

CHAPTER 7



AVIATION STRUCTURAL MECHANIC (AM)

NAVPERS 18068F-7K
Change 102

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Event-Based Review

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

AVIATION STRUCTURAL MECHANIC (AM)



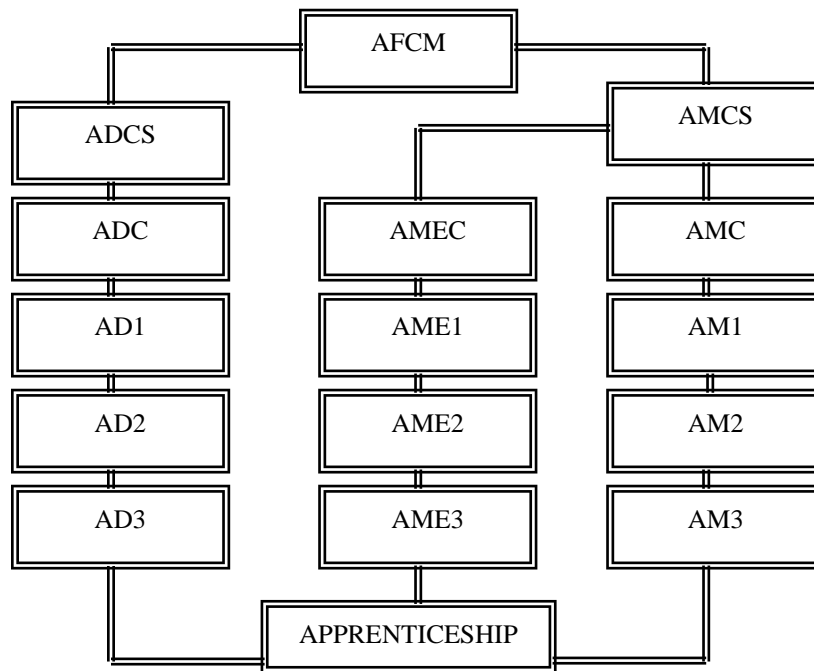
SCOPE OF RATING

Aviation Structural Mechanics (AM) maintain aircraft airframe and structural components, flight surfaces and controls, hydraulic and pneumatic control and actuating systems and mechanisms, landing gear systems, air conditioning, pressurization, visual improvement, and utility systems; fabricate and repair metallic and nonmetallic materials; supervise operation of airframe work centers; maintain aircraft metallic and non-metallic structures including fuselages, fixed and moveable flight surfaces, tail booms, doors, panels, decks, empennages, and seats (except ejection seats); maintain flight controls and related mechanisms; maintain hydraulic power storage and distribution systems including main (primary and secondary), auxiliary (utility), and emergency systems; maintain hydraulic actuating subsystems; maintain landing gear systems including wheels and tires, brakes, and emergency systems; maintain pneumatic power, storage and distribution systems; maintain hoists and winches, wing and tail fold systems; maintain launch and arresting gear systems; perform hydraulic component repair and testing; and perform aircraft daily, special, hourly, Non-Destructive, and conditional inspections.

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 7.

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**Aviation Structural Mechanic Intermediate Level****Job Code****001805****Job Family**

Production

NOC

TBD

Short Title (30 Characters)

AVIATION STRUCTURAL MECH I-LVL

Short Title (14 Characters)

AVSTRUMEC I-LV

Pay Plan

Enlisted

Career Field

AM

Other Relationships and Rules

EXXX and IXXX series and other NECs as assigned

Job Description

Aviation Structural Mechanics - Intermediate Level, perform maintenance on metallic and non-metallic hose and tube assemblies, hydraulic and pneumatic components, landing gear, tire/wheel assemblies, utility systems, and flight control system components; conduct advanced composite structural repairs, corrosion prevention/treatment, painting applications, Non-Destructive Inspections (NDI), and welding.

