

# Engine Disassembly

**Meets ASE Task:** (A1-C-2) P-1 Disassemble engine block; clean and prepare components for inspection and reassembly.

Name \_\_\_\_\_ Date \_\_\_\_\_ Time on Task \_\_\_\_\_

Make/Model/Year \_\_\_\_\_ VIN \_\_\_\_\_ Evaluation: 4 3 2 1

**This procedure is for overhead valve engines only. For overhead camshaft engines, consult the factory service information.**

- \_\_\_\_\_ 1. Remove all coolant and engine oil from the engine.
- \_\_\_\_\_ 2. Clean the engine with degreaser and/or a pressure washer.
- \_\_\_\_\_ 3. Install the engine on an engine stand.
- \_\_\_\_\_ 4. Remove the exhaust and the intake manifolds.
- \_\_\_\_\_ 5. Remove the cylinder head(s) being certain to follow the torque table backwards starting with the highest number and working toward the lowest number to help prevent warping the cylinder head.
- \_\_\_\_\_ 6. Remove the harmonic balancer and timing chain cover.
- \_\_\_\_\_ 7. Remove the timing chain and camshaft.
- \_\_\_\_\_ 8. Remove the oil pan (replace all pan bolts back into the block rails to prevent loss if possible).
- \_\_\_\_\_ 9. Remove the oil pickup and pump (if in the oil pan).
- \_\_\_\_\_ 10. Mark the connecting rods if not already marked from the factory or during a previous service.
- \_\_\_\_\_ 11. Remove the ridge:
  - a. Install the tool into the cylinder and position the piston properly so that enough threads will be above the tool to cut the entire ridge.
  - b. Expand the tool to the proper bore size.
  - c. Locate the cutter blade slightly below the ridge and tighten the lock screw.
  - d. Apply the spring tension to the cutter blade.
  - e. Cut the ridge.
  - f. Stop cutting as soon as the ridge has been removed to avoid tapering the top of the bore.
  - g. Remove the chips from the cylinder.

\_\_\_\_\_ 12. Remove the pistons and the rods (keep the rod caps together).