

# CHAPTER 7



## AVIATION STRUCTURAL MECHANIC (AM)

NAVPERS 18068-7G  
CH-53

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

AVIATION STRUCTURAL MECHANIC (AM)



SCOPE OF RATING

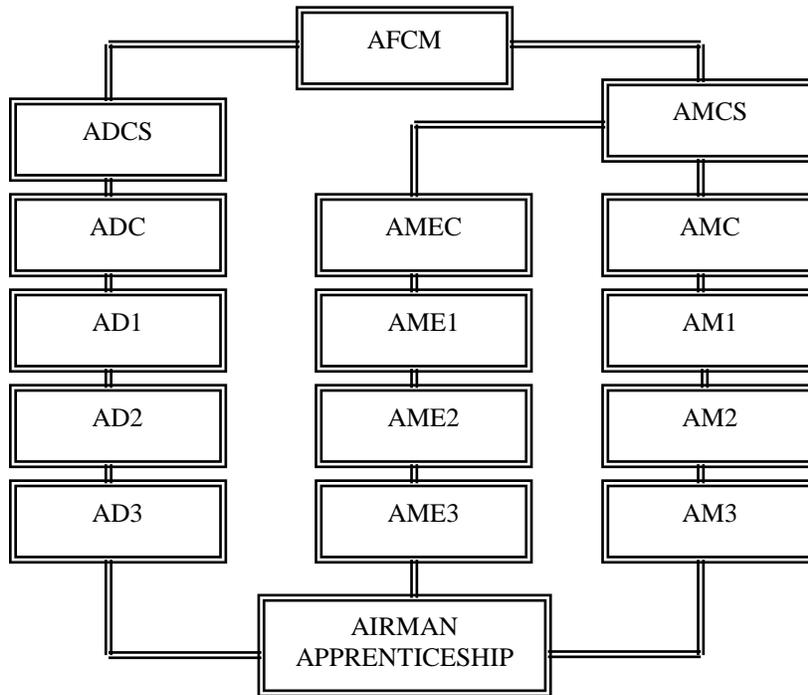
Aviation Structural Mechanics (AM) maintain aircraft airframe and structural components, flight surfaces and controls, hydraulic and pneumatic control and actuating systems and mechanisms, landing gear systems, and other utility systems; fabricate and repair metallic and nonmetallic materials; supervise 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), flight controls and related mechanisms, hydraulic power storage and distribution systems including main (primary and secondary), auxiliary (utility), and emergency systems, hydraulic actuating subsystems, landing gear systems including wheels and tires, brakes, and emergency systems, pneumatic power, storage and distribution systems, hoists and winches, wing and tail fold systems, launch and arresting gear systems, hydraulic component repair and test; and perform aircraft daily, special, hourly, and conditional inspections.

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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.**

NEBC Job Title

NEBC Job Code

**Aviation Structural Mechanic Intermediate Level**

**001805**

Job Family  
Production

NOC  
TBD

Short Title (30 Characters)  
AVIATION STRUCTURAL MECH I-LVL

Short Title (10 Characters)  
AVSTRT ILV

Pay Plan  
Enlisted

Career Field  
AM

Other Relationships and Rules  
Not applicable, based upon the NEC assigned to the job (if any).

Job Description

Aviation Structural Mechanics Intermediate Level are responsible for all maintenance procedures on metallic, non-metallic, hydraulic, pneumatic, tire/wheel, utility, flight control system components, corrosion prevention on Naval aircraft parts and associated equipment; and perform non-destructive inspections and welding.

