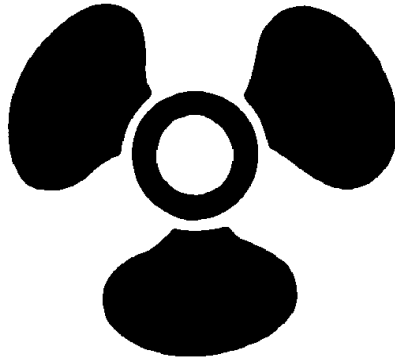


CHAPTER 51



MACHINIST'S MATE, NON-NUCLEAR, SUBMARINE AUXILIARY (MMA)

NAVPERS 18068F-51H
Change 96

Updated: October 2023

TABLE OF CONTENTS

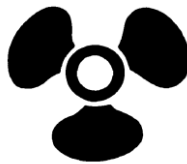
MACHINIST'S MATE, NON-NUCLEAR, SUBMARINE AUXILIARY (MMA)

SCOPE OF RATING	MMA-3
GENERAL INFORMATION	MMA-4
AUXILIARY EQUIPMENT TECHNICIAN	MMA-5
MECHANICAL MAINTENANCE	MMA-5
MECHANICAL SYSTEMS OPERATIONS	MMA-7
QUALITY ASSURANCE	MMA-8
AUXILIARLY EQUIPMENT OPERATOR	MMA-10
MECHANICAL MAINTENANCE	MMA-10
MECHANICAL SYSTEMS OPERATIONS	MMA-11
QUALITY ASSURANCE	MMA-13
AUXILIARLY EQUIPMENT MANAGER	MMA-14
EQUIPMENT ADMINISTRATION	MMA-14
MECHANICAL SYSTEMS MAINTENANCE	MMA-15
MECHANICAL SYSTEMS OPERATIONS	MMA-15
QUALITY ASSURANCE	MMA-15

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

MACHINIST'S MATE, NON-NUCLEAR, SUBMARINE AUXILIARY (MMA)



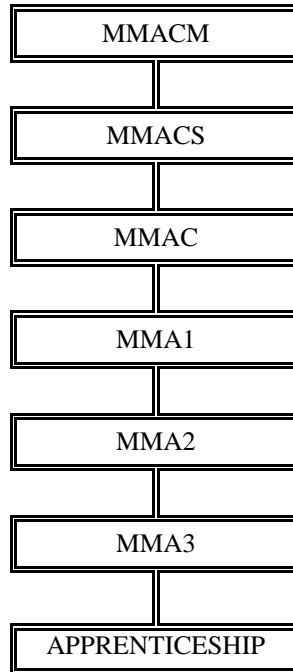
SCOPE OF RATING

Machinist's Mate, Non-Nuclear, Submarine Auxiliary (MMA) operate, maintain, and repair (at the organizational and intermediate level) damage control equipment and systems, internal combustion diesel engines and diesel engine support systems, hydraulic systems, atmosphere control and oxygen-generating equipment, refrigeration systems, compressed air and gas systems, potable water system, seawater systems, and sanitary and plumbing systems.

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 51.

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**Auxiliary Equipment Technician****Job Code****001519****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

AUXILIARY EQUIPMENT TECHNICIAN

Short Title (14 Characters)

AUX EQUIP TECH

Pay Plan

Enlisted

Career Field

MMA

Other Relationships and Rules

NEC QXXX and 7XXX series and other NECs as assigned

Job Description

Auxiliary Equipment Technicians perform organizational and intermediate maintenance, repair, and troubleshooting; conduct advanced systems operations of hydraulic power plants and hydraulic system components, emergency diesel engines, compressed gas systems (e.g., air, oxygen, hydrogen, and nitrogen), sanitation systems, seawater systems, freshwater systems, oxygen-generating equipment, atmosphere control equipment, and submarine salvage equipment (e.g., watertight hatches and doors); and supervise operations and maintenance performed by Auxiliary Equipment Operators.

