



## CHEVROLET COMPUTER-CONTROLLED DISTRIBUTOR INSTALLATION INSTRUCTIONS P/N 890-160

### INTRODUCTION

Congratulations on your purchase of the Holley Computer-Controlled Distributor for Chevrolets! Holley Performance Products cannot and will not be responsible for any alleged or actual engine or other damage, or other conditions resulting from misapplication of the products described herein. However, it is our intent to provide the best possible products for our customer; products that perform properly and satisfy your expectations. Should you need information or parts assistance, please contact our Technical Service Department at 1-270-781-9741, Monday through Friday, 7 a.m. to 5 p.m. Central Time; please have the part number of the product you purchased on hand when you call.

**WARNING!** These instructions must be read and fully understood before beginning installation. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury or death. If these instructions are not fully understood, installation should not be attempted.

**WARNING!** Although distributor replacement is not difficult, you must proceed carefully. Improper distributor installation can cause severe engine damage.

**WARNING!** Electronic ignition systems generate extremely high voltages that could possibly cause personal injury and damage to the electronic components. Double-check for proper connections. The spark plug and coil wires must be in place before turning the ignition on or off and/or starting the engine.

### REMOVING THE ORIGINAL DISTRIBUTOR

1. If the vehicle has a manual transmission, place the gearshift in neutral and chock the wheels. This prevents the crankshaft from being accidentally turned and the distributor mounting reference lost, if someone pushes or leans against the vehicle. Automatic transmissions should be placed in "Park".
2. Disconnect the ground cable from the battery.
3. Remove or relocate the engine parts, such as air cleaners, that block access to the distributor.
4. Disconnect the distributor electrical connectors. Label the connectors to make the replacement unit installation easier.
5. Thoroughly clean the engine area around the distributor housing, so that position-reference marks can be made and easily seen. Be careful to prevent any dirt or debris from falling into the engine.
6. Remove the screws holding the cap to the distributor. Remove the distributor cap, with spark plug wires attached, and set it aside.
7. Note the position of the rotor on the distributor. Examine the distributor housing for existing reference marks that align with the tip of the rotor. If there is no reference mark, make a reference mark on the housing. **This reference mark is important and must be accurate for proper distributor installation.**
8. Make a second reference mark between the distributor housing and the engine or other assembly to show the mounting position.

**WARNING!** Do not crank the engine during the replacement procedure. If the engine is accidentally cranked, the distributor gear or its pin is sheared off, or the distributor is removed before reference marks are made, you must follow the procedure at the end of this instruction sheet for finding top dead center (TDC) of #1 cylinder compression stroke

9. Remove the distributor hold-down nut/bolt and clamp. Carefully lift the distributor out of the engine. If the distributor is hard to remove, spray penetrating oil down the side of the distributor neck and work it back and forth, until it is free. The rotor will rotate as you lift the distributor out due to the helical cut gears. Note the position of the rotor when the gears disengage. Scribe a second rotor-to-housing reference line when the gears disengage and remove the distributor. The position of the rotor will need to be the same on the new distributor rotor during installation. Make sure the oil pump shaft stays fully seated in the oil pump. If the shaft comes out with the distributor, you will need to refer to a service manual for the installation of the oil pump shaft at this time.

**WARNING!** If the distributor is installed without the oil pump shaft in place, the engine will start and run, but will not turn the oil pump. This will cause major internal engine damage.

10. Remove the distributor-to-block gasket or seal ring and discard, if so equipped. Inspect the distributor gear for any excessive wear. If excessive wear is detected, replacement of the distributor drive gear is recommended. On applications where the drive gear is an integral part of the camshaft, it may be necessary to replace the camshaft.
11. Remove the replacement distributor from the box and compare it with the original unit. Using a mounting boss or other component feature as a reference, transfer the reference mark(s) from the old distributor housing to the identical location on the replacement unit housing.

## INSTALLING THE NEW DISTRIBUTOR

1. Clean the distributor-mounting pad on the engine.
2. Install the new distributor mounting gasket/seal ring that is supplied with the new distributor.
3. Apply a liberal amount of camshaft and lifter lubricant (provided with the kit) onto the distributor drive gear.

