Installation Instructions for 40007 GM Vortec Distributor

WARNING: Disconnect the battery cables. When disconnecting the battery, always remove the negative cable first and install it last.

Note: It is recommended to have the Service Manual available for your vehicle. If the distributor is not installed properly, the Check Engine Light will come on.

IMPORTANT: The distributor MUST be properly indexed when installed. The cam and crank sensors must be within 2° to be properly synched. If not, the check engine light will illuminate and a Diagnostic Trouble Code (Code P1345) will be set. The engine will still start and run, but a DTC will be set and the check engine light will stay on until the phasing is corrected.

It is required to use a bi-directional scanner to set the sync of the distributor. A timing light will not assist in setting the cam-to-crank phasing. Many GM dealers and local repair shops will have the required scanner.

The following is the procedure to properly adjust the cam-to-crank sensor phasing using a proper scan tool:

- 1. With the ignition OFF, install the scan tool to the Data Link Connector.
- 2. Start the engine and bring to normal operating temp.
- 3. Monitor the Cam Retard Offset. Increase engine speed to 1,000 rpm as cam retard offset reading will not be accurate below 1,000 rpm.
- 4. If the scan tool indicates that cam retard is between 0° and +/- 2°, the distributor is properly adjusted. Move to step 8.
- 5. If the scan tool does not indicate that cam retard is between 0° and +/- 2°, you will need to adjust the distributor.
- 6. With the engine off, slightly loosen the distributor hold down bolt.
- 7. Rotate the distributor as follows:
 - a. To compensate for a negative reading, rotate the distributor counterclockwise.
 - b. To compensate for a positive reading, rotate the distributor clockwise.
- 8. Tighten the distributor hold down bolt.
- 9. Recheck the cam retard offset repeating steps 2 through 8 as needed.
- 10. When proper adjustment is achieved, use scan tool to perform cam/crank relearn. Installation is complete.

Distributor Removal:

- 1. Mark the spark plug wires and their location then remove the cap. Note that the Vortec Distributor routes the wires to each side and from front to back.
- 2. Remove the two screws retaining the cap.
- 3. With the cap off, turn the engine over until the rotor is aimed at a fixed point on the engine or firewall. Note this position by making a mark.
- 4. Loosen the distributor hold-down clamp and slide it out of the way.
- 5. Lift the distributor out of the engine.

Distributor Installation:

- 1. Remove the cap from the distributor. Install the new gasket on the housing.
- 2. Apply a liberal amount of the supplied break-in lubricant to the distributor gear.
- 3. Install the distributor making sure that the rotor comes to rest at the same fixed mark. If the distributor will not fully seat you may need to rotate the oil pump shaft using a long flat-blade screwdriver.
- 4. With the rotor in the correct position and the distributor fully seated, install the distributor clamp and tighten it.
- 5. Install the distributor cap.
- 6. Install the spark plug wires one at a time to ensure correct location.

