and portable electronic equipment
E7	CORE	Conduct preventive maintenance on shore power rigging and unrigging
E4	CORE	Conduct work on energized equipment
E4	CORE	Repair alarm system components
E5	CORE	Repair fire protection system electrical components
E5	CORE	Replace Arc Fault Detector (AFD) system components
E4	CORE	Replace electronic and electrical measurement instruments (e.g., meters, switches, thermostat, etc.)
E4	CORE	Replace fire protection system electrical and electronic components
E5	CORE	Supervise work on energized equipment
E4	CORE	Troubleshoot alarm system components
E5	CORE	Troubleshoot fire protection system electrical and electronic components

SMALL CRAFT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Repair small craft electrical distribution system components
E4	CORE	Repair small craft starter system components
E4	CORE	Replace small craft electrical distribution system components
E4	CORE	Replace small craft starter system components
E4	CORE	Troubleshoot small craft electrical distribution system components
E4	CORE	Troubleshoot small craft starter system components

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze technical manuals
E4	CORE	Complete wire removals and replacements form
E4	CORE	Conduct electrical checks on Master Light Off Checklist Sheet (MLOCS)
E5	CORE	Conduct electrical safety training
E6	CORE	Conduct tag-out training
E5	CORE	Conduct training on electrical and electronic fundamentals and components
E5	NON-CORE	Draft Quality Assurance (QA) repair forms
E4	CORE	Generate working drawings
E4	CORE	Process customer trouble-calls
E5	CORE	Train Repair Party Electricians (RPE)
E5	NON-CORE	Validate Quality Assurance (QA) repair forms

Job Title**Electrical Systems Maintainer****Job Code****003699****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

ELECTRICAL SYSTEMS MAINTAINER

Short Title (14 Characters)

ELEC SYS MAINT

Pay Plan

Enlisted

Career Field

EM

Other Relationships and Rules

UXXX and 7XXX series and other NECs as assigned

Job Description

Electrical Systems Maintainers perform operations, corrective, and preventive maintenance on electrical distribution systems, motors and controllers, electrical generators, lighting systems, alarm and indicating systems, machinery vibration analysis equipment, other electrical and electronic control and support equipment, propulsion plant and auxiliary equipment and other equipment essential for the movement of Naval tactical forces; and interpret electrical schematics, diagrams and blueprints associated with those systems.

DoD Relationship**Group Title**

Electric Power

DoD Code

166200

O*NET Relationship**Occupation Title**

Electrical and Electronics
Repairers, Commercial and
Industrial Equipment

SOC Code

49-2094.00

Job Family

Installation, Maintenance, and
Repair

Skills*Equipment Maintenance**Reading Comprehension**Repairing**Systems Evaluation**Installation**Equipment Selection**Systems Analysis**Quality Control Analysis**Technology Design**Coordination***Abilities***Finger Dexterity**Visualization**Selective Attention**Written Comprehension**Control Precision**Information Ordering**Manual Dexterity**Written Expression**Deductive Reasoning**Oral Expression***AUXILIARY ELECTRICAL EQUIPMENT****Paygrade****Task Type****Task Statements**

E4

CORE

Adjust capstan electrical components

E4

CORE

Adjust electrical winch components

E5

CORE

Adjust electrically-operated valve components

E4

CORE

Adjust galley equipment electrical components

E4

CORE

Adjust scullery equipment electrical components

E5

CORE

Align degaussing system components

E4

CORE

Conduct preventive maintenance on air compressor electrical and electronic components

E4

CORE

Conduct preventive maintenance on air conditioning system electrical and electronic components

E4

CORE

Conduct preventive maintenance on battery service and support systems

E4

CORE

Conduct preventive maintenance on chilled water electrical and electronic components

E4

CORE

Conduct preventive maintenance on Collection, Holding, and Transfer (CHT) system electronic and electrical components

