

MSD[®] IGNITION INSTALLATION INSTRUCTIONS

MSD Boost Timing Master with Vacuum Advance PN 8962

IMPORTANT: Read the instructions before attempting installation.

Parts Included:

- | | |
|------------------------------------|-------------------------|
| 1 – Boost Timing Master, PN 8962 | 4 – Self Tapping Screws |
| 1 – Dashboard Mounted Control Knob | 1 – 2-Pin Connector |
| 1 – Parts Bag | |

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

Note: The PN 8962 must be used with an MSD Ignition Control.

Note: The PN 8962 will advance the timing approximately 1.5° for every inch of vacuum the unit sees (maximum of 15°). The advance will begin at approximately 4 inches of vacuum and will end at approximately 14 inches of vacuum.

INTRODUCTION

In order to get the most out of your Boost Timing Master, driving tests and fine-tuning are required. You will want to achieve having the highest advance timing for peak horsepower at low rpm when boost pressure is low, and retard the timing during boost just enough to prevent knocking or predetonation.

Note: In setting up the timing curve, a hand held Mighty-Vac or similar tool will allow you to simulate the boost pressure, while you adjust timing at idle.

PROGRAMMING

Cylinder Select: The Boost Timing Master is programmed at the factory for 8-cylinder engines. It can easily be modified for use on 4 and 6-cylinder engines. The number of cylinders is adjusted by cutting the cylinder select loops. Figure 1 shows the Cylinder Programming Loops and how to modify the Unit.

Magnetic Trigger: If you are using a distributor with a magnetic pickup, such as an MSD, to trigger the ignition system the White Wire Loop needs to be cut (Figure 1). If you are using the points or amplifier input of the MSD Ignition Control, this Loop does not need to be cut.

MOUNTING

The Boost Timing Master can be mounted under the hood, but should be away from direct engine heat

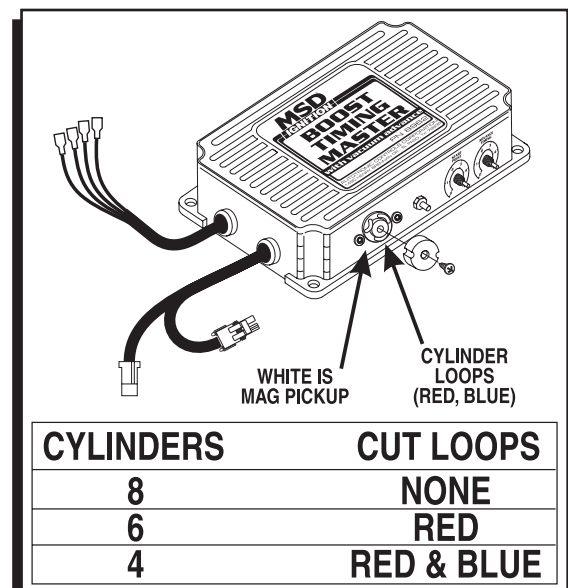


Figure 1 Selecting the Cylinders or Trigger Pickup.

sources. Make sure that the wiring reach their connections. Use the Control as a template to mark the mounting holes. Remove the unit and drill the holes with a 1/8" drill bit. Use the supplied screws to mount the unit.

Control Knob

Find a suitable location on the dashboard that can easily be reached by the driver. Drill a 7/16" hole, install the supplied snap bushing and route the harness wires through. Make sure the harness reaches the connector on the BTM before mounting the control knob. Install the supplied 2-pin Weather-tight connector (Figure 2) on the harness and connect it to the Grey/Black wire on the BTM. The order of the wires inside the connector is not important.

Boost Line

Connect one end of an 1/8" ID vacuum line to the brass spigot on the BTM. Connect the other end of the hose to a ported source such as the intake manifold or below the throttle blades of the carburetor or throttle body. If you already have a boost gauge you can tee into that line.

