

# MSD<sup>®</sup> IGNITION INSTALLATION INSTRUCTIONS

## MSD Universal Front Drive Distributor PN 8511

### Parts Included:

1 - Distributor Assembly	1 - Universal Mounting Bracket	1 - Wire Retainer
1 - 12-Point 7/16"-20 Bolt	3 - Timing Belts	1 - Coil Wire Retainer
1 - 7/16" Washer	1 - Timing Belt Pulley	2 - Wire Retainer Screws
1 - Jesel Belt Drive Cam Adapter (Chevrolet)	1 - Rotor Phasing Tech Bulletin	

The MSD Universal Front Drive will require fabrication and machining. We have tried to supply you with the measurements and directions to assist you with installing the Drive assembly on your engine, but a competent machine shop is recommended.

You will need to:

- Machine the lower housing to achieve proper cam pulley alignment.
- Modify the mounting bolt location on the supplied Universal bracket.
- Create a cam adapter for correct pulley registration (some applications).

**Note:** To install the MSD Front Drive Distributor you will also need a Distributor Plug. MSD offers two models for Chevrolet style blocks; PN 8513 for cam driven oil pumps and PN 8512 for dry sump oil systems. For other applications a dummy distributor can be used.

**Note:** An MSD Flying Magnet Crank Trigger is required.

## ASSEMBLY

### DRIVE ASSEMBLY

The lower housing of this Universal Drive is made longer than necessary. This added material allows you to machine the housing to achieve the correct cam pulley to distributor pulley alignment for your application (Figure 1).

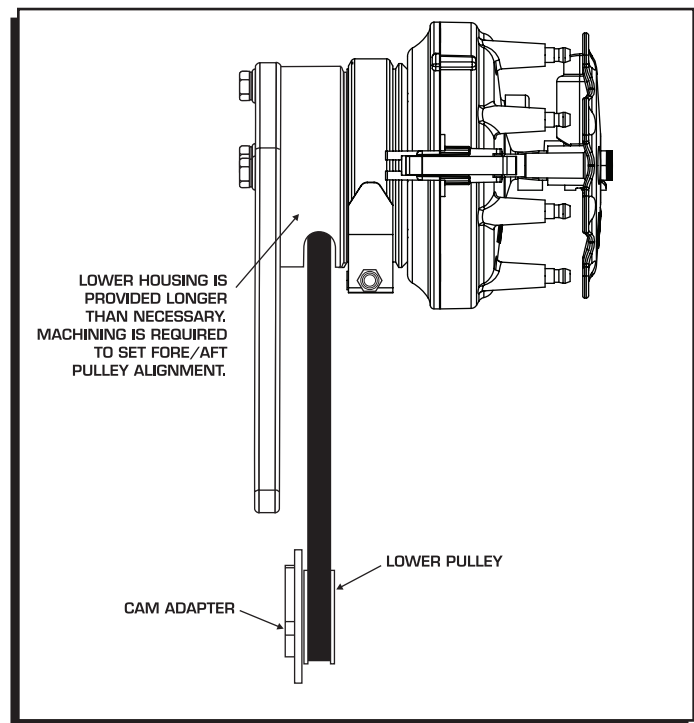


Figure 1 Correct Vertical Alignment.

**BRACKET**

A universal bracket is supplied in this kit. The bolt pattern for the distributor drive assembly is machined into the bracket, however, additional machining is required to mount the bracket to the engine block. Figure 2 shows the pulley-to-pulley center distance that works with the supplied belts.

If the supplied bracket cannot be used with your application, another bracket will have to be fabricated. Figure 2 also shows the distributor drive assembly measurements. A new bracket must be at least 0.375" thick aluminum.