DoD Relationship**Group Title**

Auxiliaries

DoD Code

165200

O*NET Relationship**Occupation Title**Maintenance and Repair Workers,
General**SOC Code**

49-9071.00

Job FamilyInstallation, Maintenance, and
Repair**Skills***Equipment Maintenance**Operation and Control**Operation Monitoring**Troubleshooting**Repairing**Quality Control Analysis**Systems Evaluation**Management of Material Resources**Reading Comprehension**Monitoring***Abilities***Manual Dexterity**Problem Sensitivity**Written Comprehension**Deductive Reasoning**Multi-limb Coordination**Control Precision**Inductive Reasoning**Information Ordering**UNASSIGNED**UNASSIGNED***MECHANICAL MAINTENANCE****Paygrade****Task Type****Task Statements**

E4

CORE

Lubricate components

E4

CORE

Maintain air system components

E4

CORE

Maintain atmosphere control equipment

E4

CORE

Maintain auxiliary drain systems

E4

CORE

Maintain damage control equipment

E4

CORE

Maintain demineralized water systems

E4

CORE

Maintain depth sensing systems

E5

CORE

Maintain diesel engine support systems

E5

CORE

Maintain diesel engines

E4

CORE

Maintain drain systems

E5

NON-CORE

Maintain dry deck shelter systems

E4

CORE

Maintain escape trunks

E4

CORE

Maintain fresh water cooling systems

E4

CORE

Maintain habitability systems

E4

CORE

Maintain hydraulic system components

E4

CORE

Maintain oxygen and nitrogen systems

E5

CORE

Maintain oxygen-generating equipment

MECHANICAL MAINTENANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Maintain potable water system components
E4	CORE	Maintain refrigeration system components
E4	CORE	Maintain salvage components
E4	CORE	Maintain shipboard valves
E4	CORE	Maintain ship's service hydraulic plants
E4	CORE	Maintain steering and diving control systems
E4	CORE	Maintain steering and diving hydraulic plants
E4	CORE	Maintain submarine lubrication system
E4	CORE	Maintain trim system components
E4	CORE	Maintain variable ballast system components
E4	CORE	Maintain ventilation system components
E4	CORE	Maintain watertight doors and hatches
E4	CORE	Perform diagnostic equipment calibration
E4	CORE	Repair air system components
E5	CORE	Repair atmosphere control equipment
E4	CORE	Repair auxiliary drain system components
E4	CORE	Repair damage control equipment
E4	CORE	Repair demineralized water system
E5	CORE	Repair depth sensing system
E5	CORE	Repair diesel engine and support systems
E4	CORE	Repair drain system components
E4	CORE	Repair escape trunks
E4	CORE	Repair fresh water cooling systems
E4	CORE	Repair habitability systems
E4	CORE	Repair hydraulic system components
E5	CORE	Repair main ballasting systems and components
E5	CORE	Repair oxygen and nitrogen systems
E4	CORE	Repair potable water system
E4	CORE	Repair refrigeration systems
E4	CORE	Repair shipboard pumps
E4	CORE	Repair shipboard valves
E5	CORE	Repair steering and diving control systems
E4	CORE	Repair submarine lubrication systems
E4	CORE	Repair trim systems
E4	CORE	Repair ventilation systems
E4	CORE	Repair watertight doors and hatches
E7	CORE	Supervise diesel inspections
E4	CORE	Test watertight doors and hatches
E4	CORE	Troubleshoot air system components

MECHANICAL MAINTENANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Troubleshoot atmosphere control equipment
E4	CORE	Troubleshoot auxiliary drain system components
E4	CORE	Troubleshoot damage control equipment
E4	CORE	Troubleshoot demineralized water system
E5	CORE	Troubleshoot depth sensing system
E5	CORE	Troubleshoot diesel engine and support systems
E4	CORE	Troubleshoot drain system components
E4	CORE	Troubleshoot escape trunks
E4	CORE	Troubleshoot fresh water cooling systems
E4	CORE	Troubleshoot habitability systems
E4	CORE	Troubleshoot hydraulic system components
E5	CORE	Troubleshoot main ballasting systems and components
E5	CORE	Troubleshoot oxygen and nitrogen systems
E5	CORE	Troubleshoot oxygen-generating equipment
E4	CORE	Troubleshoot potable water system
E4	CORE	Troubleshoot refrigeration systems
E4	CORE	Troubleshoot shipboard pumps
E4	CORE	Troubleshoot shipboard valves
E5	CORE	Troubleshoot steering and diving control systems
E4	CORE	Troubleshoot submarine lubrication systems
E4	CORE	Troubleshoot trim systems
E4	CORE	Troubleshoot ventilation systems