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

Aircraft Structures

DoD Code

160300

Occupation TitleAircraft Structure, Surfaces,
Rigging; and Systems Assemblers**SOC Code**

51-2011.00

Job Family

Production

Skills*Equipment Selection**Equipment Maintenance**Quality Control Analysis**Repairing**Critical Thinking**Operation and Control**Operation Monitoring**Troubleshooting**Installation**Judgment and Decision Making***Abilities***Selective Attention**Deductive Reasoning**Manual Dexterity**Category Flexibility**Inductive Reasoning**Control Precision**Written Comprehension**Oral Expression**Written Expression**Mathematical Reasoning***CORROSION CONTROL****Paygrade****Task Type****Task Statements**

E4

CORE

Apply aircraft coatings

E4

CORE

Clean aircraft, support equipment, and aircraft related equipment

E4

CORE

Clean composite materials and components

E4

CORE

Depreserve aircraft, support equipment, and aircraft related equipment

E4

CORE

Inspect aircraft, support equipment (SE), components, and related systems for corrosion

E4

CORE

Inspect components, structures, and sub-assemblies for corrosion

E5

CORE

Inspect composite materials and components

E4

CORE

Maintain aircraft coatings

E6

CORE

Manage corrosion control programs

E6

CORE

Manage Respirator Protection Programs (RPP)

E4

CORE

Perform corrosion prevention procedures

E4

CORE

Perform emergency reclamations

E4

CORE

Preserve aircraft, support equipment, and aircraft related equipment

E4

CORE

Treat aircraft and aircraft components for corrosion

FLIGHT CONTROL SYSTEMS**Paygrade****Task Type****Task Statements**

E5

CORE

Inspect flight control systems

E5

CORE

Inspect flight controls

FLIGHT CONTROL SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Maintain flight control systems
E4	CORE	Repair flight control systems
E4	CORE	Repair flight controls
E5	CORE	Troubleshoot flight control systems
E5	CORE	Troubleshoot flight controls

HOSE AND TUBE REPAIR AND MANUFACTURING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Fabricate hose and tube assemblies
E4	CORE	Inspect hose and tube assemblies
E4	CORE	Install hose and tube assemblies
E4	CORE	Manufacture hose and tube assemblies
E4	CORE	Remove hose and tube assemblies
E4	CORE	Repair hose and tube assemblies
E4	CORE	Test hose and tube assemblies

HYDRAULIC AND PNEUMATIC SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze hydraulic fluid samples
E4	CORE	Assemble aircraft hydraulic components
E4	CORE	Assemble aircraft pneumatic components
E4	CORE	Clean aircraft hydraulic components
E4	CORE	Clean aircraft hydraulic systems
E4	CORE	Collect hydraulic fluid samples
E4	CORE	Disassemble aircraft hydraulic components
E4	CORE	Disassemble aircraft pneumatic components
E4	CORE	Inspect aircraft hydraulic components
E4	CORE	Inspect aircraft hydraulic systems
E4	CORE	Inspect aircraft pneumatic components
E4	CORE	Inspect aircraft pneumatic systems
E4	CORE	Inspect hydraulic test stands
E5	CORE	Inspect In-Flight Refueling (IFR) systems
E4	CORE	Maintain aircraft hydraulic components
E4	CORE	Maintain hydraulic test stands
E4	CORE	Maintain in-flight refueling systems
E5	CORE	Manage hydraulic fluid program
E4	CORE	Repair aircraft hydraulic components
E4	CORE	Repair aircraft pneumatic components
E4	CORE	Repair In-Flight Refueling (IFR) systems
E4	CORE	Test aircraft hydraulic components
E4	CORE	Test aircraft hydraulic systems

HYDRAULIC AND PNEUMATIC SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Test aircraft pneumatic components
E4	CORE	Test aircraft pneumatic systems
E4	CORE	Test hydraulic test stands
E4	CORE	Test In-Flight Refueling (IFR) systems
E5	CORE	Troubleshoot aircraft hydraulic components
E5	CORE	Troubleshoot aircraft hydraulic systems
E5	CORE	Troubleshoot aircraft pneumatic components
E5	CORE	Troubleshoot aircraft pneumatic systems
E5	CORE	Troubleshoot In-Flight Refueling (IFR) systems