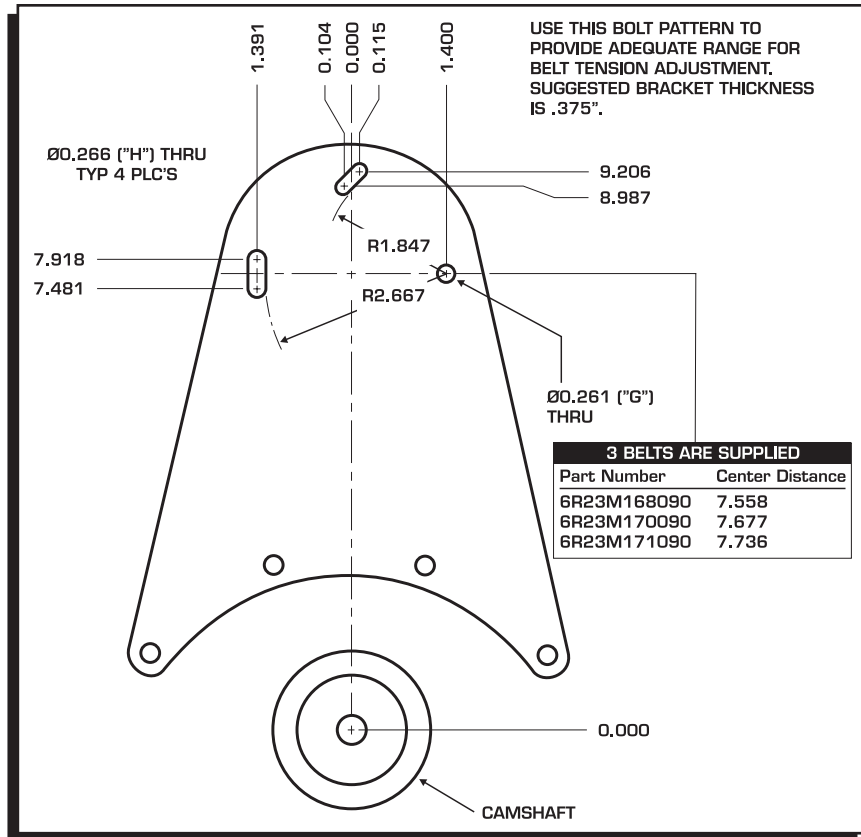


Figure 2 Front Drive Mount Bolt Pattern Dimensions.

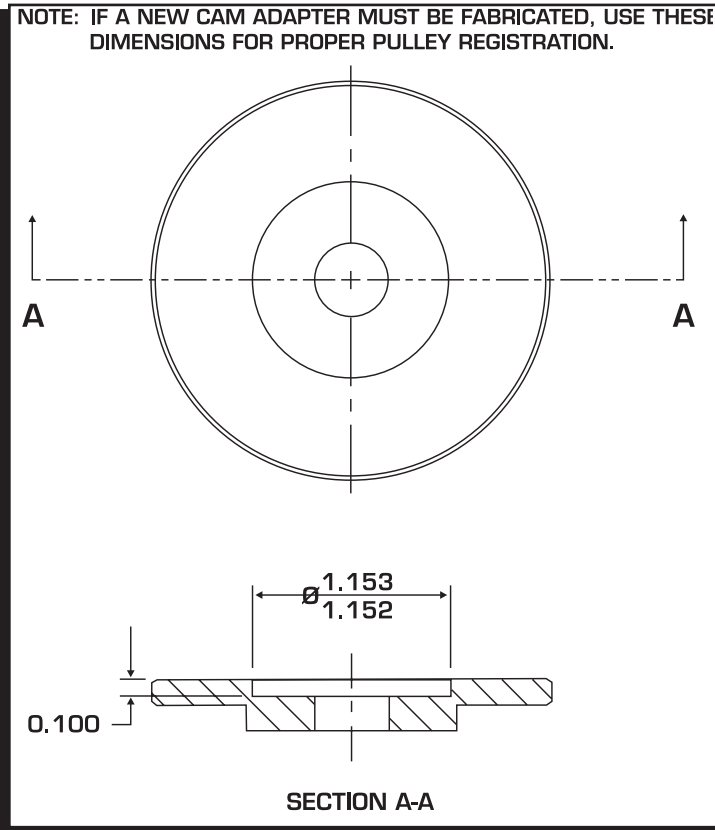


Figure 3 Cam Adapter Dimensions.

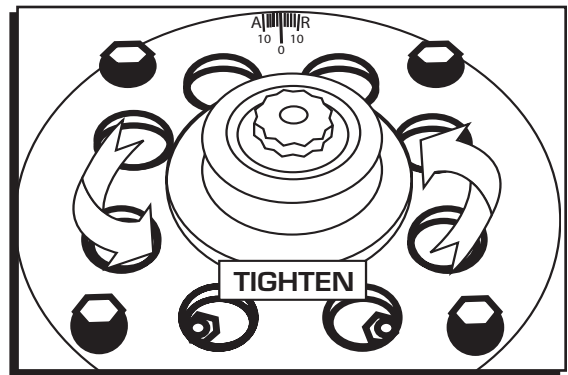
**CAM ADAPTER**

There are a number of camshaft belt drive kits available from different manufacturers. For this reason, you may need to machine an adapter to achieve the proper pulley registration on the camshaft. This kit is supplied with a cam adapter that works on all Chevrolet based engines using a Jesel camshaft belt drive. Figure 3 shows the recess dimensions required for the supplied pulley.