MECHANICAL SYSTEMS OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Align air system components
E5	CORE	Align atmosphere control equipment
E4	CORE	Align auxiliary drain systems
E4	CORE	Align depth sensing systems
E4	CORE	Align diesel engine and support systems
E4	CORE	Align drain systems
E5	NON-CORE	Align dry deck shelter systems
E4	CORE	Align external hydraulic plants
E4	CORE	Align fresh water cooling systems
E4	CORE	Align hydraulic system components
E4	CORE	Align main ballasting systems and components
E4	CORE	Align oxygen and nitrogen systems
E5	CORE	Align oxygen-generating equipment
E4	CORE	Align potable water systems
E4	CORE	Align refrigeration system components

MECHANICAL SYSTEMS OPERATIONS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Align refrigeration systems
E4	CORE	Align ships service hydraulic plants
E4	CORE	Align steering and diving control systems
E4	CORE	Align stern diving plants
E4	CORE	Align submarine emergency life support systems
E4	CORE	Align submarine habitability systems
E4	CORE	Align submarine salvage systems
E4	CORE	Align trim systems
E4	CORE	Align ventilation systems
E4	CORE	Maintain shipboard pumps
E4	CORE	Test air system components
E5	CORE	Test atmosphere control equipment
E4	CORE	Test auxiliary drain systems
E4	CORE	Test depth sensing systems
E4	CORE	Test diesel engines and support systems
E4	CORE	Test drain systems
E4	CORE	Test external hydraulic plants
E4	CORE	Test fresh water cooling systems
E4	CORE	Test hydraulic system components
E4	CORE	Test main ballasting systems and components
E4	CORE	Test oxygen and nitrogen systems
E5	CORE	Test oxygen-generating equipment
E4	CORE	Test potable water systems
E4	CORE	Test refrigeration systems
E4	CORE	Test ship's service hydraulic plants
E4	CORE	Test steering and diving control systems
E4	CORE	Test stern diving plants
E4	CORE	Test submarine emergency life support systems
E4	CORE	Test submarine habitability systems
E4	CORE	Test submarine salvage systems
E4	CORE	Test trim systems
E4	CORE	Test ventilation systems

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Perform Quality Assurance (QA) inspections
E5	NON-CORE	Repair dry deck shelter systems
E5	CORE	Repair oxygen-generating equipment
E4	CORE	Repair salvage components
E5	NON-CORE	Test dry deck shelter systems

QUALITY ASSURANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Troubleshoot dry deck shelter systems
E4	CORE	Troubleshoot salvage components

Job Title**Auxiliary Equipment Operator****Job Code****001524****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

AUXILIARY EQUIPMENT OPERATOR

Short Title (14 Characters)

AUX EQUIP OPER

Pay Plan

Enlisted

Career Field

MMA

Other Relationships and Rules

NEC QXXX and 7XXX series and other NECs as assigned

Job Description

Auxiliary Equipment Operators align and perform operations, and basic preventive maintenance of hydraulic power plants and hydraulic system components, emergency diesel engines, compressed gas systems such as air, oxygen, hydrogen, nitrogen, sanitation systems, seawater systems, freshwater systems, submarine firefighting and emergency dewatering and damage control equipment; conduct critical work functions associated with movement of Naval tactical forces, repair and equipment maintenance, enhanced survivability, and rescue and recovery; provide security for operational forces and means; and conduct Naval Special Warfare (NSW).