**WARNING! Failure to use a good quality break-in lubricant can result in engine damage, due to failure of the distributor gear.**

4. Slide the distributor into the engine, lining up the scribed mark on the housing with the matching mark on the engine. The rotor will turn slightly as you fully seat the distributor. In order to align the scribed marks, it may be necessary to pull the distributor out slightly and rotate it to engage the next position on the drive gear. When fully seated, the rotor should line up with the first rotor reference mark scribed on the distributor. If the distributor will not fully seat, you may need to rotate the oil pump shaft, until the distributor fully seats and the rotor lines up.
5. Rotate the distributor to align the mark on the housing with the mark on the engine. Install the hold-down bolt or nut, and hand-tighten until the timing is checked.
6. Connect the two wiring harnesses.
7. Install the new distributor cap and transfer spark plug wires from the old distributor to the new distributor cap one at a time. This will ensure that the spark plug wires are installed in the correct locations.

## FINAL CONNECTIONS

1. Before starting the vehicle, recheck all the connections made during the distributor installation. Install any components and vacuum line(s) that were removed to gain access to the distributor.
2. Reconnect the negative (-) battery cable.
3. The ignition timing must be checked to get to the exact specifications.

**CHECK THE IGNITION TIMING:** Disconnect the single-wire "EST" connector (*tan wire with black tracer*) and follow the recommended procedure, as detailed on the emission specification decal in the engine compartment and in the vehicle's manual.

## FINDING TOP DEAD CENTER (TDC), #1 CYLINDER

1. Remove the spark plug from the #1 cylinder. See the manufacturer's service manual for the location of the #1 cylinder on the engine.
2. If the distributor is installed, remove the coil wire from the cap and ground it. On GM HEI distributors equipped with an integral coil, disconnect the pink feed wire. On vehicles equipped with an external coil, disconnect the 2-wire connector on the coil.
3. Hold your thumb over the #1 cylinder spark plug hole. Crank the engine over in short bursts, until you feel compression at the spark plug hole. Continue cranking slowly, until the "TDC" or "0" mark on the timing scale lines up with the timing pointer.
4. Insert the distributor into the engine, so the rotor points to the spot where the #1 plug wire will be when the cap is installed. Be sure the distributor is installed in a position that allows a reasonable amount of rotation for spark timing adjustment.
5. Install the coil wire to the distributor cap, if disconnected. Refer to the manufacturer's service manual for the ignition timing procedure. Set the ignition timing and tighten the distributor hold-down bolt to the manufacturer's specifications.



## TROUBLESHOOTING

Problem	Cause
Engine will not start	<ul style="list-style-type: none"> <li>- Loose, cracked, or defective distributor cap.</li> <li>- Distributor is not properly seated.</li> <li>- Distributor is installed backward (180° out).</li> <li>- Distributor control wiring is loose or corroded.</li> <li>- Burned, cracked, or improperly seated rotor.</li> </ul>
Engine backfires, but doesn't start	<ul style="list-style-type: none"> <li>- Loose, cracked, or defective distributor cap.</li> <li>- Distributor is not properly seated.</li> <li>- Ignition timing is incorrect.</li> <li>- Moisture is in the distributor.</li> <li>- Ignition wires are defective or connected in the wrong firing order.</li> <li>- Burned, cracked, or improperly seated rotor.</li> </ul>
Engine runs rough or misfires at high speed	<ul style="list-style-type: none"> <li>- Ignition wires are defective or connected in the wrong firing order.</li> <li>- Spark advance system is faulty.</li> <li>- Vacuum hoses are leaking or disconnected.</li> <li>- Burned, cracked, or improperly seated rotor.</li> </ul>
Excessive fuel consumption	<ul style="list-style-type: none"> <li>- Ignition timing is incorrect.</li> <li>- Spark advance system is faulty.</li> </ul>
Intermittent operation	<ul style="list-style-type: none"> <li>- Loose, cracked, or defective distributor cap.</li> <li>- Distributor control wiring is loose or corroded.</li> </ul>
Oil leak at the distributor	<ul style="list-style-type: none"> <li>- Distributor is not properly seated.</li> <li>- Distributor is installed without seal.</li> </ul>
Engine Detonates (pings)	<ul style="list-style-type: none"> <li>- Ignition timing is incorrect.</li> </ul>

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**For online help, please refer to the Tech Service section of our website: [www.holley.com](http://www.holley.com)**

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