**INSTALLATION**

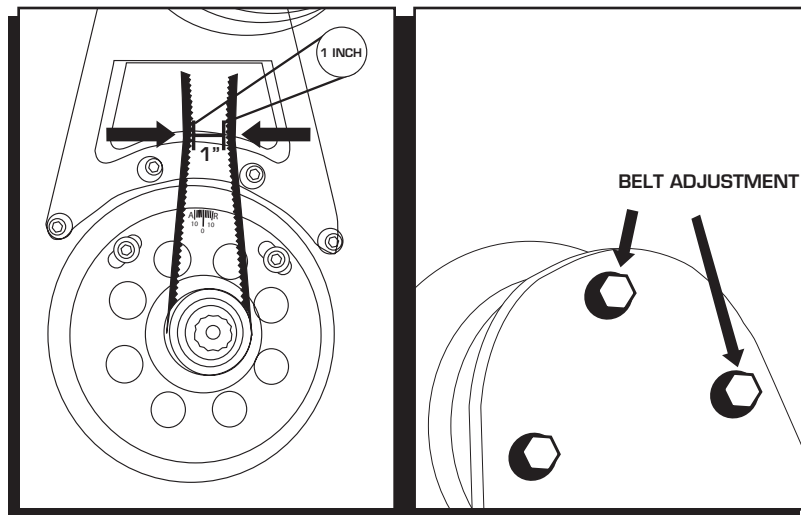
Prior to installation, it is recommended to position the crankshaft with the number one cylinder set to the desired timing on the compression stroke.

1. Install the distributor assembly.
2. Install the camshaft pulley, cam adapter, washer and 12-point bolt (Figure 4).
3. With the engine positioned with the number one cylinder at your desired timing, position the rotor so it is aligned with the number one cap terminal. This is required to get the rotor phasing close enough to run the engine. Rotor phasing should be checked and adjusted with the engine running. (See supplied Tech Bulletin for more information)



**Figure 4 Installing the Timing Belt Pulley.**

4. With the rotor tip aligned, adjust the tension of the distributor drive belt. This is adjusted with the three bolts on the back of the housing (Figure 5). Squeeze the belt in the middle until there is about one inch between the belt with light pressure.

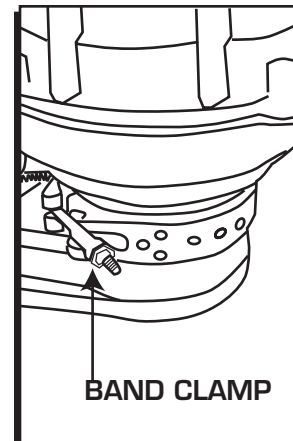


**Figure 5 Adjusting the Belt Tension.**

## **ROTOR PHASING**

Rotor phasing can be adjusted by loosening the band clamp and rotating the head assembly. It is recommended to modify a distributor cap by drilling a hole near the terminal so you can see exactly where the rotor tip is in relation to the cap terminal when the ignition fires. See the supplied Tech Bulletin concerning Rotor Phasing for more details.

<b>Replacement Parts</b>	
Cap	PN 8408
Rotor	PN 8423
Band Clamp	PN 8146



**Figure 6 Band Clamp for Rotor Adjustment.**

### **Service**

In case of malfunction, this MSD component will be repaired free of charge according to the terms of the warranty. When returning MSD components for service, Proof of Purchase must be supplied for warranty verification. After the warranty period has expired, repair service is charged based on a minimum and maximum charge.

**All returns must have a Return Material Authorization (RMA) number** issued to them before being returned. To obtain an RMA number please contact MSD Customer Service at (915) 855-7123 or fax a request to (915) 857-3344. Send the unit prepaid with proof of purchase to the attention of: **MSD Ignition, Customer Service - RMA #, 12120 Esther Lama, Dock 5, El Paso, Texas 79936.**

When returning the unit for repair, leave all wires at the length in which you have them installed. Be sure to include a detailed account of any problems experienced, and what components and accessories are installed on the vehicle.

The repaired unit will be returned as soon as possible after receipt, COD for any charges. (Ground shipping is covered by warranty). All units are returned regular UPS unless otherwise noted. For more information, call the MSD Customer Service Line (915) 855-7123. MSD technicians are available from 7:00 a.m. to 6:00 p.m. Monday - Friday (mountain time).

### **Limited Warranty**

MSD IGNITION warrants MSD Ignition products to be free from defects in material and workmanship under normal use and if properly installed for a period of one year from date of purchase. If found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of MSD Ignition. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall MSD Ignition be liable for special or consequential damages.