Holley EFI distributors are designed to plug and play with Holley EFI systems. The design includes dual hall-effect sensors for the crankshaft and camshaft signals. They can be used as just a crank speed input as well as providing a cam sync signal, for sequential fueling operation. They can also be used for crank and cam signals for Coil-On-Plug applications. The precision machined shutter wheel design ensures accurate timing, even at very high engine speeds. They can be used with other EFI systems that support Hall Effect crank and cam sensors.

NOTE: The distributor comes with a hardened steel distributor gear that should be compatible with all applications, other than a billet steel camshaft. If a billet steel camshaft is used, a bronze gear is recommended. (See PN's at end).

DISTRIBUTOR REMOVAL:

1. Crank the engine over until it reads 50 degrees before top dead center on the compression stroke. Take the distributor cap off and make sure that the rotor is pointing to cylinder #1. If not, rotate the crankshaft one full revolution (as the engine is not on the compression stroke).

   If your balancer is not marked at 50 degrees, take a tape measure and measure from the 0 degree mark to the following point (mark does NOT have to be exact):

Balancer Diameter	Distance
6"	2-5/8"
7"	3-1/16"
8"	3-1/2"

2. Disconnect the Battery NEGATIVE (-) cable.

3. Remove spark plug wires and all other wiring/vacuum hoses from distributor.

4. Remove distributor hold-down. Lift the distributor upwards and remove.

DISTRIBUTOR INSTALL:

1. Install the distributor gasket on the base of the distributor. Some adhesive can be installed the distributor side if desired to hold it in place.

2. If the engine has already been broken in/run previously and is about to be fired immediately after the distributor install, coat the gear with motor oil. If the engine is new or will sit a while before it is fired, coat the distributor gear with a moly paste or camshaft break-in lube.

3. Install the distributor. The rotor does not have to be pointed in a specific direction, as the base will be rotated as needed after installation. You will have to make sure the oil pump drive shaft slot is turned in a direction that allows for the distributor shaft to mesh with it. You may have to turn it with a long screw driver to position it. Make sure that the drive shaft meshes and the distributor fully seats.

NOTE: If the engine block or heads have been milled, make sure that the distributor is fully seating and not binding on the oil pump. A quick check is to remove the distributor gasket, and make sure that the distributor still fully seats. If it does not, further investigation is needed. PN 565-104 utilizes a slip-collar. Ensure that it is properly adjusted to allow for proper housing and gear engagement.

4. Next, connect the 10 pin distributor connector to the 10 pin Holley EFI main harness Ignition Adapter connector.

5. Reconnect the battery cable(s).

6. Turn the ignition key to the run (DO NOT CRANK) position. This will power the distributor.

7. There are two LED's on the distributor circuit board. They are used to align the distributor, by indicating when the crank and cam sensors are being triggered. The crank and cam LED's are noted in **Figure 1** below.

