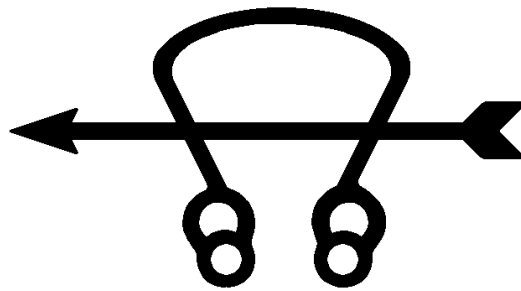


# CHAPTER 73



## SONAR TECHNICIAN (SURFACE) (STG)

NAVPERS 18068-73D  
CH-44

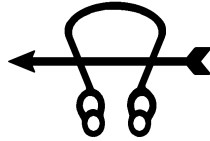
## **SONAR TECHNICIAN, SURFACE (STG) TABLE OF CONTENTS**

<b>SCOPE OF RATING</b>	STG-3
<b>GENERAL INFORMATION</b>	STG-4
<b>ANTI-SUBMARINE WARFARE OPERATIONS MANAGER</b>	STG-5
ANTI-SUBMARINE WARFARE (ASW)	STG-5
AUXILIARY AND SUPPORT SYSTEMS	STG-6
EQUIPMENT ADMINISTRATION	STG-6
SONAR SYSTEMS	STG-7
UNDERWATER ANALYSIS	STG-7
WATCH TEAM OPERATIONS	STG-7
<b>ANTI-SUBMARINE WARFARE EQUIPMENT OPERATOR</b>	STG-9
ANTI-SUBMARINE WARFARE (ASW)	STG-9
AUXILIARY AND SUPPORT SYSTEMS	STG-10
EQUIPMENT ADMINISTRATION	STG-11
SONAR SYSTEMS	STG-11
UNDERWATER ANALYSIS	STG-12
WATCH TEAM OPERATIONS	STG-12
<b>ANTI-SUBMARINE WARFARE EQUIPMENT TECHNICIAN</b>	STG-14
AUXILIARY AND SUPPORT SYSTEMS	STG-14
EQUIPMENT ADMINISTRATION	STG-15
SONAR SYSTEMS	STG-16
TECHNICAL CORE FUNDAMENTALS	STG-17

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

SONAR TECHNICIAN (SURFACE) (STG)



SCOPE OF RATING

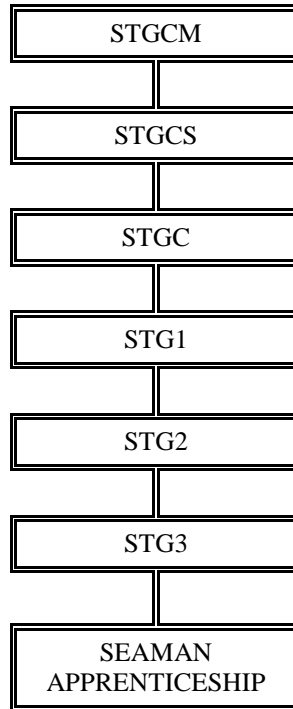
Sonar Technicians, Surface (STG) operate surface sonar and other oceanographic systems; manipulate, control, evaluate, and interpret sonar and oceanographic data; operate surface ship underwater fire control systems (with associated equipment) for the solution of anti-submarine warfare problems; and perform organizational and intermediate maintenance on surface sonar and allied equipment.

---

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 73.

## 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 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****Anti-Submarine Warfare Operations Manager****Job Code****003746****Job Family**  
Management**NOC**  
1100-3021.00**Short Title (30 Characters)**  
ASW OPERATIONS MANAGER**Short Title (10 Characters)**  
ASW OP MGR**Pay Plan**  
Enlisted**Career Field**  
STG**Proficiency Level**  
J/M**Other Relationships and Rules:**  
Any applicable NEC: 0466, 0507, 1321 or 0000**Job Description**

Anti-Submarine Warfare Operations Managers manage the employment of Undersea Warfare equipment. They evaluate, disseminate and make tactical Undersea Warfare decisions. They coordinate communications, manage equipment maintenance, and conduct ordnance oversight. They also manage training programs and monitor watch team operations.

