

# Work Processes Schedule

## AUTOMOBILE MECHANIC (AUTOMOTIVE SERVICE)

RAPIDS: 0023N

O\*NET/SOC: 49-3023.01

REVISION DATE: 12/2014

Demonstrate knowledge and skills for qualifying as Journeyman. Applicable Job Qualification Requirements will be used as a guide in performing tasks and demonstrating knowledge in the following areas. Actual work time must be recorded in the Work Experience Log.

### Applicable Ratings/MOS

USMC MOS 2147, 3521, 3522, 3525

USCG None

USN CM

### Related Instruction

Any trade related schools/courses totaling 576 hours

### Additional Requirement

None

Total Hours: **8000**

Skill	Description	Hours
A	<p><b>VEHICLE EXAMINATION AND INSPECTION</b></p> <p>Examine vehicles such as; automobiles, buses, trucks, and other automotive vehicles. Discuss fault indications with the customer or an automobile repair service estimator, or automobile tester as to the exact nature and extent of damage or malfunction.</p>	800
B	<p><b>VEHICLE PREPARATION</b></p> <p>Plan work procedures, using charts, technical manuals, and experience. Raise vehicle, using hydraulic jack or hoist to gain access to mechanical units bolted to underside of vehicle.</p>	450
C	<p><b>MALFUNCTION IDENTIFICATION AND REMOVAL</b></p> <p>Remove unit, such as engine, transmission, or differential, using wrenches and hoist. Disassemble unit and inspect parts for wear, using micrometers, calipers, and thickness gauges.</p>	450
D	<p><b>REPAIRING MALFUNCTIONS OR DAMAGE</b></p> <p>Repair or replace parts such as; pistons, rods, gears, valves, and bearings, using mechanic's hand tools.</p>	550
E	<p><b>OVERHAUL COMPONENTS</b></p> <p>Overhaul or replace carburetors, blowers, generators, distributors, starters, and pumps. Rebuild parts, such as crankshafts and cylinder blocks, using lathes, shapers, drill presses, and welding equipment.</p>	550

<b>F</b>	<b>ELECTRICAL SYSTEMS</b> Rewire ignition system, lights, and instrument panel.	500
<b>G</b>	<b>BRAKE SYSTEM</b> Reline and adjust brakes, align front end, repair or replace shock absorbers, and solder leaks in radiator.	500
<b>H</b>	<b>BODY DAMAGE</b> Mend damaged body and fenders by hammering out or filling in dents and welding broken parts.	350
<b>I</b>	<b>MISCELLANEOUS COMPONENTS</b> Replace and adjust headlights and install and repair accessories, such as radios, heaters, mirrors, and windshield wipers.	450
<b>J</b>	<b>EXHAUST AND EMISSION SYSTEM</b> Troubleshoot and analysis exhaust and emission systems. Repair exhaust emission control systems, air pumps, and control valves. Remove and replace exhaust system components, mounts, heat riser valves, catalytic converters, and manifolds.	450
<b>K</b>	<b>EMISSION INSPECTION AND ANALYSIS</b> Conduct and evaluate tests on vehicle to check exhaust emissions. Review instructions to determine details of test to be performed. Start and operate vehicle according to test program, compare performance with specifications and records results.	450
<b>L</b>	<b>SPECIAL TESTING</b> Drive vehicle over dynamometer. Record identifying data. Performs dwell, timing and idle speed tests using gauges. Evaluate performance and adjust performance to manufacturers, specifications. Adjust dynamometer settings to vehicle specifications and connect instrument sensor to exhaust system.	450
<b>M</b>	<b>TEST EQUIPMENT</b> Calibrate, clean and maintain test equipment and recording devices.	250
<b>N</b>	<b>EMISSION SYSTEM REPAIR</b> Diagnose and repair vehicle malfunction.	400
<b>O</b>	<b>SMOG DEVICE INSTALLATION</b> Install smog control device system components on tested vehicle. Ensure proper	400

operation.

	operation.	
<b>P</b>	<b>CLUTCH WORK</b>  Rebuild automobile and truck clutches performing a complete tear down of the clutch system using hand and power tools. Immerse clutch assembly in solvent to remove grease and residue. Place assembly into machine that tumbles assembly in abrasive chips to remove rust. Grind and buff clutch plates and facing, using portable abrasive wheel. Replace facing on clutch plates, using riveting gun or riveting press. Disassemble clutch, using hand and power tools. Repair or replace worn or damaged clutch parts. Reassemble clutch and replace cover, using hand tools. Inspect clutch system components for proper tolerances in accordance with specifications.	550
<b>Q</b>	<b>EMISSION SYSTEMS</b>  Inspect and test motor vehicle emission control systems, using hand tools and computerized testing equipment. Attach test circuit leads to vehicle ignition system and insert exhaust probe in tail pipe. Start and accelerate engine to specified speed. Observe dials and meters of testing equipment to determine exhaust emissions content and record reading on chart. Compare computer printout to exhaust emissions chart to detect variations. Examine emission control systems to determine cause of faulty operation. Adjust and replace defective parts, using hand tools. Record incidence of recurring defects and consult with department heads or plant engineers to initiate corrective measures.	450