LANDING GEAR AND RELATED SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Assemble landing gear tire and wheel assemblies
E4	CORE	Disassemble landing gear tire and wheel assemblies
E5	CORE	Inspect landing gear components and related systems
E5	CORE	Inspect landing gear tire and wheel assemblies
E4	CORE	Maintain landing gear tire and wheel assemblies
E4	CORE	Repair landing gear and related systems
E4	CORE	Repair landing gear tire and wheel assemblies
E4	CORE	Test landing gear components and related systems
E5	CORE	Test landing gear tire and wheel assemblies
E5	CORE	Troubleshoot landing gear components and related systems
E5	CORE	Troubleshoot landing gear tire and wheel assemblies

MAINTENANCE ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Brief Maintenance Control (MC)/Production Control (PC)
E5	CORE	Develop workcenter maintenance plans
E4	CORE	Document maintenance actions
E4	CORE	Incorporate Technical Directives (TD)
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E6	CORE	Prepare Broad Arrow (BA) reports
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E5	CORE	Update Monthly Maintenance Plans (MMP) / Monthly Personnel Plan (MPP)
E6	CORE	Validate Monthly Maintenance Plans (MMP) / Monthly Personnel Plan (MPP)

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Audit Naval Aviation Maintenance Programs (NAMP)
E4	CORE	Conduct aircraft special inspections
E5	CORE	Conduct Collateral Duty Inspector (CDI) inspections
E5	CORE	Conduct Collateral Duty Quality Assurance Representative (CDQAR) inspections

QUALITY ASSURANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct conditional inspections
E6	CORE	Conduct Quality Assurance (QA) inspections
E4	CORE	Conduct Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E4	CORE	Conduct tap test inspections
E6	CORE	Manage airframe and related systems maintenance
E6	CORE	Manage conditional inspections
E6	CORE	Manage Naval Aviation Maintenance Programs (NAMP)
E6	CORE	Manage Non-Destructive Testing and Inspection (NDT/I) programs
E6	CORE	Monitor Naval Aviation Maintenance Programs (NAMP)
E5	CORE	Supervise airframe and related systems maintenance
E5	CORE	Supervise conditional inspections
E5	CORE	Supervise Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E5	CORE	Supervise tap test inspections

STRUCTURAL MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct Non-Destructive Inspections (NDI)
E4	CORE	Fabricate components, structures, and sub-assemblies
E5	CORE	Inspect components, structures, and sub-assemblies
E4	CORE	Inspect structural repair tooling
E4	CORE	Maintain structural repair tooling
E4	CORE	Repair aircraft structural components
E4	CORE	Repair aircraft structures
E4	CORE	Repair composite materials and components
E4	CORE	Repair structural repair tooling
E4	NON-CORE	Weld aircraft components
E4	NON-CORE	Weld Support Equipment (SE)

Job Title**Aviation Structural Mechanic Organizational Level****Job Code****001862****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

AVIATION STRUCTURAL MECH O-LVL

Short Title (14 Characters)

AVSTRUMEC O-LV

Pay Plan

Enlisted

Career Field

AM

Other Relationships and Rules

EXXX and IXXX series and other NECs as assigned

Job Description

Aviation Structural Mechanics - Organizational Level, perform maintenance procedures and troubleshooting on metallic and non-metallic components, hose and tube assemblies, hydraulic and pneumatic systems, landing gear, tire/wheel assemblies, utility systems, flight control systems, composite structural repair, corrosion prevention/treatment; upkeep tactical paint schemes on Naval aircraft; perform daily, special, phase, conditional, Quality Assurance (QA), acceptance and transfer inspections on aircraft.

