

MSD[®] IGNITION

INSTALLATION INSTRUCTIONS

MSD Pro-Billet Cam Sync Distributor

Chevrolet V8, PN 2357

Ford 289/302

Steel Gear, PN 2358; Iron Gear, PN 2359;

Bronze Gear, PN 2360; FE Steel Gear, PN 2363

Parts Included:

1 - Pro-Billet Distributor	2 - 1.5" Self Tapping Screws
1 - Rotor, PN 84211	1 - Tube of Gear Lubricant
1 - Distributor Cap, PN 84313	1 - O-Ring (Ford) or Gasket (Chevrolet)
1 - Wire Retainer	2 - O-Rings (Chevrolet)

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

Note: An MSD 6, 7, 8 or 10 Series Ignition is required.

This distributor is equipped with an adjustable Hall-Effect Cam Sync Sensor for fuel injected engines. The Cam Sync can be adjusted to achieve the proper lead time required for the particular ECU being used.

The distributor also features an adjustable rotor. This allows the rotor phasing to be set properly and compensate for timing changes.

HALL-EFFECT PICKUP

LED OPERATION

The LED is On whenever the magnet is **not** in front of the pickup. The LED turns Off when the magnet passes over the center of the pickup (approximately 40°).

SPECIFICATIONS

Accepts 5 – 18 Volts continuous

Output: Within 1.5 volt on the red wire and .3 volt above ground.

Protected from reverse polarity, short circuit and over voltage.

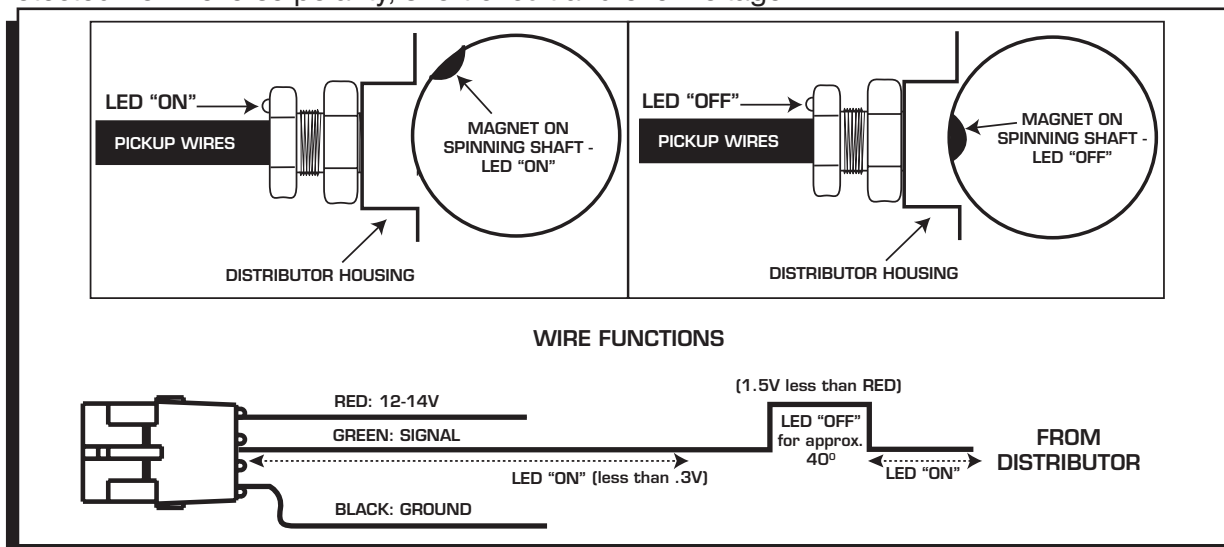


Figure 1 Installing the Hall-Effect Pickup.

INSTALLING THE DISTRIBUTOR

1. Position the engine at your desired timing. Remove the existing distributor cap without disconnecting any of the spark plug wires.
2. Install the O-ring and apply a liberal amount of the supplied lubricant to the distributor gear. CHEVY: Install the gasket and apply a liberal amount of the supplied lubricant to the gear. (The supplied O-rings can only be used if the block has been modified as shown in Figure 3.)
3. Install the distributor making sure that the rotor comes to rest pointing at what will be the number one cylinder. If the distributor will not fully seat with the 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 and spark plug wires one at a time to ensure correct location.
6. A wire retainer is supplied to secure the wires in place. Align the mounting bosses and use the supplied 1.5" self tapping Phillips screws to hold the retainer in place.