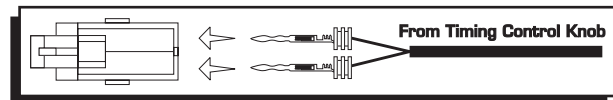


Figure 2 Connecting the Control Knob Harness.

WIRING	
Red:	Connects to switched 12 volts.
Black:	Connects to Ground.
Yellow:	Connects to MSD Ignition's White wire.
White:	Connects to points or amplifier trigger wire on the engine.
Green/Violet 2-Pin Connector:	Connects to the magnetic pickup of the distributor or crank trigger. Green is negative, Violet is positive. Note: When using this connector, the white wire loop must be cut.
Note: The White wire and 2-Pin Magnetic Pickup wires will never be used at the same time!	

ADJUSTING THE BOOST

The PN 8962 allows you to set the amount of ignition retard as well as when the retard begins, both in relation to the amount of boost being produced (Figure 3).

Dash Control Knob: This controls the **slope of the retard**. That is, how much timing is removed per pound of boost. The settings are 0° – 3° of retard per pound of boost with a maximum of 15° of retard.

Start Point: This is where you adjust the **beginning** of the boost retard curve. You can adjust the start point of the slope from 0 – 5 pounds of boost. A typical setting is 2 psi for most users. Figure 3 illustrates this adjustment.

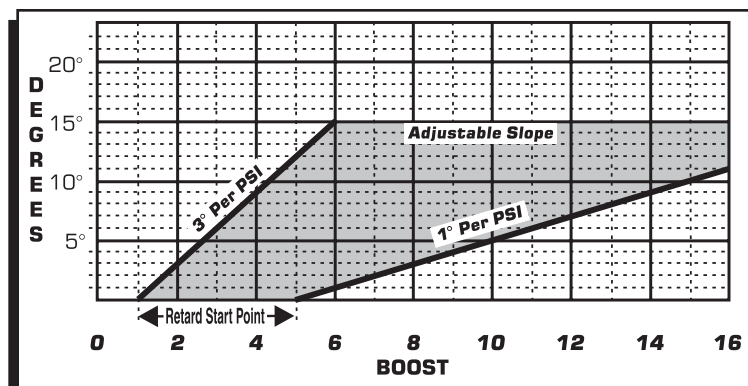


Figure 3 Setting the Timing Adjustments.

Vacuum Advance: This adjustment allows you to advance the ignition timing just like a vacuum advance canister on a distributor except you get to set the total amount of advance. You will have to physically move the distributor to take advantage of this feature. It is a good idea to set the advance timing knob to zero until you have finished wiring to the ignition system and BTM.

In order to get the most out of your Boost Timing Master, testing and tuning is required. To set the adjustment, it is recommended to use a hand held Mighty-Vac or similar tool to simulate a boost signal. By watching the timing with a timing light and simulating the boost signal you will be able to get a good starting point to tune from.

Setting The Vacuum Advance

1. Make sure the advance timing knob is set to zero (full counterclockwise) and disconnect the pressure hose.
2. With a timing light, check your timing at idle. This will be the timing the engine will see at low vacuum (heavy throttle conditions).
3. Shut off the engine, and rotate the distributor to change timing in the advance direction, by the amount of degrees you want to advance at high vacuum (light throttle or idling). You can advance up to 15°.
4. Start the engine and check the timing again with the timing light. Now adjust the advance timing knob clockwise until you electronically return to the same timing you had in step 2.
5. Reconnect the pressure sensing hose, and with the timing light, watch the timing advance. It will now electronically advance proportional to the vacuum in your intake manifold.

