

# Engine Repair: Miscellaneous In-Vehicle Engine Tasks

## Student/intern information:

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

## Vehicle used for this activity:

Year \_\_\_\_\_ Make \_\_\_\_\_ Model \_\_\_\_\_

Odometer \_\_\_\_\_ VIN \_\_\_\_\_

Learning Objective/Task	CDX Tasksheet Number	2013 MLR NATEF Reference Number; Priority Level	2013 AST NATEF Reference Number; Priority Level	2013 MAST NATEF Reference Number; Priority Level
• Install engine covers using gaskets, seals, and sealers as required.	C541	1A4; P-1	1A5; P-1	1A5; P-1
• Inspect, remove, and replace engine mounts.	C596		1A8; P-2	1A8; P-2
• Replace valve stem seals on an assembled engine; inspect valve spring retainers, locks/keepers, and valve lock/keeper grooves; determine necessary action.	C675			1B8; P-3

Time off \_\_\_\_\_

Time on \_\_\_\_\_

Total time \_\_\_\_\_

## Materials Required

- Vehicle
- Gasket scraper (nonabrasive for aluminum and plastic surfaces)
- Seal pullers and installers
- Vehicle hoist
- Engine support or transmission jack
- Valve spring compressor
- Cylinder leakage tester

## Some Safety Issues to Consider

- Lifting equipment such as engine hoists are important tools that increase productivity and make the job easier. However, they can also cause severe injury or death if used improperly. Make sure you follow the manufacturer's operation procedures.
- This procedure will require cleaning the components. Use the proper personal protective equipment for the chemicals and processes used.
- Engine castings and parts can have sharp edges. Always exercise extreme caution when working around them. Also, the parts are relatively heavy and can cause serious pinching of fingers. Be careful when handling them.
- Diagnosis of this fault may require test-driving the vehicle on the school grounds. Attempt this task only with full permission from your instructor and follow all the guidelines exactly.
- 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.

## **Performance Standard**

**0–No exposure:** No information or practice provided during the program; complete training required

**1–Exposure only:** General information provided with no practice time; close supervision needed; additional training required

**2–Limited practice:** Has practiced job during training program; additional training required to develop skill

**3–Moderately skilled:** Has performed job independently during training program; limited additional training may be required

**4–Skilled:** Can perform job independently with no additional training