**DoD Relationship**

**Title and Group:**  
Sonar, General  
113

**Code and Area:**  
113000  
11

**O\*NET Relationship**

**Title and SOC Code:**  
Computer and Information Systems  
Managers  
11-3021.00

**Name and Family Code:**  
Management  
11

**ANTI-SUBMARINE WARFARE (ASW)**

<b>Paygrade</b>	<b>Task Type</b>	<b>Task Statements</b>	<b>Skills</b>	<b>Abilities</b>
E6	CORE	Assign contact priorities	<i>Critical Thinking</i> <i>Judgment and Decision Making</i>	<i>Deductive Reasoning</i> <i>Information Ordering</i>
E7	CORE	Coordinate Anti-Submarine Warfare (ASW) missions	<i>Coordination</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Deductive Reasoning</i>
E7	CORE	Coordinate Anti-Submarine Warfare (ASW) prosecutions	<i>Coordination</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Deductive Reasoning</i>
E7	CORE	Coordinate multi-force prosecutions (air, surface, and subsurface)	<i>Coordination</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Deductive Reasoning</i>
E7	CORE	Coordinate Surface Action Unit (SAU) procedures	<i>Coordination</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Deductive Reasoning</i>
E6	CORE	Correlate multi-sensor data	<i>Complex Problem Solving</i> <i>Coordination</i>	<i>Information Ordering</i> <i>Deductive Reasoning</i>
E7	CORE	Establish Prevention of Mutual Interference (PMI) plans	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Inductive Reasoning</i>
E7	CORE	Establish Water Space Management (WSM) plans	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Category Flexibility</i> <i>Inductive Reasoning</i>
E6	CORE	Evaluate Anti-Submarine Warfare (ASW) plots	<i>Critical Thinking</i> <i>Operations Analysis</i>	<i>Inductive Reasoning</i> <i>Problem Sensitivity</i>
E7	CORE	Evaluate force lay down plan Undersea Warfare/Decision Support Systems (USW/DSS)	<i>Critical Thinking</i> <i>Operations Analysis</i>	<i>Inductive Reasoning</i> <i>Problem Sensitivity</i>
E6	CORE	Evaluate search plans	<i>Judgment and Decision Making</i> <i>Critical Thinking</i>	<i>Inductive Reasoning</i> <i>Problem Sensitivity</i>
E6	CORE	Implement Prevention of Mutual Interference (PMI) plans	<i>Coordination</i> <i>Critical Thinking</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Implement Water Space Management (WSM) plans	<i>Coordination</i> <i>Critical Thinking</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Interpret Anti-Submarine Warfare (ASW) plots	<i>Reading Comprehension</i> <i>Critical Thinking</i>	<i>Written Comprehension</i> <i>Deductive Reasoning</i>
E7	CORE	Manage battle group Anti-Submarine Warfare (ASW) operations	<i>Critical Thinking</i> <i>Coordination</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>

E6	CORE	Manage Integrated Underwater Surveillance Sonar System (IUSS) operations	<i>Critical Thinking</i> <i>Coordination</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Manage shipboard Anti-Submarine Warfare (ASW) operations	<i>Critical Thinking</i> <i>Coordination</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Manage small object avoidance operations	<i>Critical Thinking</i> <i>Coordination</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Perform tactical oceanographic analysis	<i>Critical Thinking</i> <i>Systems Analysis</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E7	CORE	Plan Anti-Submarine Warfare (ASW) missions	<i>Complex Problem Solving</i> <i>Operation and Control</i>	<i>Inductive Reasoning</i> <i>Written Comprehension</i>
E6	CORE	Prepare acoustic data media for shipment	<i>Coordination</i> <i>Management of Personnel</i>	<i>Information Ordering</i> <i>Written Expression</i>
E6	CORE	Recommend actions to reduce own ships detectability	<i>Complex Problem Solving</i> <i>Speaking</i>	<i>Written Comprehension</i> <i>Written Expression</i>
E6	CORE	Recommend evasive steering actions	<i>Complex Problem Solving</i> <i>Speaking</i>	<i>Written Comprehension</i> <i>Written Expression</i>
E7	CORE	Supervise towed systems handling	<i>Instructing</i> <i>Monitoring</i>	<i>Problem Sensitivity</i> <i>Time Sharing</i>

## AUXILIARY AND SUPPORT SYSTEMS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E7	CORE	Manage sonar dome configuration changes	<i>Critical Thinking</i> <i>Coordination</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E6	CORE	Monitor sonar dome pressurization system operations	<i>Monitoring</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Deductive Reasoning</i>

## EQUIPMENT ADMINISTRATION

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E7	CORE	Approve installation and alteration of equipment	<i>Quality Control Analysis</i> <i>Systems Analysis</i>	<i>Deductive Reasoning</i> <i>Written Comprehension</i>
E6	CORE	Coordinate equipment certifications	<i>Critical Thinking</i> <i>Quality Control Analysis</i>	<i>Deductive Reasoning</i> <i>Written Expression</i>
E6	CORE	Manage alignment of weapons and combat systems equipment	<i>Equipment Selection</i> <i>Management of Material Resources</i>	<i>Deductive Reasoning</i> <i>Written Expression</i>
E6	CORE	Manage controlled equipment	<i>Management of Material Resources</i> <i>Operation and Control</i>	<i>Written Expression</i> <i>Written Comprehension</i>
E6	CORE	Manage electronic systems configuration	<i>Critical Thinking</i> <i>Systems Analysis</i>	<i>Deductive Reasoning</i> <i>Problem Sensitivity</i>
E7	CORE	Manage network software and firmware	<i>Management of Material Resources</i> <i>Systems Analysis</i>	<i>Information Ordering</i> <i>Written Comprehension</i>
E6	CORE	Manage work center equipment and system level administration	<i>Management of Material Resources</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Written Comprehension</i>
E6	JSPEC	Monitor contractor testing	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Problem Sensitivity</i> <i>Inductive Reasoning</i>

