

CHAPTER 7



AVIATION STRUCTURAL MECHANIC (AM)

NAVPERS 18068F-7L
Change 104

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

AVIATION STRUCTURAL MECHANIC (AM)



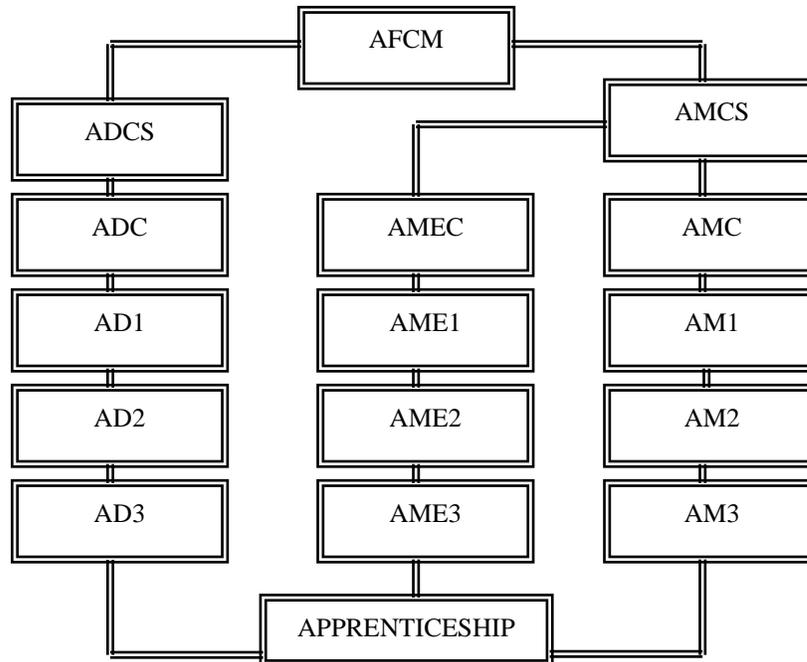
SCOPE OF RATING

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, oxygen and other utility systems, egress systems including seat and canopy ejection systems and components; fabricate and repair metallic and nonmetallic materials; supervise operation of airframe work centers; maintain aircraft metallic and nonmetallic 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; perform identification, cleaning, treatment, and prevention of corrosion; conduct aircraft daily, special, hourly, and conditional inspections; and conduct Non-Destructive Inspections (NDI).

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/repairs on metallic and nonmetallic hose and tube assemblies, hydraulic and pneumatic components, landing gear, tire/wheel assemblies, utility systems, and flight control system components; document maintenance actions and perform records maintenance; and conduct advanced composite structural repairs, corrosion prevention/treatment, painting applications, and Non-Destructive Inspections (NDI).

DoD RelationshipGroup Title

Aircraft Structures

DoD Code

160300

O*NET RelationshipOccupation TitleAircraft Structure, Surfaces, Rigging, and Systems Assemblers
51-2011.00SOC CodeJob Family

Production

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

E4

Task Type

NON-CORE

Task Statements

Apply aircraft coatings

E4

CORE

Perform corrosion prevention procedures

E4

CORE

Perform emergency reclamations

E4

CORE

Treat aircraft and aircraft components for corrosion

FLIGHT CONTROL SYSTEMS**Paygrade**

E4

Task Type

CORE

Task Statements

Assemble flight control components

E4

CORE

Disassemble flight control components

E5

CORE

Inspect flight control components

E4

CORE

Repair flight control components

E4

CORE

Repair flight control systems

E5

CORE

Troubleshoot flight control components

HOSE AND TUBE REPAIR AND MANUFACTURING**Paygrade**

E4

Task Type

NON-CORE

Task Statements

Fabricate hose and tube assemblies

E5

CORE

Inspect 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/pneumatic system components
E4	CORE	Clean aircraft hydraulic/pneumatic system components
E4	NON-CORE	Clean In-Flight Refueling (IFR) systems
E4	CORE	Collect hydraulic fluid samples
E4	CORE	Disassemble aircraft hydraulic/pneumatic system components
E5	NON-CORE	Inspect In-Flight Refueling (IFR) systems
E4	CORE	Repair aircraft hydraulic/pneumatic system components
E4	NON-CORE	Repair In-Flight Refueling (IFR) systems
E4	CORE	Test aircraft hydraulic/pneumatic system components
E4	NON-CORE	Test In-Flight Refueling (IFR) systems
E5	CORE	Troubleshoot aircraft hydraulic/pneumatic system components
E5	NON-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 components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Assemble landing gear tire and wheel assemblies
E4	CORE	Disassemble landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Disassemble landing gear tire and wheel assemblies
E5	CORE	Inspect landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E5	CORE	Inspect landing gear tire and wheel assemblies
E4	CORE	Repair landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Repair landing gear tire and wheel assemblies
E4	CORE	Test landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Test landing gear tire and wheel assemblies
E5	CORE	Troubleshoot landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E5	CORE	Troubleshoot landing gear tire and wheel assemblies

MAINTENANCE ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Coordinate maintenance briefings
E4	CORE	Draft Aircraft Discrepancy Books (ADB) work orders
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E7	CORE	Prepare Aviation Maintenance Supply Readiness Reports (AMSRR)
E5	CORE	Prepare Broad Arrow (BA) reports
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)

MAINTENANCE ADMINISTRATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Update Monthly Maintenance Plans (MMP) / Monthly Personnel Plans (MPP)
E6	CORE	Validate Monthly Maintenance Plans (MMP) / Monthly Personnel Plans (MPP)

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Brief Maintenance Control (MC)/Production Control (PC)
E5	CORE	Conduct Collateral Duty Inspector (CDI) inspections
E5	CORE	Conduct Collateral Duty Quality Assurance Representative (CDQAR) inspections
E6	CORE	Conduct Quality Assurance (QA) inspections
E4	CORE	Conduct Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E5	CORE	Conduct tap test inspections