E5

CORE

Conduct preventive maintenance on degaussing system components

E4

NON-CORE

Conduct preventive maintenance on dehydrator electrical components

E4

CORE

Conduct preventive maintenance on electrically-operated valve components

E4

CORE

Conduct preventive maintenance on galley equipment electrical components

AUXILIARY ELECTRICAL EQUIPMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on laundry equipment electrical and electronic components
E4	CORE	Conduct preventive maintenance on mess deck equipment electrical components
E4	CORE	Conduct preventive maintenance on potable water system electrical components
E4	CORE	Conduct preventive maintenance on refrigeration system electrical components
E4	NON-CORE	Conduct preventive maintenance on salinity indicating system components
E4	CORE	Conduct preventive maintenance on scullery equipment electrical components
E4	CORE	Conduct preventive maintenance on ship's heating system electrical and electronic components
E5	CORE	Conduct preventive maintenance on steering control system electrical and electronic components
E4	CORE	Conduct preventive maintenance on storage batteries
E4	CORE	Conduct preventive maintenance on ventilation system electrical and electronic components
E4	CORE	Conduct preventive maintenance on waste management electrical and electronic components
E4	CORE	Conduct preventive maintenance on welding equipment electrical components
E5	CORE	Repair air compressor electrical components
E5	CORE	Repair air conditioning system electrical components
E5	CORE	Repair battery service and support system
E4	CORE	Repair chilled water electrical system components
E5	CORE	Repair Collection, Holding, and Transfer (CHT) system electrical components
E6	CORE	Repair degaussing system components
E5	NON-CORE	Repair dehydrator electrical components
E5	CORE	Repair electrically-operated valve components
E4	CORE	Repair galley equipment electrical components
E4	CORE	Repair laundry equipment electrical components
E4	CORE	Repair mess deck equipment electrical components
E4	CORE	Repair potable water system electrical components
E5	CORE	Repair refrigeration system electrical components
E4	NON-CORE	Repair salinity indicating system components
E4	CORE	Repair scullery equipment electrical components
E4	CORE	Repair ship's heating system electrical components
E5	CORE	Repair ship's steering control system electrical components
E5	CORE	Repair ventilation system electrical components
E4	CORE	Repair waste management electrical components
E4	CORE	Repair welding equipment electrical components
E5	CORE	Replace air compressor electrical and electronic components
E5	CORE	Replace air conditioning system electrical and electronic components
E5	CORE	Replace battery service and support system

AUXILIARY ELECTRICAL EQUIPMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Replace capstan electrical components
E4	CORE	Replace chilled water electrical and electronic components
E5	CORE	Replace Collection, Holding, and Transfer (CHT) system electronic and electrical components
E4	CORE	Replace electrical winch components
E5	CORE	Replace electrically-operated valve components
E4	CORE	Replace galley equipment electrical components
E4	CORE	Replace laundry equipment electrical and electronic components
E4	CORE	Replace mess deck equipment electrical components
E4	CORE	Replace potable water system electrical components
E5	CORE	Replace refrigeration system electrical components
E4	NON-CORE	Replace salinity indicating system components
E4	CORE	Replace scullery equipment electrical components
E4	CORE	Replace ship's heating system electrical and electronic components
E5	CORE	Replace ship's steering control system electrical and electronic components
E5	CORE	Replace ventilation system electrical and electronic components
E4	CORE	Replace waste management electrical and electronic components
E4	CORE	Replace welding equipment electrical and electronic components
E5	CORE	Test electrically-operated valve components

ELECTRICAL INSTALLATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on grounding straps
E4	CORE	Disconnect electrical equipment
E4	CORE	Inspect cableways
E4	CORE	Install hardwired electrical equipment
E4	CORE	Install permanent cables
E4	CORE	Isolate damaged electrical equipment
E4	CORE	Remove dead-ended cables
E5	CORE	Repair damaged electrical equipment
E4	NON-CORE	Solder electrical leads to equipment

ELEVATORS AND CONVEYORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on conveyor electrical and electronic components
E4	CORE	Conduct preventive maintenance on elevator and dumbwaiter electrical components
E5	CORE	Repair conveyor electrical components
E5	CORE	Repair elevator and dumbwaiter electrical components
E5	CORE	Replace conveyor electrical and electronic components
E5	CORE	Replace elevator and dumbwaiter electrical components

LIFTING EQUIPMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on capstan electrical components
E4	CORE	Conduct preventive maintenance on crane electrical and electronic components
E4	CORE	Conduct preventive maintenance on electrical winch components
E4	CORE	Conduct preventive maintenance on hoist electrical components
E4	CORE	Conduct preventive maintenance on windlass electrical components
E4	CORE	Repair capstan electrical components
E5	CORE	Repair crane electrical components
E4	CORE	Repair electrical winch components
E5	CORE	Repair hoist electrical components
E5	CORE	Repair windlass electrical components
E5	CORE	Replace crane electrical and electronic components
E5	CORE	Replace windlass electrical components

LIGHTING SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Adjust flight deck lighting and landing aids system components
E4	CORE	Conduct preventive maintenance on flight deck lighting and landing aids system components
E4	CORE	Conduct preventive maintenance on general lighting system components
E4	CORE	Conduct preventive maintenance on navigation and signal lighting system components
E4	CORE	Repair flight deck lighting and landing aids system components
E4	CORE	Repair general lighting system components
E4	CORE	Repair navigation and signal lighting system components
E4	CORE	Replace flight deck lighting and landing aids system components
E4	CORE	Replace general lighting system components
E4	CORE	Replace navigation and signal lighting system components

MOTORS AND GENERATORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on Alternating Current (AC) motors
E4	CORE	Conduct preventive maintenance on Direct Current (DC) generators
E4	CORE	Conduct preventive maintenance on Direct Current (DC) motors
E5	CORE	Conduct preventive maintenance on generator governor system electrical and electronic components
E5	CORE	Conduct preventive maintenance on Ship's Service Generator (SSG) electrical components
E5	CORE	Conduct preventive maintenance on static converter components
E5	CORE	Conduct preventive maintenance on static inverter components
E5	CORE	Repair Direct Current (DC) generators
E5	CORE	Repair Direct Current (DC) motors
E6	CORE	Repair generator governor system electrical components

