

Engine Disassembly

Meets ASE Task: A1 – C-3 – P-2

Name: _____ Date: _____ Time on Task: _____

Make/Model/Year: _____ VIN: _____

Evaluation (Enter number from 4, 3, 2, 1) : _____

- 1. Remove all coolant and engine oil from the engine. Clean the engine with degreaser and/or a pressure washer. Install the engine on an engine stand.
- 2. Remove the exhaust and the intake manifolds.
- 3. 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.
- 4. Remove the harmonic balancer and timing chain cover.
- 5. Remove the timing chain and camshaft.
- 6. Remove the oil pan (replace all pan bolts back into the block rails to prevent loss if possible).
- 7. Remove the oil pickup and pump (if in the oil pan).
- 8. Mark the connecting rods if not already marked from the factory or during a previous service.
- 9. 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.
- 10. Remove the pistons and the rods (keep the rod caps together).
- 11. Remove the crankshaft.
- 12. Clean the engine block and all other parts.