SETTING THE CAM SYNC PICKUP

The Hall-Effect Pickup is designed to provide an aftermarket ECU with a sync signal. This signal must be advanced more than the ignition trigger signal. The amount of advance or lead time depends on the EFI system being used. Always check with the EFI manufacturer to determine the advance required for the cam sync.

For example: An ECU requires 10° of advance. Your engine will be running total timing of 36°. Position the number one cylinder at 46° and align the pickup.

1. Once the distributor is locked in place at your desired total timing, rotate the engine until the number one cylinder is positioned at the required cam sync (If 10° of sync is required with the engine at 36°, position the engine at 46°).
2. With power going to the Hall-Effect pickup, adjust the pickup until the light turns off (the output will be higher). This will be the 10° of advance for the ECU. It is important to rotate the pickup clockwise until the light turns on, to find the edge of the magnet. Then rotate the pickup CCW just until the light turns off.
3. Lock the pickup sync in position.

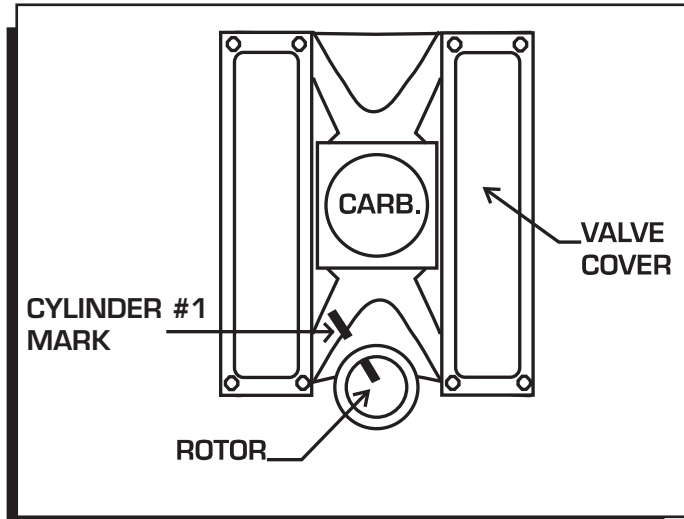


Figure 2 Marking the Rotor Location.

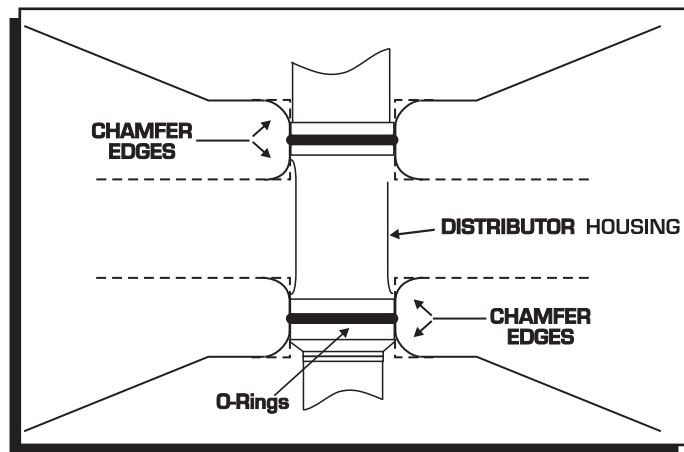


Figure 3 Modified Block for use with O-Rings.

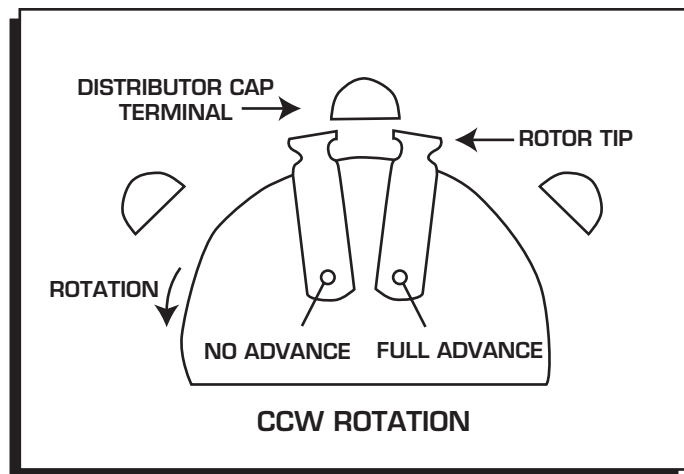


Figure 4 Rotor Phasing.