MOTORS AND GENERATORS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Repair Ship's Service Generator (SSG) electrical components
E5	CORE	Repair static converter components
E5	CORE	Repair static inverter components
E4	CORE	Replace Alternating Current (AC) motors
E5	CORE	Replace Direct Current (DC) generators
E5	CORE	Replace Direct Current (DC) motors
E4	CORE	Replace motors bearings

NETWORKED LOGIC CONTROL SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct preventive maintenance on Machinery Control System (MCS) electrical and electronic components
E5	CORE	Conduct preventive maintenance on Programmable Logic Controllers (PLC)
E5	CORE	Repair digital and analog controls circuits
E5	NON-CORE	Repair Machinery Control System (MCS) electrical components
E5	CORE	Replace digital and analog controls circuits
E5	CORE	Test digital and analog controls circuits

POWER DISTRIBUTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on Arc Fault Detector (AFD) system components
E4	CORE	Conduct preventive maintenance on Automatic Bus Transfer (ABT) components
E4	CORE	Conduct preventive maintenance on casualty power system components
E4	CORE	Conduct preventive maintenance on Direct Current (DC) distribution circuits and components
E5	CORE	Conduct preventive maintenance on electrical distribution switchboard components
E4	CORE	Conduct preventive maintenance on electrical power monitoring systems
E4	CORE	Conduct preventive maintenance on magnetic controllers
E4	CORE	Conduct preventive maintenance on Manual Bus Transfer (MBT) components
E4	CORE	Conduct preventive maintenance on neutral bonded Alternating Current (AC) distribution circuits and components
E4	CORE	Conduct preventive maintenance on power distribution system components
E4	CORE	Conduct preventive maintenance on shore power components
E4	CORE	Conduct preventive maintenance on ungrounded Alternating Current (AC) distribution circuits and components
E4	CORE	Conduct preventive maintenance on Uninterruptable Power Supplies (UPS)
E4	CORE	Perform shore power rigging and unrigging
E5	CORE	Repair Arc Fault Detector (AFD) system components
E5	CORE	Repair Automatic Bus Transfer (ABT) components
E4	CORE	Repair casualty power system components
E4	CORE	Repair Direct Current (DC) distribution circuits and components
E5	CORE	Repair electrical distribution switchboard components

POWER DISTRIBUTION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Repair electrical power monitoring systems
E4	CORE	Repair magnetic controllers
E4	CORE	Repair Manual Bus Transfer (MBT) components
E4	CORE	Repair neutral bonded Alternating Current (AC) distribution circuits and components
E4	CORE	Repair power distribution system components
E4	CORE	Repair ungrounded Alternating Current (AC) distribution circuits and components
E5	CORE	Repair Uninterruptable Power Supplies (UPS)
E5	CORE	Replace Automatic Bus Transfer (ABT) components
E4	CORE	Replace casualty power system components
E4	CORE	Replace Direct Current (DC) distribution circuits and components
E4	CORE	Replace neutral bonded Alternating Current (AC) distribution circuits and components
E4	CORE	Replace ungrounded Alternating Current (AC) distribution circuits and components

PROPULSION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct preventive maintenance on boiler electrical and electronic components
E4	CORE	Conduct preventive maintenance on engine electrical and electronic components
E5	NON-CORE	Conduct preventive maintenance on shaft speed sensing, indication, and Engine Order Telegraph (EOT) components
E6	CORE	Perform preventive maintenance on precipitator components
E5	CORE	Repair boiler electrical components
E5	CORE	Repair engine electrical components
E6	CORE	Repair precipitator components
E5	NON-CORE	Repair shaft speed sensing, indication, and Engine Order Telegraph (EOT) components

SAFETY

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Calibrate measurement instruments (e.g., gauges, switches, thermostats, etc.)
E4	CORE	Conduct electrical safety checks on personnel and portable electronic equipment
E4	CORE	Conduct preventive maintenance on alarm system components
E4	CORE	Conduct preventive maintenance on fire protection system electrical and electronic components
E7	CORE	Conduct preventive maintenance on shore power rigging and unrigging
E4	CORE	Conduct work on energized equipment
E4	NON-CORE	Perform preventive maintenance on measurement instruments (e.g., gauges, switches, thermostat, etc.)
E4	CORE	Repair alarm system components
E5	CORE	Repair fire protection system electrical components
E5	CORE	Replace Arc Fault Detector (AFD) system components
E4	CORE	Replace fire protection system electrical and electronic components

SMALL CRAFT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct daily boat report for electrical components
E4	CORE	Conduct preventive maintenance on small craft electrical distribution system components
E4	CORE	Conduct preventive maintenance on small craft starter system components
E4	CORE	Repair small craft electrical distribution system components
E4	CORE	Repair small craft starter system components
E4	CORE	Replace small craft electrical distribution system components
E4	CORE	Replace small craft starter system components

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze technical manuals
E4	CORE	Complete wire removals and replacements form
E4	CORE	Conduct electrical checks on Master Light Off Checklist Sheet (MLOCS)
E5	CORE	Conduct electrical safety training
E5	CORE	Conduct training on electrical and electronic fundamentals and components
E5	NON-CORE	Draft Quality Assurance (QA) repair forms
E4	CORE	Generate working drawings
E4	CORE	Process customer trouble-calls