E6	CORE	Monitor password accounts	<i>Systems Evaluation</i>	<i>Problem Sensitivity</i>
			<i>Operation Monitoring</i>	<i>Selective Attention</i>
E6	CORE	Supervise installation and alteration of equipment	<i>Management of Personnel</i>	<i>Problem Sensitivity</i>
			<i>Monitoring</i>	<i>Oral Expression</i>
E7	CORE	Update password accounts	<i>Reading Comprehension</i>	<i>Written Expression</i>
			<i>Systems Analysis</i>	<i>Written Comprehension</i>

## SONAR SYSTEMS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E6	CORE	Supervise towed array handling system operations	<i>Instructing</i>	<i>Problem Sensitivity</i>
			<i>Monitoring</i>	<i>Time Sharing</i>

## UNDERWATER ANALYSIS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E6	CORE	Correlate acoustic intelligence data	<i>Complex Problem Solving</i>	<i>Information Ordering</i>
			<i>Coordination</i>	<i>Deductive Reasoning</i>
E6	CORE	Determine final contact classifications	<i>Complex Problem Solving</i>	<i>Deductive Reasoning</i>
			<i>Judgment and Decision Making</i>	<i>Information Ordering</i>
E6	CORE	Review narrow band tonals	<i>Active Learning</i>	<i>Written Comprehension</i>
			<i>Reading Comprehension</i>	<i>Written Expression</i>

## WATCH TEAM OPERATIONS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E6	CORE	Coordinate tactical information distribution	<i>Speaking</i>	<i>Deductive Reasoning</i>
			<i>Writing</i>	<i>Information Ordering</i>
E6	CORE	Manage sonar control during casualty conditions	<i>Critical Thinking</i>	<i>Deductive Reasoning</i>
			<i>Coordination</i>	<i>Inductive Reasoning</i>
E6	CORE	Manage sonar doctrine statements	<i>Critical Thinking</i>	<i>Deductive Reasoning</i>
			<i>Coordination</i>	<i>Inductive Reasoning</i>
E6	CORE	Monitor watch team performance	<i>Monitoring</i>	<i>Problem Sensitivity</i>
			<i>Time Management</i>	<i>Inductive Reasoning</i>
E6	JSPEC	Review Commanding Officer's (CO) tactical orders	<i>Reading Comprehension</i>	<i>Written Comprehension</i>
			<i>Active Learning</i>	<i>Selective Attention</i>
E6	JSPEC	Review Rules of Engagement (ROE)	<i>Reading Comprehension</i>	<i>Written Comprehension</i>
			<i>Active Learning</i>	<i>Selective Attention</i>
E6	CORE	Review sonar doctrine	<i>Reading Comprehension</i>	<i>Written Comprehension</i>
			<i>Active Learning</i>	<i>Selective Attention</i>
E6	JSPEC	Review warfare commander's messages and intentions	<i>Reading Comprehension</i>	<i>Written Comprehension</i>
			<i>Active Learning</i>	<i>Selective Attention</i>
E6	CORE	Supervise equipment alignment according to Emission Control (EMCON) plans	<i>Quality Control Analysis</i>	<i>Problem Sensitivity</i>
			<i>Monitoring</i>	<i>Oral Expression</i>
E6	CORE	Supervise sonar control during special evolutions	<i>Instructing</i>	<i>Problem Sensitivity</i>
			<i>Monitoring</i>	<i>Time Sharing</i>

E6	CORE	Transition sonar control between conditions of readiness	<i>Operation and Control</i>	<i>Oral Expression</i>
			<i>Systems Analysis</i>	<i>Control Precision</i>
E6	JSPEC	Verify systems alignment to Commanding Officer's (CO) tactical orders	<i>Quality Control Analysis</i>	<i>Information Ordering</i>
			<i>Systems Analysis</i>	<i>Written Comprehension</i>



**Job Title****Anti-Submarine Warfare Equipment Operator****Job Code****003747****Job Family**

Office and Administrative Support

**NOC**

4300-9011.00

**Short Title (30 Characters)**

ASW EQUIPMENT OPERATOR

**Short Title (10 Characters)**

ASW EQ OP

**Pay Plan**

Enlisted

**Career Field**

STG

**Proficiency Level**

A/J

**Other Relationships and Rules:**

0406, 0411, 0511, 0508, 0521, 0505, 0450, 0430, 0516, 0523

**Job Description**

Anti-Submarine Warfare Equipment Operators operate sonar systems, underwater fire control systems, and support equipment on combatant surface ships and fixed shore stations. They conduct undersea surveillance and aid in safe navigation. They use shipboard equipment and fixed shore equipment to detect, analyze, and locate targets of interest. They conduct ordnance handling and operate various support equipment.