**DoD Relationship**

**O\*NET Relationship**

Group Title  
Aircraft Structures

DoD Code  
160300

Occupation Title  
Aircraft Structure, Surfaces,  
Rigging, and Systems Assemblers

SOC Code  
51-2011.00

Job Family  
Production

Skills

Equipment Maintenance  
Equipment Selection  
Quality Control Analysis  
Repairing  
Critical Thinking  
Judgment and Decision Making  
Monitoring  
Management of Material Resources  
Operation and Control  
Troubleshooting

Abilities

Selective Attention  
Deductive Reasoning  
Manual Dexterity  
Oral Expression  
Written Comprehension  
Problem Sensitivity  
Category Flexibility  
Inductive Reasoning  
Control Precision  
Written Expression

**CORROSION CONTROL**

**Paygrade**

**Task Type**

**Task Statements**

E4	CORE	Apply and maintain aircraft coatings
E4	CORE	Inspect aircraft and aircraft components for corrosion
E6	CORE	Manage Respirator Protection Programs (RPP)
E4	CORE	Perform corrosion prevention procedures
E4	CORE	Perform emergency reclamations
E4	CORE	Treat aircraft corrosion

**FLIGHT CONTROL SYSTEMS**

**Paygrade**

**Task Type**

**Task Statements**

E4	CORE	Inspect flight controls
E4	CORE	Repair flight control systems
E5	CORE	Troubleshoot flight control systems

**HOSE AND TUBE REPAIR AND MANUFACTURING**

**Paygrade**

**Task Type**

**Task Statements**

E4	CORE	Manufacture hose and tube assemblies
E4	CORE	Repair hose and tube assemblies
E5	CORE	Supervise hose and tube maintenance

E5	CORE	Supervise hose and tube repair
E4	CORE	Test hose and tube assemblies

#### HYDRAULIC AND PNEUMATIC SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Collect and analyze hydraulic fluid samples
E4	CORE	Inspect aircraft pneumatic components
E4	CORE	Inspect hydraulic systems
E4	CORE	Maintain hydraulic test stands
E4	CORE	Repair aircraft pneumatic components
E4	CORE	Repair hydraulic components
E5	CORE	Supervise aircraft hydraulic and pneumatic component maintenance
E4	CORE	Test hydraulic components and assemblies
E4	CORE	Test pneumatic components and assemblies
E4	CORE	Troubleshoot aircraft pneumatic components
E5	CORE	Troubleshoot hydraulic and pneumatic systems and components

#### LANDING GEAR AND RELATED SYSTEMS

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

#### MAINTENANCE ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Assign aircraft to missions
E7	CORE	Brief and debrief flight crews
E4	CORE	Document aircraft maintenance
E6	CORE	Manage airframes administration
E7	CORE	Prepare broad arrow reports
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E7	CORE	Schedule aircraft for maintenance
E7	CORE	Schedule aircraft inspections

#### MAINTENANCE INSPECTIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct aircraft special inspections
E5	CORE	Weld aircraft components and Support Equipment (SE)

## QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Analyze aircraft trends
E6	CORE	Audit Naval Aviation Maintenance Programs (NAMP)
E5	CORE	Conduct Quality Assurance (QA) inspections
E6	CORE	Manage aircraft Quality Assurance (QA) functions
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)

## STRUCTURAL REPAIR

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct Non-Destructive Inspections (NDI)
E4	CORE	Conduct tap test inspections
E4	CORE	Fabricate metallic components, structures, and sub-assemblies
E4	CORE	Fabricate non-metallic components, structures, and sub-assemblies
E4	CORE	Inspect aircraft structural components
E4	CORE	Inspect aircraft structures
E4	CORE	Maintain structural repair equipment
E4	CORE	Repair aircraft structural components
E4	CORE	Repair aircraft structures
E4	CORE	Repair composite materials and components
E5	CORE	Supervise structural maintenance

NEBC Job Title

NEBC Job Code

# Aviation Structural Mechanic Organizational Level

**001862**

Job Family

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

AVIATION STRUCTURAL MECH O-LVL

Short Title (10 Characters)

AVSTR OLV

Pay Plan

Enlisted

Career Field

AM

Other Relationships and Rules

83XX/88XX series NEC

Job Description

Aviation Structural Mechanics Organizational Level are responsible for all maintenance procedures on the metallic, non-metallic fuel cell, hydraulic, pneumatic, landing gear, utility, flight control systems, 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