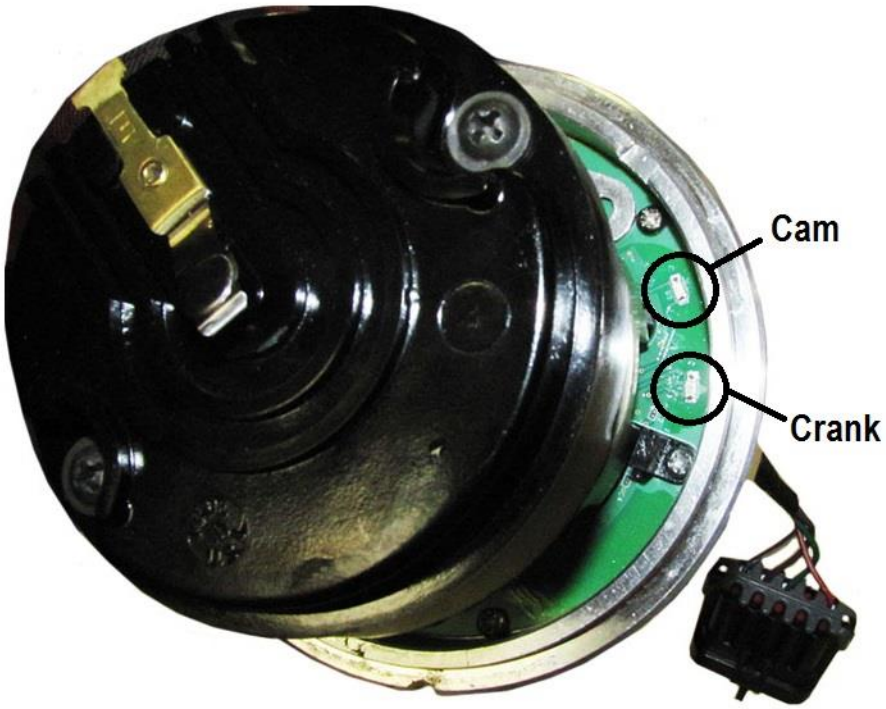


Figure 1

8. For engines that have the rotor rotating clockwise, turn the housing counterclockwise until the Cam LED goes from off (dark) to on (light). For counter-clockwise rotation rotor applications, turn the housing clockwise until the Cam LED goes from off (dark) to on (light). Stop at this point. (See chart below to determine what direction your engine rotates) At this point, the Crank LED should be on. Continue to slowly turn the housing in the same direction until the crank LED goes off, then on, then off, then slowly until it is on. This will position the distributor close to where it needs to be. Install and snug the distributor clamp down at this point.

Engine Family	**Rotor Rotation**
Small/Big Block Chevy	Clockwise
Chrysler Small Block	Clockwise
Ford 351W	Counter-Clockwise
Ford 302	Counter-Clockwise
BB Chrysler Wedge	Counter-Clockwise
Ford FE	Counter-Clockwise
Oldsmobile	Counter-Clockwise
Pontiac	Counter-Clockwise

9. **Figure 2** indicates which post is Cylinder #1. It is distinguished as being above the edge of the block-off plate as noted. The rotor should be aligned closest to this post (with the engine at 50 degrees BTDC on cylinder #1 compression stroke). If it is not, there was an error made in step #8. Repeat if needed. Install the rest of the plug wires in the proper firing order.

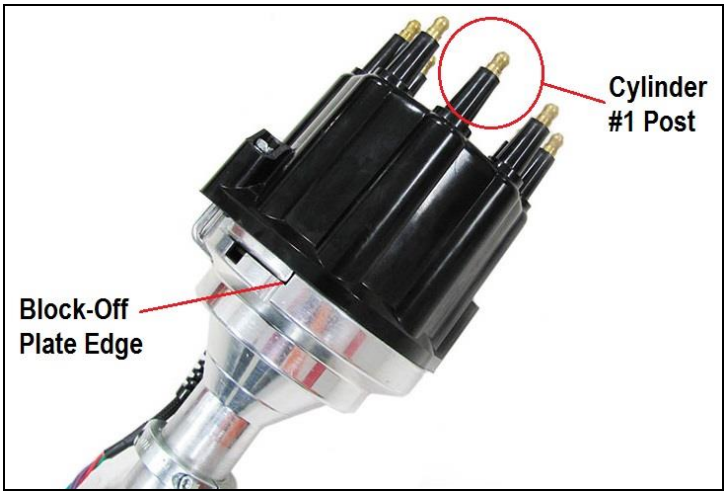


Figure 2

10. At this point the EFI software needs to be configured. Under System Parameters and Ignition Parameters, enter an Ignition Type of "CUSTOM"

Click the "Configure" button.