**DoD Relationship****Title and Group:**

Sonar, General

113

**Code and Area:**

113000

11

**O\*NET Relationship****Title and SOC Code:**

Computer Operators

43-9011.00

**Name and Family Code:**

Office and Administrative

Support

43

**ANTI-SUBMARINE WARFARE (ASW)**

<b>Paygrade</b>	<b>Task Type</b>	<b>Task Statements</b>	<b>Skills</b>	<b>Abilities</b>
E4	CORE	Analyze Contacts of Interest (COI)	<i>Complex Problem Solving Monitoring</i>	<i>Deductive Reasoning Speed of Closure</i>
E4	CORE	Assign symbology to contacts	<i>Critical Thinking Judgment and Decision Making</i>	<i>Deductive Reasoning Information Ordering</i>
E4	CORE	Compute contact course and speed	<i>Critical Thinking Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Conduct Target Motion Analysis (TMA)	<i>Critical Thinking Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine best depth to avoid detection	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine break point and ambient limited speeds	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine contact bearing	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine contact ranges	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Evaluate contact information	<i>Critical Thinking Complex Problem Solving</i>	<i>Inductive Reasoning Problem Sensitivity</i>
E4	CORE	Execute search plans	<i>Coordination Critical Thinking</i>	<i>Deductive Reasoning Inductive Reasoning</i>
E4	CORE	Generate acoustic data media recordings	<i>Equipment Selection Operations Analysis</i>	<i>Deductive Reasoning Manual Dexterity</i>
E4	CORE	Identify evasion devices and acoustic jamming	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Identify submerged objects	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E5	CORE	Input underwater fire control parameters	<i>Critical Thinking Judgment and Decision Making</i>	<i>Control Precision Manual Dexterity</i>
E5	CORE	Launch anti-submarine weapons	<i>Coordination Equipment Selection</i>	<i>Inductive Reasoning Finger Dexterity</i>

E4	CORE	Launch Expendable Mobile Acoustic Training Targets (EMATT)	<i>Coordination Equipment Selection</i>	<i>Inductive Reasoning Finger Dexterity</i>
E5	CORE	Localize Targets of Interest (TOI)	<i>Coordination Critical Thinking</i>	<i>Deductive Reasoning Inductive Reasoning</i>
E5	CORE	Operate underwater fire control systems	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Perform Battle Damage Assessments (BDA)	<i>Critical Thinking Judgment and Decision Making</i>	<i>Information Ordering Inductive Reasoning</i>
E4	CORE	Recognize and interpret symbology of underwater contacts	<i>Operation Monitoring Active Learning</i>	<i>Perceptual Speed Deductive Reasoning</i>
E5	CORE	Recommend Anti-Submarine Warfare (ASW) search and attack plans	<i>Complex Problem Solving Speaking</i>	<i>Static Strength Written Expression</i>
E4	CORE	Recommend own ship's course and speed changes	<i>Complex Problem Solving Speaking</i>	<i>Written Comprehension Written Expression</i>
E5	CORE	Recommend torpedo evasion tactics	<i>Complex Problem Solving Speaking</i>	<i>Written Comprehension Written Expression</i>
E4	CORE	Report Contacts of Interest (COI)	<i>Judgment and Decision Making Speaking</i>	<i>Oral Expression Speech Clarity</i>
E4	CORE	Resolve towed array ambiguities	<i>Complex Problem Solving Mathematics</i>	<i>Inductive Reasoning Mathematical Reasoning</i>
E4	CORE	Track Contacts of Interest (COI)	<i>Judgment and Decision Making Operation Monitoring</i>	<i>Control Precision Problem Sensitivity</i>
E4	CORE	Update and display contact information	<i>Reading Comprehension Operation and Control</i>	<i>Control Precision Written Expression</i>

## AUXILIARY AND SUPPORT SYSTEMS

<u><b>Paygrade</b></u>	<u><b>Task Type</b></u>	<u><b>Task Statements</b></u>	<u><b>Skills</b></u>	<u><b>Abilities</b></u>
E4	CORE	Make operational and situational reports	<i>Reading Comprehension Speaking</i>	<i>Speech Clarity Written Expression</i>
E4	CORE	Monitor external communications	<i>Monitoring Active Listening</i>	<i>Speech Recognition Auditory Attention</i>
E4	CORE	Operate auxiliary air and cooling water systems	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Operate sonar dome pressurization systems	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Operate torpedo countermeasure systems equipment	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Operate underwater communication systems equipment	<i>Equipment Selection Operation Monitoring</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Perform external communications (radios, telephones, ship-to-ship, and ship-to-shore)	<i>Active Listening Speaking</i>	<i>Speech Recognition Speech Clarity</i>
E4	CORE	Stream torpedo countermeasure systems	<i>Coordination Operation and Control</i>	<i>Deductive Reasoning Manual Dexterity</i>

