

Course Competencies

AUTO 112 Engine Repair

Upon completion of this course, successful students will (be able to):

Comply with personal and environmental safety practices associated with clothing: eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state and federal safety and environmental regulations.

I. ENGINE REPAIR

A. General

1. Research applicable vehicle and service information, vehicle service history, service precautions and technical service bulletins.
2. Verify operation of the instrument panel engine warning indicators.
3. Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action.
4. Install engine covers using gaskets, seals, and sealers as required.
5. Remove and replace timing belt; verify correct camshaft timing.
6. Perform common fastener and thread repair to include: remove broken bolt, restore internal and external threads, and repair internal threads with thread insert.
7. Identify hybrid vehicle internal combustion engine service precautions.

B. Cylinder head and Valve Train

1. Adjust valves (mechanical or hydraulic lifters).

C. Lubrication and Cooling Systems

1. Perform cooling system pressure and dye tests to identify leaks; check coolant conduction and level; inspect and test radiator, pressure cap, coolant recovery tank, and heater core and galley plugs; determine necessary action.
2. Inspect, replace and adjust drive belts, tensioners, and pulleys; check pulley and belt alignment.
3. Remove, inspect and replace thermostat and gasket/seal.
4. Inspect and test coolant; drain and recover coolant; flush and refill cooling system with recommended coolant; bleed air as required.
5. Perform engine oil and filter change.