

# **MSD** **IGNITION** **INSTALLATION INSTRUCTIONS**

## **MSD Billet Crank Trigger Distributors** **PN 84697, PN 8558 and PN 84698 (GM DRCE Block)**

**Note:** Read these instructions completely before attempting the installation.

### **Parts Included:**

1 - MSD Distributor Assembly	1 - Gasket
2 - O-Rings	1 - Rotor Phasing Tech Brief
1 - Tube of Gear Lubricant	

### **Replacement Parts:**

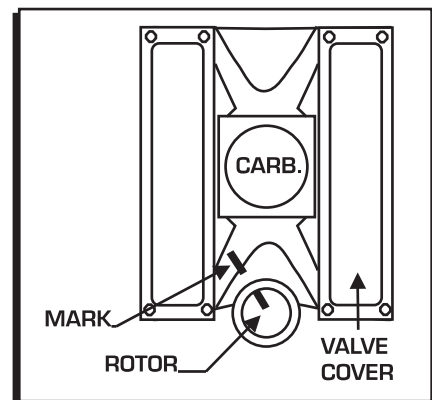
Rotor and Base, PN 8457	Chevrolet Bronze Gear:
Cap, PN 8408	Standard (0.500" ID), PN 8471
GM DRCE Bronze Gear, PN 84711	Oversized (+0.006"), PN 8472

**WARNING:** During installation, disconnect the battery cables. When disconnecting the cables, always remove the Negative cable first and install it last.

**Note:** A Crank Trigger must be used with this distributor.  
An MSD Billet Hold-Down Clamp, PN 8110, is recommended.

## **REMOVING THE DISTRIBUTOR**

1. Remove the existing distributor cap without disconnecting any of the spark plug wires.
2. With the cap off, rotate the engine or until the rotor is aimed at a fixed point on the engine or firewall. Note this position by making a mark (Figure 1).
3. Place the distributor cap back on and note which plug wire the rotor is pointing to. **MARK THE SPARK PLUG WIRES** and remove the distributor cap.
4. Loosen the distributor hold-down clamp and slide the clamp out of the way.
5. Lift the distributor out of the engine. Note that the rotor rotates as you lift the distributor out. This is due to the helical cut gear and should be taken into consideration when installing a new distributor.



**Figure 1** Marking the Rotor Location.

## PREPARING THE DISTRIBUTOR

### O-RING SEALS

The MSD Billet Distributor features two O-ring grooves in the bottom lands of the housing to seal the oil gallery. These O-rings should only be installed if the block has been modified as shown in Figure 2.

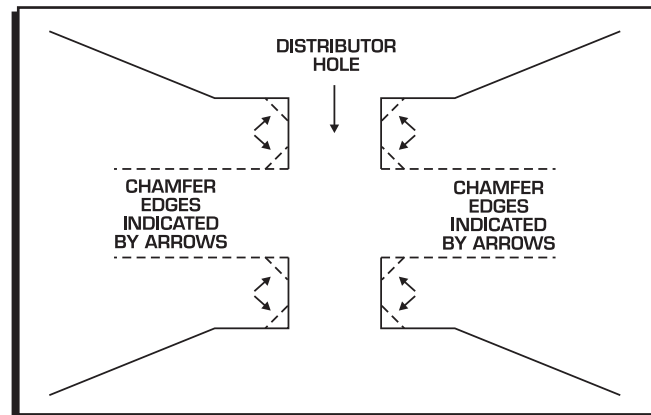


Figure 2 Modified Block to Accept the O-Ring Seals.

### ADJUSTABLE SLIP COLLAR

The MSD PN 8558, Distributor features an adjustable slip collar. This collar provides an adjustment to accommodate variations in block height, modified intakes or heads. It is recommended to check the slip collar setting before installation. MSD offers a special tool, the 3-In-1 Distributor Set Up Tool, PN 8599, to make these adjustments accurately. If the tool is not available, follow this procedure.

1. Loosen the slip collar and insert the distributor into the engine until it bottoms out against the oil pump drive.
2. After it bottoms out, raise the distributor 0.010" - 0.030" then slide the slip collar down into the position and tighten it.

### CHECKING THE OIL PUMP TO DISTRIBUTOR SHAFT OVERLAP

The proper overlap between the distributor shaft and the oil pump shaft is very important. The tongue of the distributor shaft should fit into the groove of the oil pump shaft by at least 1/4". To check this:

1. Measure the distance between the base of the slip collar to the tip of the distributor shaft (Figure 3).
2. Using a straight edge, measure the distance from the intake manifold distributor flange to the top of the oil pump intermediate shaft (Figure 3).
3. Take the two measurements and subtract them. The difference is the overlap. If there is not enough clearance or too much clearance, a different oil pump shaft is required.

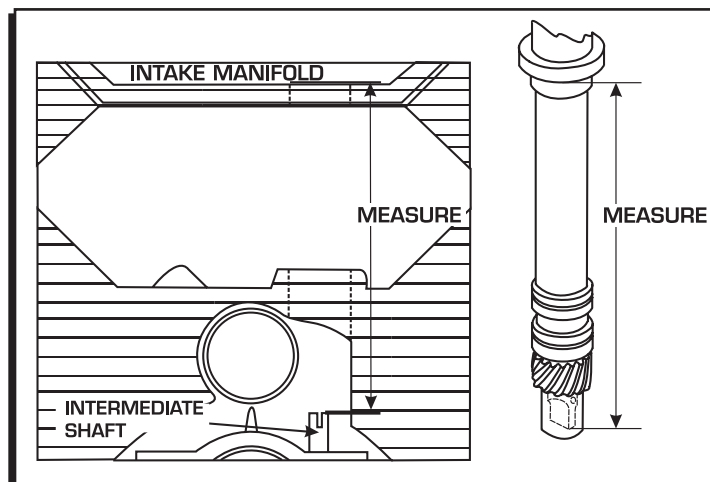


Figure 3 Checking Oil Pump Shaft to the Distributor Shaft Overlay.

### CHECKING GEAR MESH

It is recommended to check for proper gear mesh between the cam gear and distributor gear. To do this, coat the distributor gear with moly grease and install the distributor. Next, crank the engine over several times. Before pulling the distributor out, make sure the rotor is in the position that lines up with the original removal mark. Then pull the distributor out and inspect the gear pattern shown on the grease. The proper mesh will leave an even pattern in the middle of the gear. Adjust the slip collar to obtain the correct mesh.

Adjust the slip collar to obtain the correct mesh.

## **INSTALLING THE DISTRIBUTOR**

1. With the slip collar adjustment set, install the gasket and O-rings (if necessary).

**Note:** Do not use the O-rings unless the block has been modified as in Figure 2.

2. Apply a liberal amount of the supplied lubricant to the distributor gear.
3. Install the distributor making sure that the rotor comes to rest pointing at the fixed mark. If the distributor will not fully seat with rotor pointing to the marked position, you may need to rotate the oil pump shaft until the rotor lines up and the distributor fully seats.
4. Position and tighten the hold-down clamp onto the distributor.
5. Install the distributor cap. It is recommended to use a drop of Blue Loctite to the distributor cap hold down bolts.
6. Install the spark plug wires one at a time to ensure correct location.
7. It is recommended to check and confirm correct rotor phasing. The supplied tech brief explains rotor phasing in detail.