E4	CORE	Test communications systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Auditory Attention</i> <i>Hearing Sensitivity</i>
----	------	-----------------------------	--	---

## EQUIPMENT ADMINISTRATION

<u><b>Paygrade</b></u>	<u><b>Task Type</b></u>	<u><b>Task Statements</b></u>	<u><b>Skills</b></u>	<u><b>Abilities</b></u>
E4	CORE	Operate network systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E5	CORE	Supervise equipment and system level operations	<i>Management of Personnel</i> <i>Monitoring</i>	<i>Problem Sensitivity</i> <i>Oral Expression</i>

## SONAR SYSTEMS

<u><b>Paygrade</b></u>	<u><b>Task Type</b></u>	<u><b>Task Statements</b></u>	<u><b>Skills</b></u>	<u><b>Abilities</b></u>
E4	CORE	Launch Expendable Bathythermographs (XBT)	<i>Coordination</i> <i>Equipment Selection</i>	<i>Inductive Reasoning</i> <i>Finger Dexterity</i>
E4	CORE	Make tow point changes	<i>Critical Thinking</i> <i>Judgment and Decision Making</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E4	CORE	Operate active sonar systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate computer and peripheral systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate depth sounding systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate environmental range prediction systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate informational display systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate passive sonar systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Operate tactical display systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Prepare active sonobuoys for deployment	<i>Coordination</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Prepare passive sonobuoys for deployment	<i>Coordination</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Prepare towed array equipment	<i>Coordination</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Prepare towed array for deployment	<i>Coordination</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Recover towed array	<i>Coordination</i> <i>Operation and Control</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Stream towed array	<i>Coordination</i> <i>Operation and Control</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>

## UNDERWATER ANALYSIS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Analyze acoustic recording data	<i>Complex Problem Solving Mathematics</i>	<i>Mathematical Reasoning Deductive Reasoning</i>
E4	CORE	Analyze Expendable Bathythermograph (XBT) data	<i>Complex Problem Solving Science</i>	<i>Written Comprehension Deductive Reasoning</i>
E4	CORE	Analyze oceanographic and meteorological data	<i>Complex Problem Solving Science</i>	<i>Written Comprehension Deductive Reasoning</i>
E4	CORE	Annotate Contacts of Interest (COI)	<i>Complex Problem Solving Writing</i>	<i>Written Comprehension Written Expression</i>
E4	CORE	Collect acoustic intelligence data	<i>Monitoring Reading Comprehension</i>	<i>Deductive Reasoning Wrist-Finger Speed</i>
E4	CORE	Determine bottom loss	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine initial contact classifications	<i>Complex Problem Solving Judgment and Decision Making</i>	<i>Deductive Reasoning Information Ordering</i>
E4	CORE	Determine real time sound propagation changes	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Determine sound propagation	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Identify biological effects on acoustic data	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Identify broadband traces	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Identify environmental effects on acoustic data	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Identify narrowband tonals	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Identify sources of self noise	<i>Judgment and Decision Making Complex Problem Solving</i>	<i>Deductive Reasoning Perceptual Speed</i>
E4	CORE	Obtain turn counts and shaft Revolutions Per Minute (RPM)	<i>Complex Problem Solving Mathematics</i>	<i>Deductive Reasoning Mathematical Reasoning</i>
E4	CORE	Review acoustic intelligence documents	<i>Reading Comprehension Active Learning</i>	<i>Written Comprehension Selective Attention</i>

## WATCH TEAM OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	JSPEC	Align systems to Commanding Officer's (CO) tactical orders	<i>Coordination Operation and Control</i>	<i>Deductive Reasoning Problem Sensitivity</i>
E4	CORE	Configure systems for normal operations	<i>Equipment Selection Operation and Control</i>	<i>Information Ordering Written Comprehension</i>
E4	CORE	Configure systems for training operations	<i>Equipment Selection Operation and Control</i>	<i>Information Ordering Written Comprehension</i>
E4	JSPEC	Execute Commanding Officer's (CO) tactical orders	<i>Management of Material Resources Reading Comprehension</i>	<i>Deductive Reasoning Speed of Closure</i>