Equipment Selection

Quality Control Analysis

Critical Thinking

Judgment and Decision Making

Repairing

Complex Problem Solving

Monitoring

Reading Comprehension

Management of Material Resources

Abilities

Selective Attention

Manual Dexterity

Deductive Reasoning

Written Comprehension

Category Flexibility

Oral Expression

Problem Sensitivity

Multi-limb Coordination

Inductive Reasoning

Memorization

## CORROSION CONTROL

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Apply and maintain aircraft coatings
E4	CORE	Inspect aircraft and aircraft components for corrosion
E6	CORE	Manage aircraft corrosion control
E6	CORE	Manage Respirator Protection Programs (RPP)
E4	CORE	Perform corrosion prevention procedures
E4	CORE	Perform emergency reclamations
E4	CORE	Preserve and depreserve aircraft
E4	CORE	Supervise aircraft washes
E4	CORE	Treat aircraft corrosion

## FLIGHT CONTROL SYSTEMS

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

## HOSE AND TUBE REPAIR AND MANUFACTURING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Repair hose and tube assemblies
E5	CORE	Supervise hose and tube maintenance
E5	CORE	Supervise hose and tube repair

## HYDRAULIC AND PNEUMATIC SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Collect and analyze hydraulic fluid samples
E4	CORE	Maintain aircraft hydraulic systems
E4	CORE	Maintain aircraft pneumatic systems
E4	CORE	Remove and replace aircraft hydraulic components
E4	CORE	Remove and replace aircraft pneumatic components
E5	CORE	Supervise aircraft hydraulic and pneumatic component maintenance
E5	CORE	Troubleshoot hydraulic and pneumatic systems and components

## LANDING GEAR AND RELATED SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Maintain landing gear and related systems
E5	CORE	Remove and replace landing gear and related systems
E5	CORE	Supervise landing gear and related systems maintenance
E5	CORE	Troubleshoot landing gear components and related systems

## MAINTENANCE ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Conduct maintenance briefs
E4	CORE	Document aircraft maintenance
E6	CORE	Manage airframes administration
E7	CORE	Manage cannibalization actions
E4	CORE	Process aircraft components for Non-Destructive Inspections (NDI)
E7	CORE	Release aircraft safe for flight
E7	CORE	Report aircraft status
E4	CORE	Review Aircraft Discrepancy Books (ADB)

## MAINTENANCE INSPECTIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
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 conditional inspections
E4	CORE	Conduct phase inspections
E4	CORE	Conduct Support Equipment (SE) inspections (daily, preoperational, etc)
E5	CORE	Inspect aircraft fuel cells
E4	CORE	Repair aircraft fuel systems
E5	CORE	Supervise fuel cell maintenance

## QUALITY ASSURANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Analyze aircraft trends
E6	CORE	Audit Naval Aviation Maintenance Programs (NAMP)
E6	CORE	Brief and debrief Functional Check Flights (FCF)
E6	CORE	Manage aircraft Quality Assurance (QA) functions
E6	CORE	Manage Naval Aviation Maintenance Programs (NAMP)
E6	CORE	Monitor Naval Aviation Maintenance Programs (NAMP)

## STRUCTURAL REPAIR

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct tap test inspections
E4	CORE	Fabricate metallic components, structures, and sub-assemblies
E4	CORE	Fabricate non-metallic components, structures, and sub-assemblies
E4	CORE	Maintain aircraft structures
E4	CORE	Maintain aircraft fuel cells
E4	CORE	Maintain aircraft structural components
E4	CORE	Maintain in-flight refueling pod systems
E4	CORE	Maintain structural repair equipment
E5	CORE	Remove and replace aircraft structures
E4	CORE	Repair composite materials and components
E5	CORE	Supervise structural maintenance