DoD Relationship**Group Title**

Auxiliaries

DoD Code

165200

O*NET Relationship**Occupation Title**Maintenance and Repair Workers,
General**SOC Code**

49-9071.00

Job FamilyInstallation, Maintenance, and
Repair**Skills***Operation and Control**Operation Monitoring**Equipment Maintenance**Troubleshooting**Quality Control Analysis**Systems Evaluation**Management of Material Resources**Monitoring*

UNASSIGNED

UNASSIGNED

Abilities*Problem Sensitivity**Written Comprehension**Manual Dexterity**Deductive Reasoning**Multi-limb Coordination**Control Precision**Information Ordering*

UNASSIGNED

UNASSIGNED

UNASSIGNED

MECHANICAL MAINTENANCE**Paygrade****Task Type****Task Statements**

E4

CORE

Lubricate components

E4

CORE

Maintain air system components

E4

CORE

Maintain atmosphere control equipment

E4

CORE

Maintain damage control equipment

E4

CORE

Maintain demineralized water systems

E4

CORE

Maintain depth sensing systems

E5

NON-CORE

Maintain dry deck shelter systems

E4

CORE

Maintain escape trunks

E4

CORE

Maintain fresh water cooling systems

E4

CORE

Maintain habitability systems

E5

CORE

Maintain oxygen-generating equipment

E4

CORE

Maintain potable water system components

E4

CORE

Maintain ship's service hydraulic plants

E4

CORE

Maintain steering and diving control systems

E4

CORE

Maintain submarine lubrication system

E4

CORE

Maintain trim system components

E4

CORE

Maintain variable ballast system components

MECHANICAL MAINTENANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Maintain ventilation system components
E4	CORE	Perform diagnostic equipment calibration
E4	CORE	Test watertight doors and hatches
E4	CORE	Troubleshoot air system components
E5	CORE	Troubleshoot atmosphere control equipment
E4	CORE	Troubleshoot auxiliary drain system components
E4	CORE	Troubleshoot damage control equipment
E4	CORE	Troubleshoot demineralized water system
E5	CORE	Troubleshoot depth sensing system
E5	CORE	Troubleshoot diesel engine and support systems
E4	CORE	Troubleshoot drain system components
E4	CORE	Troubleshoot escape trunks
E4	CORE	Troubleshoot fresh water cooling systems
E4	CORE	Troubleshoot habitability systems
E4	CORE	Troubleshoot hydraulic system components
E5	CORE	Troubleshoot main ballasting systems and components
E5	CORE	Troubleshoot oxygen and nitrogen systems
E5	CORE	Troubleshoot oxygen-generating equipment
E4	CORE	Troubleshoot potable water system
E4	CORE	Troubleshoot refrigeration systems
E4	CORE	Troubleshoot shipboard pumps
E4	CORE	Troubleshoot shipboard valves
E5	CORE	Troubleshoot steering and diving control systems
E4	CORE	Troubleshoot submarine lubrication systems
E4	CORE	Troubleshoot trim systems
E4	CORE	Troubleshoot ventilation systems

MECHANICAL SYSTEMS OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Align air system components
E5	CORE	Align atmosphere control equipment
E4	CORE	Align auxiliary drain systems
E4	CORE	Align depth sensing systems
E4	CORE	Align diesel engine and support systems
E4	CORE	Align drain systems
E5	NON-CORE	Align dry deck shelter systems
E4	CORE	Align external hydraulic plants
E4	CORE	Align fresh water cooling systems
E4	CORE	Align hydraulic system components

MECHANICAL SYSTEMS OPERATIONS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Align main ballasting systems and components
E4	CORE	Align oxygen and nitrogen systems
E5	CORE	Align oxygen-generating equipment
E4	CORE	Align potable water systems
E4	CORE	Align refrigeration system components
E4	CORE	Align refrigeration systems
E4	CORE	Align ships service hydraulic plants
E4	CORE	Align steering and diving control systems
E4	CORE	Align stern diving plants
E4	CORE	Align submarine emergency life support systems
E4	CORE	Align submarine habitability systems
E4	CORE	Align submarine salvage systems
E4	CORE	Align trim systems
E4	CORE	Align ventilation systems
E4	CORE	Maintain shipboard pumps
E4	CORE	Test air system components
E5	CORE	Test atmosphere control equipment
E4	CORE	Test auxiliary drain systems
E4	CORE	Test depth sensing systems
E4	CORE	Test diesel engines and support systems
E4	CORE	Test drain systems
E4	CORE	Test external hydraulic plants
E4	CORE	Test fresh water cooling systems
E4	CORE	Test hydraulic system components
E4	CORE	Test main ballasting systems and components
E4	CORE	Test oxygen and nitrogen systems
E5	CORE	Test oxygen-generating equipment
E4	CORE	Test potable water systems
E4	CORE	Test refrigeration systems
E4	CORE	Test ship's service hydraulic plants
E4	CORE	Test steering and diving control systems
E4	CORE	Test stern diving plants
E4	CORE	Test submarine emergency life support systems
E4	CORE	Test submarine habitability systems
E4	CORE	Test submarine salvage systems
E4	CORE	Test trim systems
E4	CORE	Test ventilation systems

