

MSD MSD-6462

MSD 6462 6-BTM Boost Timing Master Instruction Manual

Model: MSD-6462 | Brand: MSD

PRODUCT OVERVIEW

The MSD 6462 6-BTM (Boost Timing Master) is an advanced ignition control unit designed specifically for engines equipped with turbochargers or superchargers. It combines MSD's powerful Capacitive Discharge (CD) ignition technology with an adjustable boost-dependent timing retard circuit, crucial for preventing engine damaging detonation under boost conditions.

This unit allows precise control over ignition timing, enabling the engine to operate at the threshold of detonation to obtain maximum power and efficiency. It also integrates the Soft Touch Rev Control feature, providing reliable over-rev protection for your engine.

Key features include:

- Multiple spark, capacitive discharge ignition control for enhanced combustion.
- Adjustable boost/timing retard circuit (0° to 3° per pound of boost) via a dash-mounted control knob.
- Built-in Soft Touch Rev Control, adjustable with included RPM modules (3,000, 6,000, 7,000, 8,000 RPM).
- Supplied with heavy-duty rubber shock mounts for secure installation.
- Programmable for 4, 6, or 8-cylinder engines.



Figure 1: The MSD 6462 6-BTM Boost Timing Master unit. This compact, red ignition control box features the MSD logo and model number, indicating its primary function as a multiple spark discharge system with boost control.

COMPONENTS AND SETUP

Before installation, ensure all necessary components are present and accounted for. The 6-BTM system includes the main control unit, wiring harness, RPM modules, and mounting hardware.



Figure 2: Overview of the MSD 6462 6-BTM unit and its complete set of included components. This image displays the main control box, the extensive wiring harness, various connectors, RPM modules, mounting screws, and rubber shock mounts, all essential for installation and operation.

Installation Considerations:

- **Mounting:** Utilize the supplied rubber shock mounts to secure the 6-BTM unit in a location protected from excessive heat, moisture, and direct engine vibration.
- **Wiring:** Carefully follow the wiring diagram provided in the full installation guide (not included here) for proper connection to the vehicle's ignition system, power source, and ground. Ensure all connections are secure and insulated.
- **Compatibility:** This unit is not compatible with distributor-less ignition systems. For certain factory and aftermarket tachometers or fuel injection systems, an MSD Tach/EFI Adapter may be required for correct operation.



Figure 3: The MSD 6462 6-BTM unit with its integrated wiring harness. This view highlights the various color-coded wires extending from the control box, which are used for connecting to the vehicle's electrical and ignition systems.

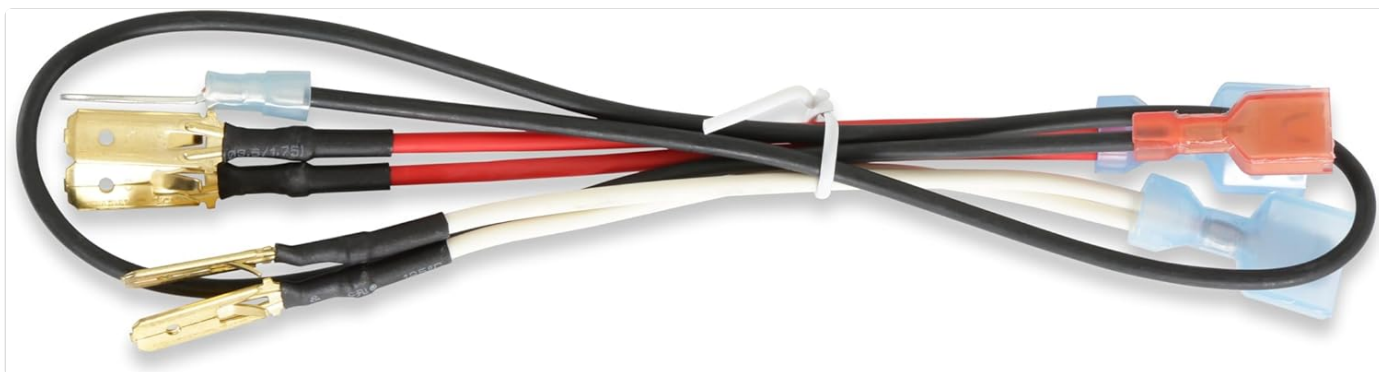


Figure 4: Close-up of various wiring connectors and terminals supplied with the MSD 6462 6-BTM. These components are used to ensure secure and proper electrical connections during installation.





