

# Work Processes Schedule

## ELECTRICIAN (SHIP & BOAT)

**RAPIDS: 0771N**

O\*NET/SOC: 47-2111.00

REVISION DATE: 12/2014

Installs and repairs wiring, fixtures, and equipment for all electrical services aboard ship and in shipyard facilities, according to blueprints and wiring diagrams: Installs conduit to bulkheads and threads wires through conduit to terminals, such as connection boxes, circuit breakers, voltage regulators, and switch panels. Connects power-supply circuits to communications gear, radar, sonar, fire control, and other electronic equipment. Tests electrical characteristics, such as voltage, resistance, and phase angle.

### Applicable Ratings/MOS

USMC MOS None

USCG EM

USN EM, EMN

### Related Instruction

Any trade related schools/courses totaling 576 hours

### Additional Requirement

None

Total Hours: **8000**

Skill	Description	Hours
A	<p><b>FUNDAMENTALS</b></p> <p>Demonstration of knowledge required in all areas.</p> <ol style="list-style-type: none"> <li>1. Safety Precautions Fundamentals</li> <li>2. First Aid And Rescue</li> <li>3. Quality Assurance Administration Fundamentals</li> <li>4. Quality Assurance Program Fundamentals</li> <li>5. Levels Of Control Fundamentals</li> <li>6. Hearing Conservation Program Fundamentals</li> <li>7. Hazardous Material Control And Management-(HMC&amp;M) Program Fundamentals</li> <li>8. Respiratory Protection Program Fundamentals</li> <li>9. Sight Conservation Program Fundamentals</li> <li>10. General Administration (Log, Record And File Maintenance)</li> <li>11. Technical Administration (Publications And Technical Manuals)</li> <li>12. Logistics</li> <li>13. Shop Fundamentals               <ul style="list-style-type: none"> <li>· Electrical Fundamentals</li> <li>· Electrical Administration Fundamentals</li> </ul> </li> </ol> <p>Cableway Inspection And Repair Fundamentals</p>	500
B	<p><b>EQUIPMENT</b></p> <p>Demonstrate safe operation and upkeep of shop equipment. The Equipment list is representative of tools and machinery typically found in the Work-Center associated with this trade.</p> <ol style="list-style-type: none"> <li>1. Armature Undercutter</li> <li>2. Sonic Cleaner System</li> <li>3. Charger, Battery, 24 Volt, Floor</li> <li>4. Crimping Tool Set, Hydraulic</li> <li>5. Drilling Machine</li> <li>6. Dial Indicator</li> <li>7. Grinders</li> <li>8. Hoist, Electric</li> <li>9. Multimeters</li> <li>10. Monitor, Waveform</li> <li>11. Megger Insulation Tester</li> <li>12. Ovens</li> <li>13. Press, Hydraulic</li> <li>14. Bearing Puller</li> <li>15. Test Panel</li> <li>16. Tester, Load Bank</li> <li>17. Tester, Surge, Portable</li> <li>18. Tester, Multi-Amp Circuit Breaker</li> </ol>	500