DoD Relationship**Group Title**

Aircraft Structures

DoD Code

160300

O*NET Relationship**Occupation Title**

Aircraft Mechanics and Service Technicians

SOC Code

49-3011.00

Job Family

Installation, Maintenance, and Repair

Skills*Equipment Maintenance**Equipment Selection**Quality Control Analysis**Repairing**Management of Material Resources**Critical Thinking**Management of Personnel Resources**Installation**Complex Problem Solving**Troubleshooting***Abilities***Selective Attention**Deductive Reasoning**Manual Dexterity**Category Flexibility**Multi-limb Coordination**Inductive Reasoning**Written Comprehension**Oral Expression**Control Precision**Written Expression***CORROSION CONTROL****Paygrade****Task Type****Task Statements**

E4

CORE

Apply aircraft coatings

E4

CORE

Clean aircraft, support equipment, and aircraft related equipment

E4

CORE

Clean composite materials and components

E4

CORE

Depreserve aircraft, support equipment, and aircraft related equipment

E4

CORE

Inspect aircraft, support equipment (SE), components, and related systems for corrosion

E4

CORE

Inspect components, structures, and sub-assemblies for corrosion

E5

CORE

Inspect composite materials and components

E4

CORE

Maintain aircraft coatings

E6

CORE

Manage corrosion control programs

E6

CORE

Manage Respirator Protection Programs (RPP)

E4

CORE

Perform corrosion prevention procedures

E4

CORE

Perform emergency reclamations

E4

CORE

Preserve aircraft, support equipment, and aircraft related equipment

E4

CORE

Treat aircraft and aircraft components for corrosion

FLIGHT CONTROL SYSTEMS**Paygrade****Task Type****Task Statements**

E5

CORE

Inspect flight control systems

E5

CORE

Inspect flight controls

FLIGHT CONTROL SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Install flight control systems
E4	CORE	Install flight controls
E4	CORE	Maintain flight control systems
E4	CORE	Remove flight control systems
E4	CORE	Remove flight controls
E4	CORE	Repair flight control systems
E4	CORE	Repair flight controls
E5	CORE	Rig flight control systems
E5	CORE	Troubleshoot flight control systems
E5	CORE	Troubleshoot flight controls

HOSE AND TUBE REPAIR AND MANUFACTURING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Inspect hose and tube assemblies
E4	CORE	Install hose and tube assemblies
E4	CORE	Remove hose and tube assemblies
E4	CORE	Repair hose and tube assemblies

HYDRAULIC AND PNEUMATIC SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze hydraulic fluid samples
E4	CORE	Assemble aircraft hydraulic components
E4	CORE	Clean aircraft hydraulic components
E4	CORE	Clean aircraft hydraulic systems
E4	CORE	Collect hydraulic fluid samples
E4	CORE	Inspect aircraft hydraulic components
E4	CORE	Inspect aircraft hydraulic systems
E4	CORE	Inspect aircraft pneumatic components
E4	CORE	Inspect aircraft pneumatic systems
E4	CORE	Inspect hydraulic test stands
E5	CORE	Inspect In-Flight Refueling (IFR) systems
E4	CORE	Install aircraft hydraulic components
E4	CORE	Install aircraft pneumatic components
E4	CORE	Install In-Flight Refueling (IFR) systems
E4	CORE	Maintain aircraft hydraulic components
E4	CORE	Maintain aircraft hydraulic systems
E4	CORE	Maintain aircraft pneumatic systems
E4	CORE	Maintain in-flight refueling systems
E5	CORE	Manage hydraulic fluid program
E4	CORE	Remove aircraft hydraulic components
E4	CORE	Remove aircraft pneumatic components

HYDRAULIC AND PNEUMATIC SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Remove In-Flight Refueling (IFR) systems
E4	CORE	Repair In-Flight Refueling (IFR) systems
E4	CORE	Test aircraft hydraulic systems
E4	CORE	Test aircraft pneumatic systems
E4	CORE	Test hydraulic test stands
E4	CORE	Test In-Flight Refueling (IFR) systems
E5	CORE	Troubleshoot aircraft hydraulic components
E5	CORE	Troubleshoot aircraft hydraulic systems
E5	CORE	Troubleshoot aircraft pneumatic components
E5	CORE	Troubleshoot aircraft pneumatic systems
E5	CORE	Troubleshoot In-Flight Refueling (IFR) systems