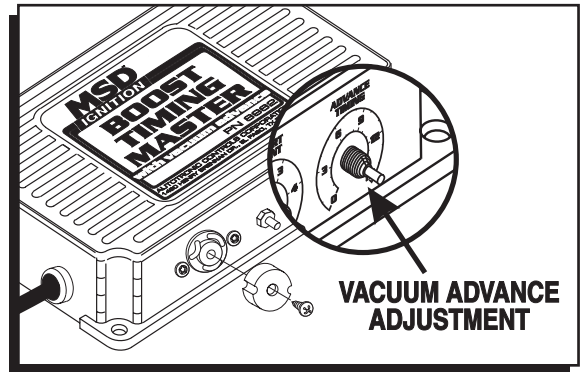
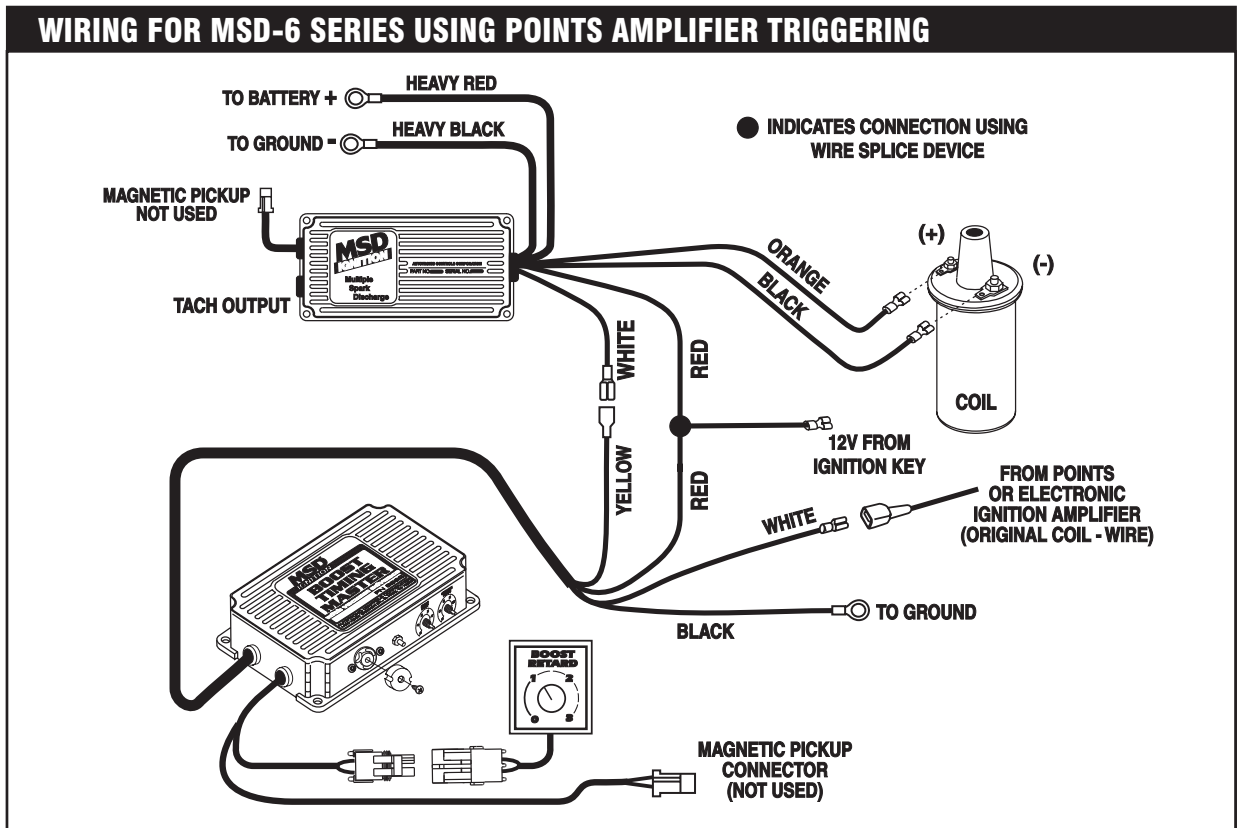
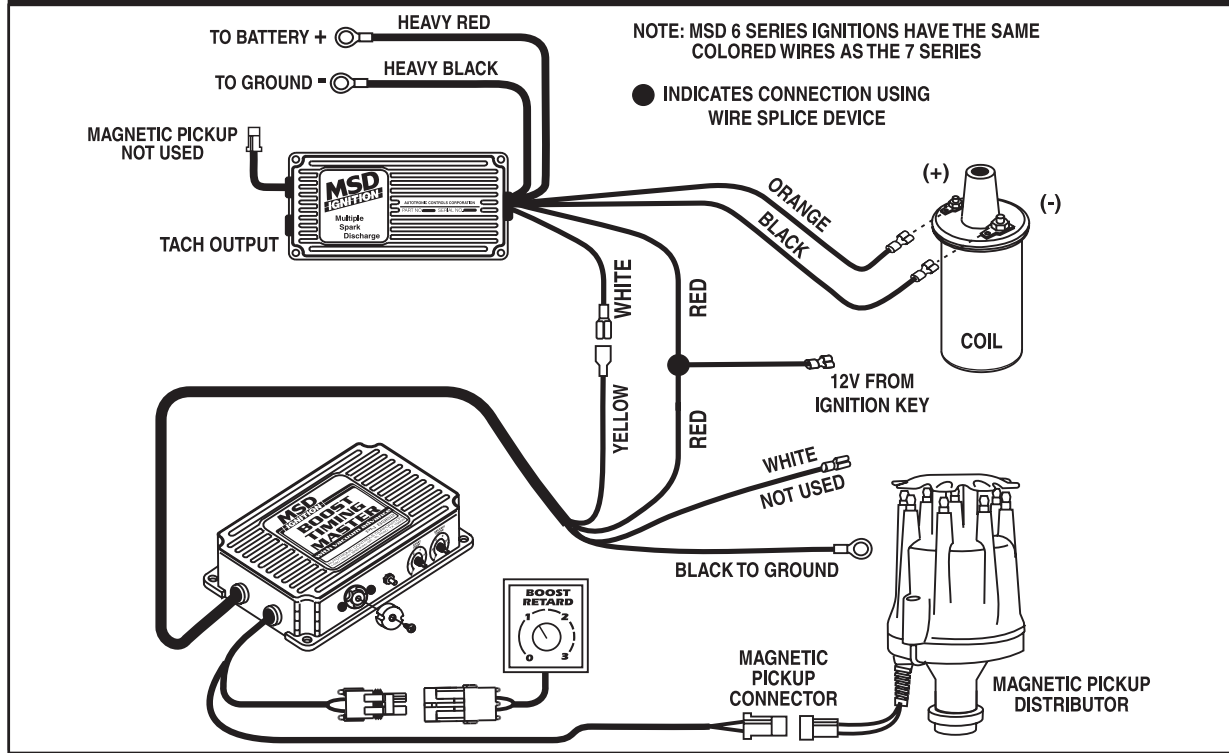


Figure 4 Adjusting the Vacuum Advance.



WIRING FOR MSD-6 SERIES USING MAGNETIC TRIGGERING



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 warranty service, **Proof of Purchase** must be supplied for verification. After the warranty period has expired, repair service is based on a minimum and maximum fee.

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 1 (888) MSD-7859 or visit our website at www.msdisignition.com/rma to automatically obtain a number and shipping information.

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 using Ground shipping methods (ground shipping is covered by warranty). For more information, call MSD Ignition at (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 this product to be free from defects in material and workmanship under its intended normal use*, when properly installed and purchased from an authorized MSD dealer, for a period of one year from the date of the original purchase. This warranty is void for any products purchased through auction websites. If found to be defective as mentioned above, it will be repaired or replaced at the option of MSD Ignition. Any item that is covered under this warranty will be returned free of charge using Ground shipping methods.

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 representation whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall MSD Ignition or its suppliers be liable for special or consequential damages.

*Intended normal use means that this item is being used as was originally intended and for the original application as sold by MSD Ignition. Any modifications to this item or if it is used on an application other than what MSD Ignition markets the product, the warranty will be void. It is the sole responsibility of the customer to determine that this item will work for the application they are intending. MSD Ignition will accept no liability for custom applications.