

# CHAPTER 7



## AVIATION STRUCTURAL MECHANIC (AM)

NAVPERS 18068-7I  
CH-80

**TABLE OF CONTENTS**  
**AVIATION STRUCTURAL MECHANIC (AM)**

<b>SCOPE OF RATING</b>	<b>AM-3</b>
<b>GENERAL INFORMATION</b>	<b>AM-4</b>
<b>AVIATION STRUCTURAL MECHANIC INTERMEDIATE LEVEL</b>	<b>AM-5</b>
CORROSION CONTROL	AM-5
FLIGHT CONTROL SYSTEMS	AM-5
HOSE AND TUBE REPAIR AND MANUFACTURING	AM-6
HYDRAULIC AND PNEUMATIC SYSTEMS	AM-6
LANDING GEAR AND RELATED SYSTEMS	AM-7
MAINTENANCE ADMINISTRATION	AM-7
QUALITY ASSURANCE	AM-7
STRUCTURAL REPAIR	AM-8
<b>AVIATION STRUCTURAL MECHANIC ORGANIZATIONAL LEVEL</b>	<b>AM-9</b>
CORROSION CONTROL	AM-9
FLIGHT CONTROL SYSTEMS	AM-9
HOSE AND TUBE REPAIR AND MANUFACTURING	AM-10
HYDRAULIC AND PNEUMATIC SYSTEMS	AM-10
LANDING GEAR AND RELATED SYSTEMS	AM-11
MAINTENANCE ADMINISTRATION	AM-11
QUALITY ASSURANCE	AM-11
STRUCTURAL REPAIR	AM-12

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

AVIATION STRUCTURAL MECHANIC (AM)



SCOPE OF RATING

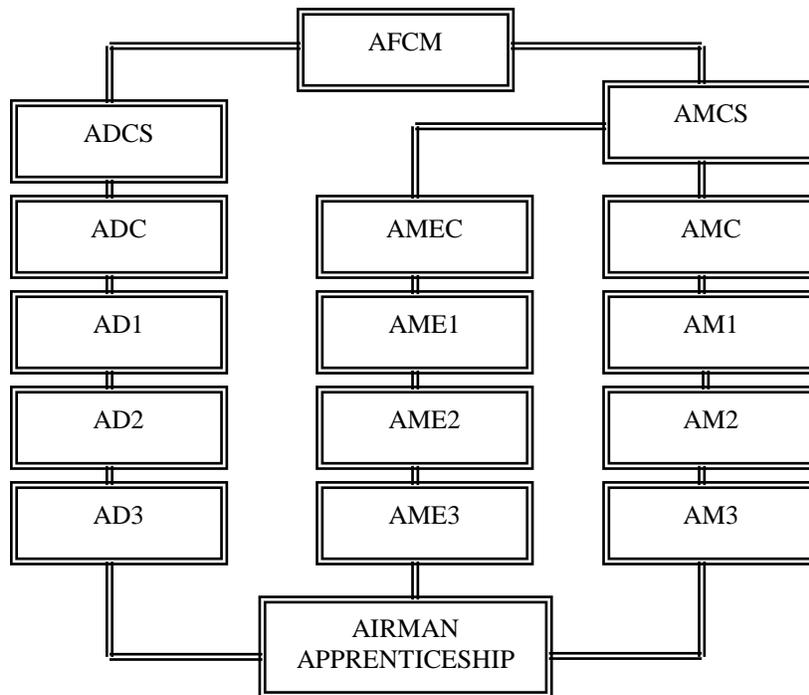
Aviation Structural Mechanics (AM) maintain aircraft airframe and structural components, flight surfaces and controls, hydraulic and pneumatic control and actuating systems and mechanisms, landing gear systems, air conditioning, pressurization, visual improvement, oxygen and other utility systems, egress 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 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**

NEC IXXX series and other NEC's as assigned

**Job Description**

Aviation Structural Mechanics Intermediate Level are responsible for all maintenance procedures on Metallic and Non-Metallic hose and tube assemblies, Hydraulic and Pneumatic components, Landing Gear, Tire/Wheel assemblies, Utility systems, Flight Control System components, advanced composite structural repair, and corrosion prevention. This individual also performs Non-Destructive Inspections and Welding.

**DoD Relationship****Group Title**

Aircraft Structures

**DoD Code**

160300

**O\*NET Relationship****Occupation Title**Aircraft Structure, Surfaces, Rigging, 51-2011.00  
and Systems Assemblers**SOC Code****Job Family**

Production

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

E4

**Task Type**

CORE

**Task Statements**

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 and aircraft components for corrosion