ROTOR PHASING

Rotor Phasing is defined as the alignment between the rotor tip and the distributor cap terminal when the spark occurs (Figure 4). This position can be very important to your engine's performance. If the alignment is incorrect, the spark will jump to the next closest terminal or another ground resulting in a misfire and loss of power.

Since the timing is going to be controlled electronically, it is important to position the rotor phasing at, or near the total timing (most advanced). Some race applications with timing retards due to nitrous or boost should split the difference of the retard amount when setting the rotor phasing.

ADJUSTMENTS

The PN 84211 Rotor provides 20° of adjustment (at the crank). Adjustments are easy by loosening the rotor screw and using a flatblade screwdriver to clock to rotor top (Figure 5).

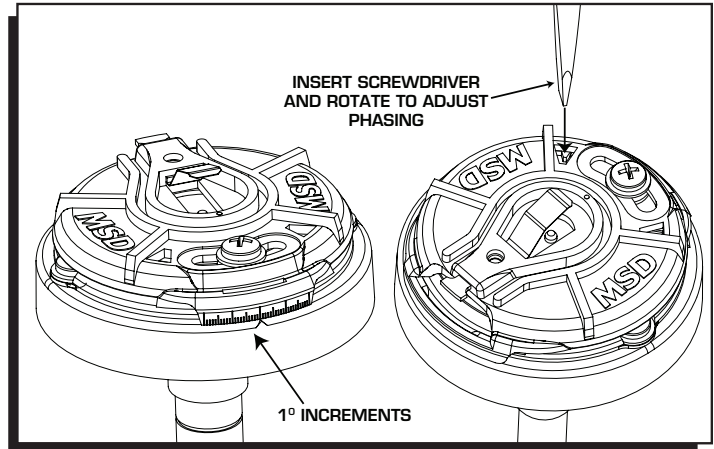


Figure 5 Adjusting the Rotor.

WARNING: High voltage is present on the coil terminals. Do not touch the terminals or coil tower when the engine is cranking or running.