E4	CORE	Execute sonar doctrine	<i>Coordination</i> <i>Critical Thinking</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E4	JSPEC	Execute warfare commander's intentions	<i>Management of Material Resources</i> <i>Reading Comprehension</i>	<i>Deductive Reasoning</i> <i>Speed of Closure</i>
E4	CORE	Manage database information	<i>Critical Thinking</i> <i>Management of Material Resources</i>	<i>Deductive Reasoning</i> <i>Written Comprehension</i>
E4	CORE	Monitor assignment and engagement status of own ships weapons systems	<i>Monitoring</i> <i>Active Learning</i>	<i>Problem Sensitivity</i> <i>Inductive Reasoning</i>
E4	CORE	Operate Command, Control, Computer, Communication, and Intelligence (C4I) systems	<i>Equipment Selection</i> <i>Operation and Control</i>	<i>Control Precision</i> <i>Deductive Reasoning</i>
E4	CORE	Prepare sonar control for special evolutions	<i>Coordination</i> <i>Equipment Selection</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Review combat systems equipment status	<i>Operation Monitoring</i> <i>Systems Evaluation</i>	<i>Written Comprehension</i> <i>Selective Attention</i>
E4	CORE	Review tactical operations data	<i>Reading Comprehension</i> <i>Active Learning</i>	<i>Written Comprehension</i> <i>Selective Attention</i>
E4	CORE	Review threat weapons data	<i>Reading Comprehension</i> <i>Active Learning</i>	<i>Written Comprehension</i> <i>Selective Attention</i>
E4	CORE	Review watch-related operation references	<i>Reading Comprehension</i> <i>Active Learning</i>	<i>Written Comprehension</i> <i>Selective Attention</i>
E4	CORE	Update plotting and status boards	<i>Reading Comprehension</i> <i>Operation and Control</i>	<i>Arm-Hand Steadiness</i> <i>Written Expression</i>
E4	CORE	Verify equipment alignment according to Emission Control (EMCON) plan	<i>Quality Control Analysis</i> <i>Systems Analysis</i>	<i>Information Ordering</i> <i>Written Comprehension</i>

**Job Title****Anti-Submarine Warfare Equipment Technician****Job Code****003748****Job Family**

Installation, Maintenance, and Repair

**NOC**

4900-2094.00

**Short Title (30 Characters)**

ASW EQUIPMENT TECHNICIAN

**Short Title (10 Characters)**

ASW EQ TEC

**Pay Plan**

Enlisted

**Career Field**

STG

**Proficiency Level**

A/J

**Other Relationships and Rules:**

0402, 0455, 0510, 0476, 0469, 0522, 0479, 0509, 0415, 0506

**Job Description**

Anti-Submarine Warfare Equipment Technicians maintain, troubleshoot and repair sonar systems, underwater fire control systems, and support equipment on combatant surface ships and fixed shore stations.

**DoD Relationship****Title and Group:**Sonar, General  
113**Code and Area:**113000  
11**O\*NET Relationship****Title and SOC Code:**Electrical and Electronics Repairers,  
Commercial and Industrial Equipment  
49-2094.00**Name and Family Code:**Installation, Maintenance, and  
Repair  
49**AUXILIARY AND SUPPORT SYSTEMS**

<b>Paygrade</b>	<b>Task Type</b>	<b>Task Statements</b>	<b>Skills</b>	<b>Abilities</b>
E5	CORE	Configure sonar dome pressurization systems for maintenance	<i>Equipment Selection</i>	<i>Deductive Reasoning</i>
			<i>Equipment Maintenance</i>	<i>Manual Dexterity</i>
E4	CORE	Perform internal communications (Internal Voice Communication Systems (IVCS), verbal communications, and sound-powered telephones)	<i>Active Listening</i>	<i>Speech Recognition</i>
			<i>Speaking</i>	<i>Speech Clarity</i>
E4	CORE	Perform preventive maintenance on auxiliary air and cooling water systems	<i>Equipment Maintenance</i>	<i>Written Comprehension</i>
			<i>Reading Comprehension</i>	<i>Control Precision</i>
E4	CORE	Perform preventive maintenance on sonar dome pressurization systems	<i>Equipment Maintenance</i>	<i>Written Comprehension</i>
			<i>Reading Comprehension</i>	<i>Control Precision</i>
E4	CORE	Perform preventive maintenance on torpedo countermeasure systems	<i>Equipment Maintenance</i>	<i>Written Comprehension</i>
			<i>Reading Comprehension</i>	<i>Control Precision</i>
E4	CORE	Perform preventive maintenance on underwater communication systems	<i>Equipment Maintenance</i>	<i>Written Comprehension</i>
			<i>Reading Comprehension</i>	<i>Control Precision</i>
E4	CORE	Repair auxiliary air and cooling water systems	<i>Systems Evaluation</i>	<i>Problem Sensitivity</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Repair sonar dome pressurization systems	<i>Systems Evaluation</i>	<i>Problem Sensitivity</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Repair torpedo countermeasure systems	<i>Systems Evaluation</i>	<i>Problem Sensitivity</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Repair underwater communication systems	<i>Systems Evaluation</i>	<i>Problem Sensitivity</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Test auxiliary air and cooling water systems	<i>Quality Control Analysis</i>	<i>Inductive Reasoning</i>
			<i>Operation Monitoring</i>	<i>Manual Dexterity</i>
E4	CORE	Test sonar dome pressurization systems	<i>Quality Control Analysis</i>	<i>Inductive Reasoning</i>
			<i>Operation Monitoring</i>	<i>Manual Dexterity</i>
E4	CORE	Test torpedo countermeasure systems	<i>Quality Control Analysis</i>	<i>Inductive Reasoning</i>
			<i>Operation Monitoring</i>	<i>Manual Dexterity</i>
E4	CORE	Test underwater communication systems	<i>Quality Control Analysis</i>	<i>Auditory Attention</i>
			<i>Operation Monitoring</i>	<i>Hearing Sensitivity</i>
E4	CORE	Troubleshoot auxiliary air and cooling water systems	<i>Complex Problem Solving</i>	<i>Problem Sensitivity</i>
			<i>Troubleshooting</i>	<i>Deductive Reasoning</i>