Figure 5: The rubber shock mounts and additional terminals included with the MSD 6462 6-BTM. The shock mounts are designed to absorb vibrations, protecting the unit, while the terminals facilitate various electrical connections.

OPERATING INSTRUCTIONS

Boost Timing Retard Adjustment:

The 6-BTM features a dash-mounted control knob that allows you to adjust the amount of timing retard in relation to boost pressure. This knob typically ranges from 0° per pound of boost to 3° per pound. Turning the knob clockwise generally increases the amount of timing retard per pound of boost.

- **Adjustment Range:** 0° to 3° of timing retard per pound of boost.
- **Purpose:** To prevent detonation in forced induction applications by pulling timing as boost pressure increases.
- **Recommendation:** Adjust in small increments and monitor engine performance and knock sensors (if available) to find the optimal setting for your specific engine and fuel combination.

Soft Touch Rev Control:

The integrated Soft Touch Rev Control protects your engine from over-revving by cutting spark to individual cylinders when the engine RPM exceeds the set limit. This provides a smooth and consistent rev limit.

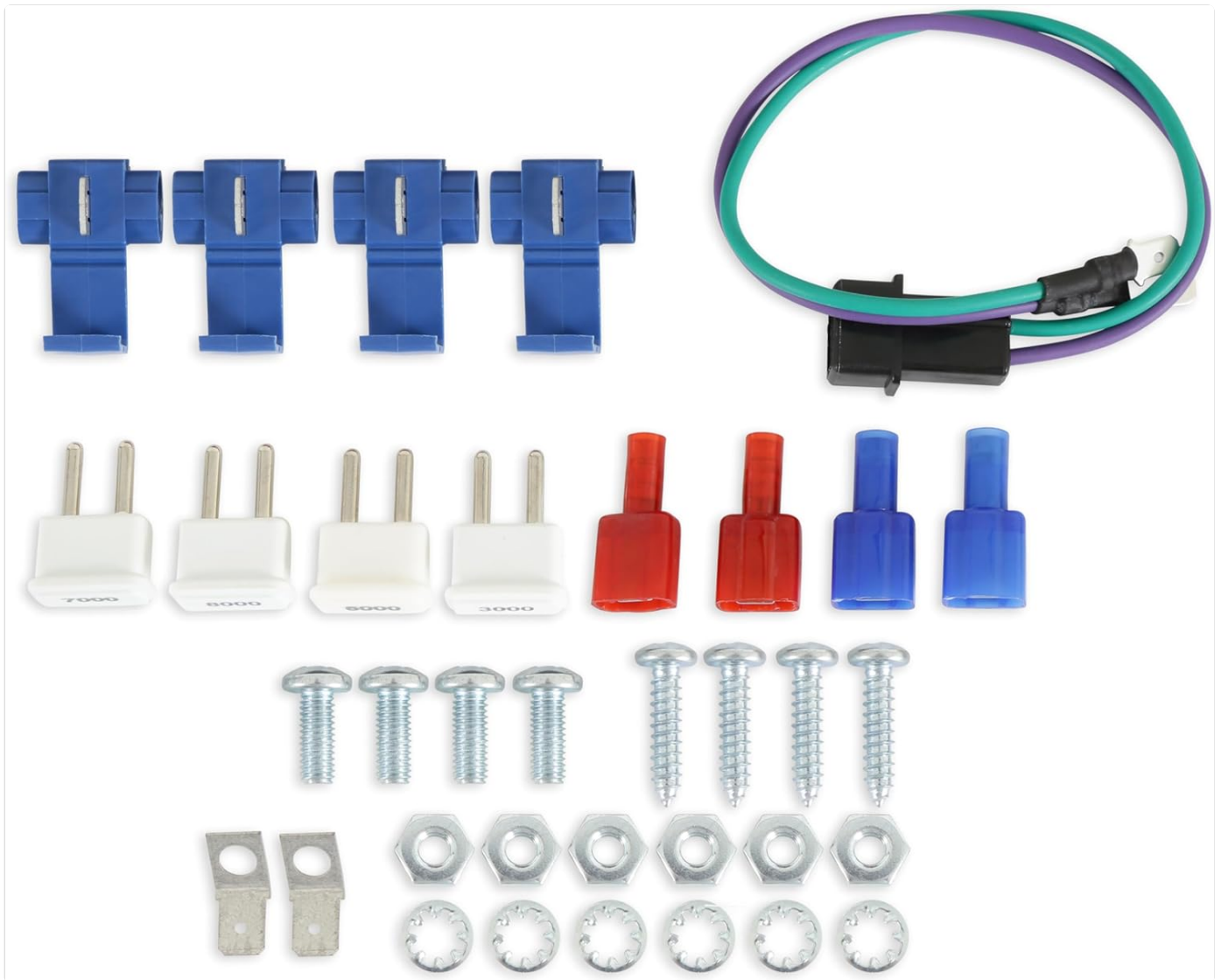


Figure 6: A selection of RPM modules included with the MSD 6462 6-BTM. These modules are inserted into the unit to set the desired engine rev limit, offering options such as 3,000, 6,000, 7,000, and 8,000 RPM.

- **Setting RPM Limit:** The rev limit is set by inserting one of the supplied RPM modules into the designated port on the 6-BTM unit. Modules for 3,000, 6,000, 7,000, and 8,000 RPM are typically included.
- **Module Insertion:** Ensure the correct RPM module is fully and properly seated. Refer to the full manual for specific module locations if not clearly marked.

MAINTENANCE