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Perform Quality Assurance (QA) maintenance
E5	NON-CORE	Test dry deck shelter systems
E5	NON-CORE	Troubleshoot dry deck shelter systems
E4	CORE	Troubleshoot salvage components

Job Title**Auxiliary Equipment Manager****Job Code****001532****Job Family**

Production

NOC

TBD

Short Title (30 Characters)

AUXILIARY EQUIPMENT MANAGER

Short Title (14 Characters)

AUX EQUIP MGR

Pay Plan

Enlisted

Career Field

MMA

Other Relationships and Rules

NEC QXXX and 7XXX series and other NECs as assigned

Job Description

Auxiliary Equipment Managers are responsible for the management of auxiliary division operations, administration of Quality Assurance (QA), calibration, Maintenance and Material Management (3-M) programs and for the management of maintenance and repair of hydraulic power plants, hydraulic system components, emergency diesel engines, compressed gas systems (e.g., air, oxygen, hydrogen, and nitrogen), sanitation systems, seawater systems, freshwater systems, oxygen generation equipment, atmosphere control equipment and submarine salvage equipment (e.g., watertight hatches and doors); conduct critical work functions associated with movement of Naval tactical forces, repair, and equipment maintenance, enhanced survivability, and rescue and recovery; provide security for operational forces and means; conduct Naval Special Warfare (NSW); provide personnel and support; and train auxiliary technician and operator personnel.

DoD Relationship**O*NET Relationship****Group Title**

Auxiliaries

DoD Code

165200

Occupation TitleFirst-Line Supervisors of
Production and Operating**SOC Code**

51-1011.00

Job Family

Production

Skills*Management of Material Resources**Management of Personnel Resources**Coordination**Monitoring**Equipment Maintenance**Quality Control Analysis**Systems Evaluation**Operation Monitoring**Operations Analysis*

UNASSIGNED

Abilities*Inductive Reasoning**Information Ordering**Oral Expression**Written Comprehension**Deductive Reasoning**Problem Sensitivity**Written Expression**Reaction Time**Speech Recognition*

UNASSIGNED

EQUIPMENT ADMINISTRATION**Paygrade****Task Type****Task Statements**

E7

NON-CORE

Approve Maintenance and Material Management (3-M) Program plans

E5

CORE

Direct Maintenance and Material Management (3-M) Program

E5

CORE

Direct material procurement

E7

NON-CORE

Manage Continuing Training and Qualification Software (CTQS) Programs

E5

CORE

Manage diagnostic equipment calibration program

E6

NON-CORE

Manage Maintenance and Material Management (3-M) Program

E5

CORE

Supervise controlled equipment inventories

E6

CORE

Supervise divisional equipment and system configurations

E6

CORE

Supervise divisional maintenance operations

E6

CORE

Supervise equipment installations, testing, and alterations

E6

CORE

Supervise ship's ballasting evolutions

E5

CORE

Supervise work center equipment and system configurations

E5

CORE

Supervise work center system repairs

MECHANICAL MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Supervise diesel engine repairs
E7	CORE	Supervise diesel inspections
E6	CORE	Supervise hydraulic repairs
E6	CORE	Supervise oxygen-generating plant operation
E7	CORE	Supervise steering and diving control system maintenance

MECHANICAL SYSTEMS OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Supervise diesel engine operations
E5	CORE	Supervise habitability and sanitation operations
E6	CORE	Supervise hydraulic system operations
E6	CORE	Supervise oxygen and nitrogen systems maintenance
E6	CORE	Supervise oxygen and nitrogen systems operations

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Develop Quality Assurance (QA) packages
E4	CORE	Perform Quality Assurance (QA) maintenance
E6	CORE	Review Quality Assurance (QA) packages
E7	CORE	Supervise oxygen-generating plant repairs