E4	CORE	Troubleshoot sonar dome pressurization systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot torpedo countermeasure systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot underwater communication systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>

## EQUIPMENT ADMINISTRATION

<u><b>Paygrade</b></u>	<u><b>Task Type</b></u>	<u><b>Task Statements</b></u>	<u><b>Skills</b></u>	<u><b>Abilities</b></u>
E4	CORE	Collect equipment and system status data	<i>Systems Evaluation Operation Monitoring</i>	<i>Information Ordering Written Expression</i>
E4	CORE	Document equipment status	<i>Operation Monitoring Writing</i>	<i>Information Ordering Written Expression</i>
E4	CORE	Inspect work areas, tools, and electronic systems equipment	<i>Management of Material Resources Quality Control Analysis</i>	<i>Information Ordering Manual Dexterity</i>
E4	CORE	Inventory controlled equipment	<i>Management of Material Resources Reading Comprehension</i>	<i>Information Ordering Written Expression</i>
E4	CORE	Inventory Maintenance Assistance Modules (MAM)	<i>Management of Material Resources Reading Comprehension</i>	<i>Information Ordering Written Expression</i>
E5	CORE	Inventory network software and firmware	<i>Management of Material Resources Reading Comprehension</i>	<i>Information Ordering Written Expression</i>
E5	CORE	Maintain password accounts	<i>Management of Material Resources Writing</i>	<i>Deductive Reasoning Information Ordering</i>
E5	JSPEC	Monitor contractor installations	<i>Quality Control Analysis Operation Monitoring</i>	<i>Problem Sensitivity Inductive Reasoning</i>
E5	CORE	Monitor for network vulnerabilities	<i>Systems Evaluation Operation Monitoring</i>	<i>Problem Sensitivity Selective Attention</i>
E4	CORE	Perform preventive maintenance on network systems	<i>Equipment Maintenance Reading Comprehension</i>	<i>Written Comprehension Control Precision</i>
E4	CORE	Repair network systems	<i>Systems Evaluation Repairing</i>	<i>Problem Sensitivity Manual Dexterity</i>
E5	CORE	Review technical briefs, notices and bulletins	<i>Reading Comprehension Active Learning</i>	<i>Written Comprehension Selective Attention</i>
E5	CORE	Supervise controlled equipment inventories	<i>Quality Control Analysis Monitoring</i>	<i>Problem Sensitivity Oral Expression</i>
E5	CORE	Supervise equipment and system level preventive maintenance	<i>Management of Personnel Monitoring</i>	<i>Problem Sensitivity Oral Expression</i>
E5	CORE	Supervise Maintenance Assistance Modules (MAM) usage	<i>Management of Material Resources Monitoring</i>	<i>Problem Sensitivity Oral Expression</i>
E4	CORE	Test network systems	<i>Quality Control Analysis Operation Monitoring</i>	<i>Inductive Reasoning Manual Dexterity</i>
E4	CORE	Troubleshoot network systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E5	CORE	Update network software	<i>Reading Comprehension Systems Analysis</i>	<i>Written Expression Written Comprehension</i>

## SONAR SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Perform preventive maintenance on active sonar systems	<i>Critical Thinking</i> <i>Equipment Maintenance</i>	<i>Deductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Perform preventive maintenance on computer and peripheral systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on depth sounding systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on environmental range prediction systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on passive sonar systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on tactical display systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on towed array handling systems	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Repair active sonar systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair computer and peripheral systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair depth sounding systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair environmental range prediction systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair passive sonar systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair tactical display systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair towed array handling systems	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Test active sonar systems	<i>Operation Monitoring</i> <i>Quality Control Analysis</i>	<i>Deductive Reasoning</i> <i>Inductive Reasoning</i>
E4	CORE	Test computer and peripheral systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test depth sounding systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test environmental range prediction systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test passive sonar systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test tactical display systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test towed array handling systems	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>