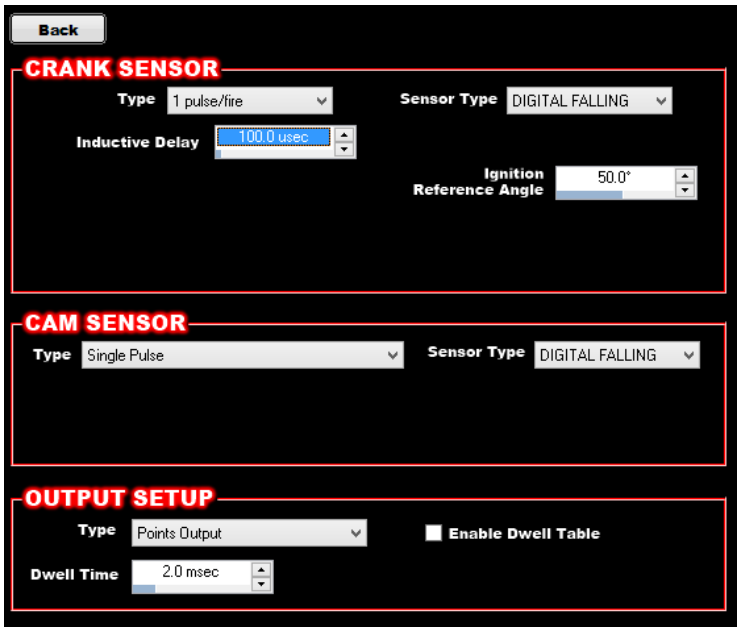
The following are the proper settings for this distributor:

CRANK SENSOR
Type – 1 pulse/fire
Sensor Type – DIGITAL FALLING
Inductive Delay – This parameter is used such that ignition timing does not under or over-advance as engine speed is increased. A starting value of 100 usec can be used. But once the engine is running, the engine should (safely) be run up to 3000-4000 RPM, and timing be checked such that it matches the commanded value. If it is lower than commanded, the Inductive Delay should be increased, if higher, the delay decreased.

CAM SENSOR
Type – Single Pulse
Sensor Type – Digital Falling

OUTPUT SETUP
The following should be used if triggering a MSD Capacitive Discharge type ignition box. If using a Coil On Plug or other type, configure properly.

Type – Points Output
Dwell Time – 2.0 msec



11. Once the software is configured and wiring reconnected, it's time to check the timing. It is advised to disconnect the fuel injectors so that no fuel will be sprayed, crank the engine over, and check the timing with a timing light. To make sure the ECU is getting an RPM signal, look at the "RPM" in the data monitor. Crank the engine over and make sure it shows RPM. Next, check the timing with a timing light, it should be whatever the cranking timing is programmed to in the software (usually 15 degrees). If it not close, turn the distributor until it is. Once it is, reconnect the fuel injectors and start the engine. Once running, check the timing with a timing light and make sure it matches the commanded timing of the ECU. It is helpful to use the "Enable Static Timing Set" feature in the software that can lock the timing to a single value. It can be found in the same drop-down as the TPS Autoset feature. If it does not, rotate the distributor until it does. Once synced, CAREFULLY rev the engine up to 3000-4000 RPM and make sure the timing still matches. If it is advanced, lower the Inductive Delay value by about 20. If it is retarded, raise the Inductive Delay value about 20. Cycle the ignition power after making this change. Once the timing matches at idle and higher RPM, lock the distributor down and you are done.

DISTRIBUTOR PINOUT:

If custom wiring the distributor, use the following pinout:

Connector Location	Channel	Wire Color
A	Crank Signal	Purple/White
B	Cam Signal	Purple
C	Signal Ground	Green
E	Switched +12V	Red

MISCELLANEOUS COMPONENTS:

Bronze Gear for SBC/BBC – MSD PN 8471

Replacement Cap and Rotor – Holley PN 566-100

Coil On/Near Plug Cap – Holley PN 566-101 – This low profile cover eliminates the rotor and distributor cap when using Coil-On/Near Plug ignition systems.

199R10977
Date: 3-4-16