LANDING GEAR AND RELATED SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Inspect landing gear components and related systems
E5	CORE	Inspect landing gear tire and wheel assemblies
E4	CORE	Install landing gear components and related systems
E4	CORE	Install landing gear tire and wheel assemblies
E4	CORE	Maintain landing gear components and related systems
E4	CORE	Maintain landing gear tire and wheel assemblies
E4	CORE	Remove landing gear components and related systems
E4	CORE	Remove landing gear tire and wheel assemblies
E4	CORE	Repair landing gear and related systems
E4	CORE	Service landing gear and related systems
E4	CORE	Service landing gear tire and wheel assemblies
E4	CORE	Test landing gear components and related systems
E5	CORE	Troubleshoot landing gear components and related systems
E5	CORE	Troubleshoot landing gear tire and wheel assemblies

MAINTENANCE ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Assign aircraft to missions
E6	CORE	Brief flight crews
E5	CORE	Brief Maintenance Control (MC)/Production Control (PC)
E6	CORE	Conduct maintenance briefs
E6	CORE	Coordinate Flight Deck (FD), Flight Line (FL) and Hangar Bay (HB) operations
E5	CORE	Develop workcenter maintenance plans
E4	CORE	Document maintenance actions
E4	CORE	Incorporate Technical Directives (TD)
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E7	CORE	Prepare Aviation Maintenance Supply Readiness Reports (AMSRR)

MAINTENANCE ADMINISTRATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E7	CORE	Release aircraft Safe For Flight (SFF)
E4	CORE	Review Aircraft Discrepancy Books (ADB)
E5	CORE	Update Monthly Maintenance Plans (MMP) / Monthly Personnel Plan (MPP)
E6	CORE	Validate Monthly Maintenance Plans (MMP) / Monthly Personnel Plan (MPP)
E6	CORE	Verify Functional Check Flight (FCF) requirements

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Audit Naval Aviation Maintenance Programs (NAMP)
E5	CORE	Conduct aircraft acceptance inspections
E4	CORE	Conduct aircraft daily inspections
E4	CORE	Conduct aircraft special inspections
E5	CORE	Conduct aircraft transfer inspections
E4	CORE	Conduct aircraft turnaround inspections
E5	CORE	Conduct Collateral Duty Inspector (CDI) inspections
E5	CORE	Conduct Collateral Duty Quality Assurance Representative (CDQAR) inspections
E5	CORE	Conduct conditional inspections
E5	CORE	Conduct phase inspections
E6	CORE	Conduct Quality Assurance (QA) inspections
E4	CORE	Conduct Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E4	CORE	Conduct tap test inspections
E6	CORE	Manage aircraft acceptance inspections
E6	CORE	Manage aircraft special inspections
E6	CORE	Manage aircraft transfer inspections
E6	CORE	Manage airframe and related systems maintenance
E6	CORE	Manage conditional inspections
E6	CORE	Manage Naval Aviation Maintenance Programs (NAMP)
E6	CORE	Monitor Naval Aviation Maintenance Programs (NAMP)
E7	CORE	Supervise aircraft acceptance inspections
E4	CORE	Supervise aircraft daily inspections
E5	CORE	Supervise aircraft special inspections
E5	CORE	Supervise aircraft transfer inspections
E5	CORE	Supervise airframe and related systems maintenance
E5	CORE	Supervise conditional inspections
E6	CORE	Supervise phase inspections
E5	CORE	Supervise Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E5	CORE	Supervise tap test inspections

STRUCTURAL MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Fabricate components, structures, and sub-assemblies
E5	CORE	Inspect components, structures, and sub-assemblies
E4	CORE	Inspect structural repair tooling
E4	CORE	Install aircraft structures
E4	CORE	Maintain aircraft structural components
E4	CORE	Maintain aircraft structures
E4	CORE	Maintain structural repair tooling
E4	CORE	Perform aircraft jacking procedures
E4	CORE	Remove aircraft structures
E4	CORE	Repair aircraft structural components
E4	CORE	Repair aircraft structures
E4	CORE	Repair composite materials and components
E4	CORE	Repair structural repair tooling
E5	CORE	Supervise aircraft jacking evolutions