STRUCTURAL MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Clean composite materials and components
E4	CORE	Clean structural repair tooling
E4	CORE	Fabricate components, structures, and sub-assemblies
E5	CORE	Inspect aircraft structures and components
E5	CORE	Inspect components, structures, and sub-assemblies
E5	CORE	Inspect composite materials and components
E4	CORE	Inspect structural repair tooling
E4	CORE	Repair aircraft structures and components
E4	NON-CORE	Repair composite materials and components
E4	CORE	Repair structural repair tooling

SUPPORT EQUIPMENT (SE)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Clean Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Depreserve Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Inspect Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Preserve Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Repair Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Test Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)

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, conduct maintenance procedures and troubleshooting on metallic and nonmetallic 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; maintain tactical paint schemes on Naval aircraft; document maintenance actions and perform records maintenance; conduct aircraft daily, special, phase, conditional, acceptance, and Quality Assurance (QA) inspections; and conduct aircraft transfer inspections.

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**Installation**Complex Problem Solving**Critical Thinking**Operation and Control**Judgment and Decision Making**Troubleshooting***Abilities***Selective Attention**Manual Dexterity**Deductive Reasoning**Multi-limb Coordination**Problem Sensitivity**Inductive Reasoning**Written Comprehension**Written Expression**Category Flexibility**Oral Expression***CORROSION CONTROL****Paygrade****Task Type****Task Statements**

E4

NON-CORE

Apply aircraft coatings

E4

CORE

Clean aircraft

E4

CORE

Depreserve aircraft

E4

CORE

Perform corrosion prevention procedures

E4

CORE

Perform emergency reclamations

E4

CORE

Perform preventive maintenance on aircraft coatings

E4

CORE

Prepare aircraft for special inspections

E4

CORE

Preserve aircraft

E4

CORE

Treat aircraft and aircraft components for corrosion

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

E4

CORE

Clean flight control systems

E5

CORE

Inspect flight control components

E5

CORE

Inspect flight control systems

E4

CORE

Install flight control components

E4

CORE

Install flight control systems

E4

CORE

Remove flight control components

E4

CORE

Remove flight control systems

E4

CORE

Repair flight control systems

AM-8

FLIGHT CONTROL SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Rig flight control systems
E5	CORE	Troubleshoot flight control systems

HOSE AND TUBE REPAIR AND MANUFACTURING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	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	Clean aircraft hydraulic/pneumatic system components
E4	CORE	Clean aircraft hydraulic/pneumatic systems
E4	NON-CORE	Clean In-Flight Refueling (IFR) systems
E4	CORE	Collect hydraulic fluid samples
E5	CORE	Inspect aircraft hydraulic/pneumatic system components
E5	NON-CORE	Inspect In-Flight Refueling (IFR) systems
E4	CORE	Install aircraft hydraulic/pneumatic system components
E4	NON-CORE	Install In-Flight Refueling (IFR) systems
E4	CORE	Remove aircraft hydraulic/pneumatic system components
E4	NON-CORE	Remove In-Flight Refueling (IFR) systems
E4	NON-CORE	Repair In-Flight Refueling (IFR) systems
E4	CORE	Service aircraft hydraulic/pneumatic systems
E4	CORE	Test aircraft hydraulic/pneumatic systems
E4	NON-CORE	Test In-Flight Refueling (IFR) systems
E5	CORE	Troubleshoot aircraft hydraulic/pneumatic system components
E5	CORE	Troubleshoot aircraft hydraulic/pneumatic systems
E5	NON-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	Clean landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E5	CORE	Inspect landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E5	CORE	Inspect landing gear tire and wheel assemblies
E4	CORE	Install landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Install landing gear tire and wheel assemblies
E4	CORE	Perform aircraft jacking procedures

LANDING GEAR AND RELATED SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Remove landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Remove landing gear tire and wheel assemblies
E4	CORE	Repair landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Service landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E4	CORE	Service landing gear tire and wheel assemblies
E5	CORE	Supervise aircraft jacking evolutions
E4	CORE	Test landing gear components and related systems (e.g., hydraulic and pneumatic systems)
E5	CORE	Troubleshoot landing gear components and related systems (e.g., hydraulic and pneumatic 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
E7	CORE	Coordinate Flight Deck (FD), Flight Line (FL) and Hangar Bay (HB) operations
E6	CORE	Coordinate maintenance briefings
E4	CORE	Draft Aircraft Discrepancy Books (ADB) work orders
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E7	CORE	Prepare Aviation Maintenance Supply Readiness Reports (AMSRR)
E5	CORE	Prepare Broad Arrow (BA) reports
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 Plans (MPP)
E6	CORE	Validate Monthly Maintenance Plans (MMP) / Monthly Personnel Plans (MPP)

QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Brief Functional Check Flights (FCF)
E5	CORE	Brief Maintenance Control (MC)/Production Control (PC)
E5	CORE	Conduct aircraft acceptance inspections
E4	CORE	Conduct aircraft daily inspections
E5	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

QUALITY ASSURANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct phase inspections
E6	CORE	Conduct Quality Assurance (QA) inspections
E4	CORE	Conduct Support Equipment (SE) inspections (e.g., daily, preoperational, etc.)
E5	CORE	Conduct tap test inspections
E6	CORE	Verify Functional Check Flight (FCF) requirements

STRUCTURAL MAINTENANCE

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

SUPPORT EQUIPMENT (SE)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Clean Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Depreserve Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Inspect Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Preserve Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Repair Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)
E4	CORE	Test Support Equipment (SE) and related equipment (e.g., aircraft slings, hoists, hydraulic test stands, jacks, etc.)