

United Motor Products

Chevy/GMC Vortec V6 & V8 Distributor Installation Instructions for... UMP part numbers.....9361, 9362, 9363

Please read these instructions before installing....

You should always disconnect the battery, negative lead first, before working on the ignition system. When you are done installing the distributor, reconnect the positive lead **FIRST**, onto the battery.

Included with the distributor:

- 1 - Rotor,
- 1 - Distributor Cap,
- 1- Gasket,
- 1- Hold down clamp

IMPORTANT - Read before installing...

- >>> 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.**
- >>> 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 the Diagnostic Trouble Code (P1345) will be set. The engine will still start and run, but the check engine light will stay on until the phasing is corrected.
- >>> It is required to use a bi-directional scanner to the sync of the distributor. A timing light **WILL NOT** assist in setting the cam-to-crank phasing. You can purchase a scanner or an auto service center or dealer, should have the proper scanner to complete this job.

Distributor & Spark plug wire removal...

- 1- Mark the spark plug wires and their location on the cap and which cylinder they connect to **OR** keep them attached to the cap and mark which cylinder they connect to. Remove the cap.
Note: The Vortec distributor routes the wires to each side and from front to back.
- 2- Remove the two screws holding down the cap and unplug the wiring connector from the distributor.
- 3- With the cap off, crank 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 remove it with the distributor. You **MAY** need this clamp later in the installation.
- 5- Lift the distributor out of the engine. **Note:** The rotor rotates as you lift it out. This is due to the helical cut gear and should be taken into consideration when installing the new distributor.

How to re-install the distributor...

- 1- Making sure the gasket is installed onto the shank, lower the new distributor into position. **DO NOT use any sealant between the engine block and the gasket on the distributor shank.** The rotor should be aimed at the same fixed point that the rotor from the old distributor was pointing at. After the new distributor has been lowered into place, you may find that it hasn't seated firmly against the intake manifold. This indicates that the lower end of the distributor shaft is not properly aligned with the oil pump drive rod. Do not attempt to force the distributor into position. Manually rotate the engine back and forth, either clockwise or counterclockwise, just enough for the distributor to drop into place.
- 2- Reinstall the hold-down clamp and thread the bolt just enough to exert a slight pressure against the distributor to hold it in place. If the distributor was not firmly seated, as noted in #1, manually rotate the engine back and forth, either clockwise or counterclockwise, to allow the distributor to drop into place.
- 3- **IMPORTANT:** With the distributor properly seated, tighten the hold-down bolt enough so that the distributor is held in place when the engine is started, **BUT** can still be rotated with a some effort.
- 4- Re-install plug wires one at a time. Install them in the corresponding positions of the new cap on the distributor. After all wires have been transferred, verify that the wires attached to the distributor cap towers, lead to the correct number cylinder. If you are unsure of cylinder number position or firing order, this information can be found in the service manual that covers your particular engine.
- 5- Reconnect the electrical connector from the engine harness to the distributor. At this time you can begin with the phasing of the distributor.

PHASING the distributor.....

The following is the procedure to adjust the cam-to-crank sensor phasing when using a 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 AT **or** between -2° to $+2^{\circ}$, the distributor is properly ad justed. **Move to step 8.**
- 5- If the scan tool does not indicate that cam retard is AT **or** between -2° to $+2^{\circ}$
- 6- Turn engine off.
- 7- **Rotate the distributor as follows:**
 - A- To compensate for a **negative** reading, rotate the distributor **counter** clockwise.
 - B- To compensate for a **positive** reading, rotate the distributor **clockwise**.
- NOTE: >>> Occasionally, if after using the scan tool and following the proper installation instructions, you find that the new hold down clamp that comes installed on the new distributor does not allow the final adjustments needed to properly index the distributor, you will need to use your old hold down clamp from your original distributor.**
- 8- **Once the correct reading parameters are met**, tighten the distributor hold down bolt completely to the manufacturers specifications.
- 9- Recheck the cam retard offset.... repeating steps 2-8 as needed.
- 10- When proper adjustment is achieved, use scan tool to perform cam/crank relearn. Installation is complete.