E5

CORE

Inspect aircraft, support equipment, and related equipment

E5

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

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**

E5

**Task Type**

CORE

**Task Statements**

Inspect flight control systems

E5

CORE

Inspect flight controls

E4

CORE

Repair flight control systems

E4

CORE

Repair flight controls

## FLIGHT CONTROL SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
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
E5	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
E5	CORE	Inspect aircraft hydraulic components
E5	CORE	Inspect aircraft hydraulic systems
E5	CORE	Inspect aircraft pneumatic components
E5	CORE	Inspect aircraft pneumatic systems
E4	CORE	Inspect hydraulic test stands
E4	CORE	Maintain aircraft hydraulic components
E4	CORE	Maintain hydraulic test stands
E6	CORE	Manage hydraulic fluid samples
E4	CORE	Repair aircraft hydraulic components
E4	CORE	Repair aircraft pneumatic components
E4	CORE	Repair in-flight refueling systems
E4	CORE	Test aircraft hydraulic components
E4	CORE	Test aircraft hydraulic systems
E4	CORE	Test aircraft pneumatic components
E4	CORE	Test aircraft pneumatic systems
E4	CORE	Test hydraulic test stands
E4	CORE	Test in-flight refueling systems
E5	CORE	Troubleshoot aircraft hydraulic components
E5	CORE	Troubleshoot aircraft hydraulic systems
E5	CORE	Troubleshoot aircraft pneumatic components

## HYDRAULIC AND PNEUMATIC SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Troubleshoot aircraft pneumatic systems
E5	CORE	Troubleshoot in-flight refueling 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
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E7	CORE	Prepare Broad Arrow (BA) reports
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E6	CORE	Update Monthly Maintenance Plans (MMP)

## 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
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
E5	CORE	Inspect in-flight refueling systems
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
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.)
E6	CORE	Supervise tap test inspections

## **STRUCTURAL REPAIR**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	NON-CORE	Conduct Non-Destructive Inspections (NDI)
E4	CORE	Fabricate components, structures, and sub-assemblies
E5	CORE	Inspect aircraft fuel cells
E5	CORE	Inspect aircraft structural components
E5	CORE	Inspect aircraft structures
E5	CORE	Inspect components, structures, and sub-assemblies
E5	CORE	Inspect structural repair equipment
E4	CORE	Maintain structural repair equipment
E4	CORE	Repair aircraft fuel cells
E4	CORE	Repair aircraft structural components
E4	CORE	Repair aircraft structures
E4	NON-CORE	Repair composite materials and components
E5	CORE	Repair structural repair equipment
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**

NEC EXXX and other NEC's as assigned

**Job Description**

Aviation Structural Mechanics Organizational Level are responsible for all maintenance procedures on the Metallic and Non-Metallic hose and tube assemblies, Hydraulic and Pneumatic components, Landing Gear, Tire/Wheel assemblies, Utility systems, Flight Control Systems, composite structural repair, and corrosion prevention on Naval 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

Quality Control Analysis

Equipment Selection

Repairing

Complex Problem Solving

Management of Material Resources

Critical Thinking

Management of Personnel Resources

Installation

Troubleshooting

**Abilities**

Selective Attention

Deductive Reasoning

Manual Dexterity

Category Flexibility

Multi-limb Coordination

Inductive Reasoning

Written Comprehension

Oral Expression

Control Precision

Problem Sensitivity

**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 and aircraft components for corrosion

E5

CORE

Inspect aircraft, support equipment, and related equipment

E5

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

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

E4

CORE

Install flight control systems

E4

CORE

Install 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	Remove flight control systems
E4	CORE	Remove flight controls
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
E5	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

## 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 systems
E4	CORE	Collect hydraulic fluid samples
E5	CORE	Inspect aircraft hydraulic components
E5	CORE	Inspect aircraft hydraulic systems
E5	CORE	Inspect aircraft pneumatic components
E5	CORE	Inspect aircraft pneumatic systems
E4	CORE	Inspect hydraulic test stands
E4	CORE	Install aircraft hydraulic components
E4	CORE	Install aircraft pneumatic components
E4	CORE	Install in-flight refueling 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
E6	CORE	Manage hydraulic fluid samples
E4	CORE	Remove aircraft hydraulic components
E4	CORE	Remove aircraft pneumatic components
E4	CORE	Remove in-flight refueling systems
E4	CORE	Repair in-flight refueling 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 systems

## HYDRAULIC AND PNEUMATIC SYSTEMS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
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 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	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
E7	CORE	Brief flight crews
E5	CORE	Brief Maintenance Control (MC)/Production Control (PC)
E7	CORE	Conduct maintenance briefs
E7	CORE	Coordinate Flight Deck (FD)/Flight Line (FL) operations
E5	CORE	Develop workcenter maintenance plans
E4	CORE	Document maintenance actions
E7	CORE	Manage Maintenance Control (MC)/Production Control (PC) operations
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E7	CORE	Release aircraft safe for flight
E6	CORE	Review Aircraft Discrepancy Books (ADB)
E6	CORE	Update Monthly Maintenance Plans (MMP)
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

## QUALITY ASSURANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct aircraft turnaround 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.)
E5	CORE	Conduct tap test inspections
E5	CORE	Inspect in-flight refueling systems
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)
E7	CORE	Supervise aircraft acceptance inspections
E5	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.)
E6	CORE	Supervise tap test inspections

## STRUCTURAL REPAIR

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