E4	CORE	Troubleshoot active sonar systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot computer and peripheral systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot depth sounding systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot environmental range prediction systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot passive sonar systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot tactical display systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>
E4	CORE	Troubleshoot towed array handling systems	<i>Complex Problem Solving Troubleshooting</i>	<i>Problem Sensitivity Deductive Reasoning</i>

### TECHNICAL CORE FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Align weapons and combat systems equipment	<i>Complex Problem Solving Operation and Control</i>	<i>Control Precision Manual Dexterity</i>
E4	CORE	Identify the effects of Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI)	<i>Complex Problem Solving Active Learning</i>	<i>Inductive Reasoning Problem Sensitivity</i>
E4	JSPEC	Interpret blueprints and ships drawings	<i>Troubleshooting Reading Comprehension</i>	<i>Inductive Reasoning Written Comprehension</i>
E4	JSPEC	Interpret electronic schematics	<i>Troubleshooting Reading Comprehension</i>	<i>Inductive Reasoning Written Comprehension</i>
E4	JSPEC	Interpret mechanical drawings	<i>Troubleshooting Reading Comprehension</i>	<i>Inductive Reasoning Written Comprehension</i>
E4	JSPEC	Interpret plumbing and valve drawings	<i>Troubleshooting Reading Comprehension</i>	<i>Inductive Reasoning Written Comprehension</i>
E4	JSPEC	Interpret technical manuals	<i>Troubleshooting Reading Comprehension</i>	<i>Inductive Reasoning Written Comprehension</i>
E4	CORE	Operate General Purpose Test Equipment (GPTE)	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Operate Special Purpose Test Equipment (SPTE)	<i>Equipment Selection Operation and Control</i>	<i>Control Precision Deductive Reasoning</i>
E4	CORE	Perform basic soldering on electrical and electronic equipment	<i>Repairing Equipment Selection</i>	<i>Arm-Hand Steadiness Manual Dexterity</i>
E4	CORE	Perform Combat Systems Operational Sequencing System (CSOSS) procedures for casualty operations	<i>Reading Comprehension Systems Evaluation</i>	<i>Written Comprehension Control Precision</i>
E4	CORE	Perform Combat Systems Operational Sequencing System (CSOSS) procedures for casualty response	<i>Reading Comprehension Systems Evaluation</i>	<i>Written Comprehension Control Precision</i>
E4	CORE	Perform Combat Systems Operational Sequencing System (CSOSS) procedures for normal operations	<i>Reading Comprehension Systems Analysis</i>	<i>Written Comprehension Control Precision</i>

E4	CORE	Perform Combat Systems Operational Sequencing System (CSOSS) procedures to energize/de-energize equipment	<i>Reading Comprehension</i> <i>Systems Analysis</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform corrosion prevention and control procedures	<i>Equipment Maintenance</i> <i>Equipment Selection</i>	<i>Arm-Hand Steadiness</i> <i>Stamina</i>
E4	CORE	Perform digital logic numeric conversions	<i>Mathematics</i> <i>Complex Problem Solving</i>	<i>Mathematical Reasoning</i> <i>Written Comprehension</i>
E4	CORE	Perform preventive maintenance on fiber optic cables and connectors	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform preventive maintenance on interconnecting cables and connectors	<i>Equipment Maintenance</i> <i>Reading Comprehension</i>	<i>Written Comprehension</i> <i>Control Precision</i>
E4	CORE	Perform six step troubleshooting technique	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Deductive Reasoning</i> <i>Problem Sensitivity</i>
E4	CORE	Repair fiber optic cables and connectors	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Repair interconnecting cables and connectors	<i>Systems Evaluation</i> <i>Repairing</i>	<i>Problem Sensitivity</i> <i>Manual Dexterity</i>
E4	CORE	Test fiber optic cables and connectors	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Test interconnecting cables and connectors	<i>Quality Control Analysis</i> <i>Operation Monitoring</i>	<i>Inductive Reasoning</i> <i>Manual Dexterity</i>
E4	CORE	Troubleshoot valve systems	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot Alternating Current (AC) circuits	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot digital circuits	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot Direct Current (DC) circuits	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot fiber optic cables and connectors	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot interconnecting cables and connectors	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>
E4	CORE	Troubleshoot power supplies	<i>Complex Problem Solving</i> <i>Troubleshooting</i>	<i>Problem Sensitivity</i> <i>Deductive Reasoning</i>