

Work Processes Schedule

OPTICAL-INSTRUMENT ASSEMBLER (OPTICAL GOODS)

RAPIDS: 0250N

O*NET/SOC: 51-9083.00

REVISION DATE: 03/2015

Performs mechanical, mechanical- optical and electrical repairs to include inspecting, troubleshooting and adjusting fire control instruments and systems. Measures and tests optics, using precision measuring and testing instruments. Tests and sights instruments to verify compliance to specifications.

Applicable Ratings/MOS

USMC MOS 2171

USCG None

USN AT, AWV, FC, IC

Related Instruction

Any trade related schools/courses totaling 288 hours.

Additional Requirement

AT / AWV: Must have NEC 6631 or 6724; FC Must have NEC 1139; IC Must have NEC 4779 or 4787

Total Hours: **4000**

Skill	Description	Hours
A	GENERAL ADMINISTRATION Maintain publications records and reports.	200
B	TECHNICAL ADMINISTRATION Record inspection and test data. Demonstrate ability to read blueprints, sketches, and work orders. Demonstrate ability to use formulas to compute distances.	200
C	LOGISTICS Order supplies and equipment. Package, process and document repairables for turn in.	100
D	MECHANICAL MAINTENANCE Maintain tools. Perform fault analysis and continuity checks. Inspect and replace faulty components of night vision sights. Perform recementing of lenses. Determine optical center of instrument lens and verify speed focusing power by sighting instrument on target and reading dials. Using precision measuring instruments, measure elements and instrument parts to verify dimensional specifications. Test oscilloscope and collimator with optical instrument. Assemble structural and mechanical parts of instrument with aid of blueprints, wrenches and screwdrivers. Using vacuum holding device, pick up element and position in mounting seat of housing. Secure with lock ring. Cement rings. Using tissue, cleaning solutions and compresses, air device and clean elements. Assemble telescopes, level transits and gun sights. Set up and operate lathes to modify instrument parts.	2500
	CORROSION CONTROL	

E	Paint instrument parts with brush or spray gun. Using vacuum pump, fill instrument housing with nitrogen gas to minimize corrosive effects on internal optical surfaces.	500
F	<p>INSPECTION AND EXAMINATION</p> <p>Compute standard trigonometric formulas to determine distance of test target from instrument. Position target in darkroom tunnel and connect optical instrument to test devices such as; oscilloscope or collimator. Sight instrument on target and read dial to determine optical center of instrument lens and verify specified focusing power. Record inspection and test data.</p>	500