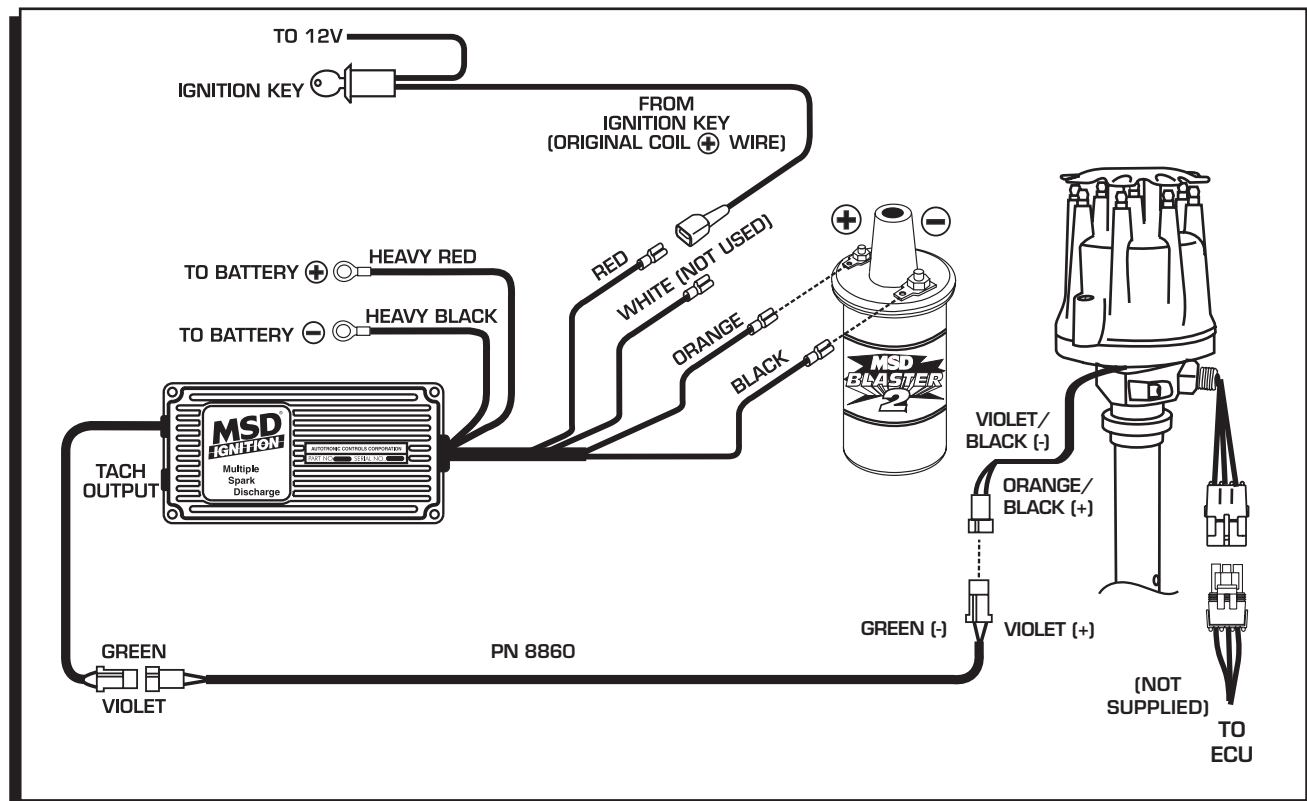


Figure 6 Wiring to an MSD 6-Series Ignition Control.

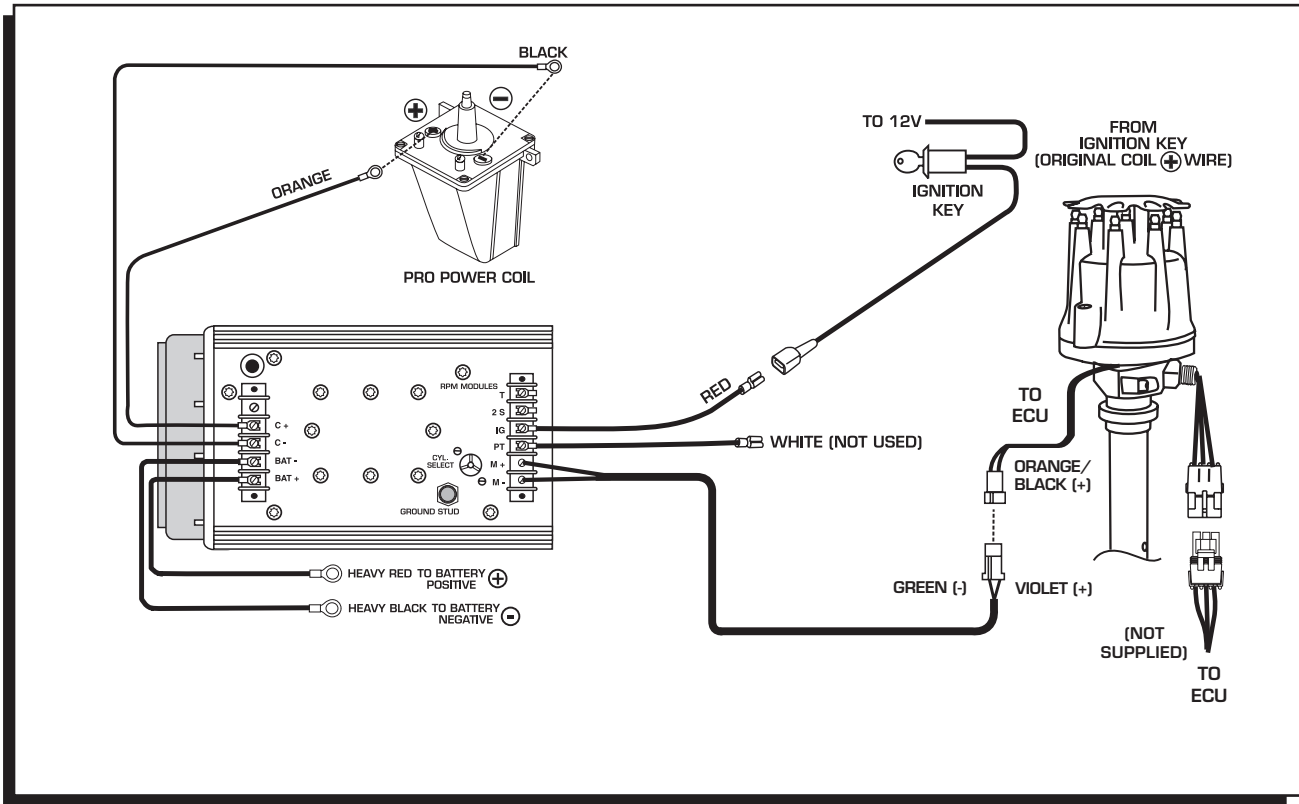


Figure 7 Wiring to an MSD 7-Series Ignition Control.