	<ul style="list-style-type: none"> <li>19. Tester, A.C., High Potential</li> <li>20. Strobotach</li> <li>21. Vulcanizer, Cable</li> <li>22. Horizon Reference Set (HRS) A\W37A-1</li> </ul>	
<b>C</b>	<p><b>FABRICATE, REPAIR &amp; REPLACE</b></p> <ul style="list-style-type: none"> <li>1. Cable Banding Material</li> <li>2. Cable Tags</li> <li>3. Cabling (Up To THOF-400)(Repair &amp; Replace Only)</li> <li>4. Ground Straps</li> <li>5. Helicopter Grounding Device</li> <li>6. Vulcanizing Repairs (Up To THOF-500)</li> <li>7. Cableway Inspections</li> </ul>	250
<b>D</b>	<p><b>TROUBLESHOOT, INSPECT AND REPAIR MISC. EQUIPMENT</b></p> <ul style="list-style-type: none"> <li>1. Ac &amp; Dc Brush Riggings</li> <li>2. Boiler Inspection Devices (Surf)</li> <li>3. Bus Transfer Device--Automatic (Abt)</li> <li>4. Bus Transfer Device--Manual (Mbt)</li> <li>5. Cathodic Protection Systems</li> <li>6. Circuit Breakers--Manually Operated</li> <li>7. Circuit Breakers--Motor Operated</li> <li>8. Circuit Breakers--Solenoid Operated</li> <li>9. Circuit Breakers--Spring Operated</li> <li>10. Cranes</li> <li>11. Degaussing Equipment (Surface)</li> <li>12. Electric Hoists</li> <li>13. Electrical Hull Fittings</li> <li>14. Electrostatic Precipitators</li> <li>15. Elevators</li> <li>16. Galley Equipment</li> <li>17. Ground Detection System</li> <li>18. Heating Elements (Including Dehydrators)</li> <li>19. Indication Circuits &amp; Light</li> <li>20. Internal Combustion Engine Starter Motors</li> <li>21. Laundry Equipment</li> <li>22. Lighting</li> <li>23. Lights--Navigation</li> <li>24. Line Voltage Monitor</li> <li>25. Magnetic Clutches</li> <li>26. Power Distribution Cabling &amp; Buswor</li> <li>27. Power Distribution Panels</li> <li>28. Rectifiers</li> <li>29. Replace Resistance Temperature Elements (Rte)</li> <li>30. Shore Power Systems</li> <li>31. Solenoids</li> <li>32. Sperry Fin Stabilizers (Surface)</li> <li>33. Surge Suppressors</li> <li>34. Switchboards (Ship &amp; Special Service)</li> <li>35. Switches &amp; Interlock</li> <li>36. Timers-Electrical &amp; Time Totalizing Meter</li> <li>37. Transformers</li> <li>38. Ultrasonic Cleaning System</li> <li>39. Welders (Static)</li> <li>40. Window Wiper Troubleshoot And Test HRS System</li> <li>41. Indicator, Stabilization Data (ISD)</li> <li>42. Electroluminescent Lamp Panel And Bar Assembly</li> <li>43. Repair &amp; Overhaul Stabilized Glide Slope Indicator (SGSI)</li> </ul>	4000
<b>E</b>	<p><b>TROUBLESHOOT, INSPECT, REPAIR &amp; TEST AC EQUIPMENT</b></p> <ul style="list-style-type: none"> <li>1. Controllers &amp; Contactors</li> <li>2. Converters</li> <li>3. Current Limiters</li> <li>4. Frequency Regulators</li> <li>5. Generators (In Place)</li> <li>6. Motors (In Place)</li> <li>7. Overvoltage Protection Circuits</li> <li>8. Secondary Propulsion Motors &amp; Cables (Subs)</li> <li>9. Slip Ring Assemblies (Including In Place Resurfacing)</li> <li>10. Voltage Regulator</li> </ul>	750
	<p><b>TROUBLESHOOT, INSPECT, REPAIR &amp; TEST DC EQUIPMENT</b></p> <ul style="list-style-type: none"> <li>1. Commutators (Includes Resurfacing)</li> <li>2. Commutators--Undercut</li> </ul>	

<b>F</b>	<ul style="list-style-type: none"> <li>3. Generators (In Place)</li> <li>4. Motor Starters &amp; Control Panel</li> <li>5. Motor/Generator Sets (In Place)</li> <li>6. Motors (in Place)</li> <li>7. Resistor Bank</li> <li>8. Voltage Regulator</li> </ul>	1000
<b>G</b>	<p><b>TROUBLESHOOT, INSPECT, REPAIR &amp; TEST SPEC. FREQ. EQUIP</b></p> <ul style="list-style-type: none"> <li>1. 400 Hz Frequency Regulators</li> <li>2. 400 Hz Motor/Generators (In Place)</li> <li>3. 400 Hz Voltage Regulators</li> <li>4. Conduct Load Testing (Up To 50 Kw)</li> <li>5. Helo Acft Servicing Station</li> </ul>	1000