

6. Ignition Timing

The ignition timing may vary depending on whether the engine is operating on the primary system or on the secondary system. The actual timing will vary depending on the exact RPM. Timing should be verified, with a timing light, at operating RPM, (approximately 4250 RPM). It should only be checked when the engine is operating with a "light load". When operating on the ECU controlled primary system, the ignition timing is modified by the ECU.

F. Valve Train

1. Valve Cover Removal and Installation

- a. Prior to valve cover removal, prepare for a small amount of oil to drain from the rocker box.
- b. Remove the two bolts securing each cover and remove the cover.
- c. Inspect the rubber O-rings on all four bolts and replace them if they are deformed.
- d. Inspect the valve cover gaskets and replace them if necessary. When replacing a gasket, apply enough silicone to the seating area of the valve cover to fill void areas where the gasket does not match. Install the gasket, then invert the valve cover onto a flat surface. Allow the silicone to dry before reinstalling the valve cover on the engine.
- e. Center the valve cover both vertically and horizontally over the cylinder head rocker box. (If reusing the same gasket, you should be able to feel when the cover slips into the previously formed depression.) Insert the bolts and tighten to the point where the large washer under the head of the bolt just contacts the valve cover. Tighten the bolts no more than an additional 1/2 to 3/4 turn. Visually check to ensure that only the gasket is contacting the cylinder head. Repeat the process on the other cover.

CAUTION: The gaskets can be damaged if the valve covers are not positioned properly or if the bolts are over-tightened. Check for oil leaks after engine start-up.

2. Valve Train Inspection

- a. 25 Hour Valve Train Inspections

The following 3 inspections should be done every 25 hours. They should be performed prior to each valve lash measurement. While these parts normally do not wear and require no maintenance, it is important to monitor their condition in order to prevent a failure.

WARNING: If you have any questions regarding these procedures, DO NOT continue to operate the engine! Call Customer Service for additional instructions.

1. Spring Retainer: Note the relative depth of the keeper set in each spring retainer. You may notice a slight variance on different valves, but no keeper set should be sunk deeply into a retainer. The important thing to look for is any change in the relative position of each keeper set. If you determine that a keeper set seems to be sinking deeper into its retainer, DO NOT continue to operate the engine. Call customer service for further instructions.