The MSD 6462 6-BTM is designed for durability and requires minimal maintenance. Regular inspection of the unit and its connections is recommended.

- **Connections:** Periodically check all wiring connections to ensure they remain tight and free from corrosion.
- **Unit Condition:** Inspect the unit for any signs of physical damage, excessive heat, or moisture ingress.
- **Cleaning:** Keep the unit clean and free of dirt, dust, and debris. Use a soft, dry cloth for cleaning. Do not use harsh chemicals or abrasive cleaners.

TROUBLESHOOTING

If you experience issues with your MSD 6462 6-BTM, consider the following basic troubleshooting steps:

- **No Spark/Engine Not Starting:**
 - Verify all power and ground connections are secure and receiving proper voltage.
 - Check the integrity of the wiring harness for any cuts, pinches, or loose terminals.
 - Ensure the ignition switch is functioning correctly.
- **Incorrect Timing Retard:**
 - Confirm the dash-mounted control knob is set to the desired position.
 - Check the boost pressure sensor connection and functionality.
- **Rev Limit Issues:**
 - Ensure the correct RPM module is fully and properly seated in the unit.
 - Verify the module itself is not damaged.
- **General Malfunction:**
 - Inspect the unit for any visible damage or signs of overheating.
 - If issues persist after basic checks, it is recommended to consult a qualified automotive technician or contact MSD technical support.

SPECIFICATIONS

Feature	Specification
Operating Voltage	+10-18 VDC Negative Ground
Current Requirements	5 Amps @ 5,000 RPM, 10 Amps @ 10,000 RPM
RPM Range	15,000 RPM with 14.4 Volts
Spark Duration	20° Crankshaft Rotation
Energy Output Max	105-115 mJ Per Spark
Voltage Output Max	Primary: 460-480 Volts, Secondary: 45,000 Volts (with Blaster Coil)
Weight	Approximately 3 lbs (unit only), 0.7 Pounds (item weight from product data)

Feature	Specification
Dimensions (L x W x H)	8"L x 4"W x 2.25"H (unit only), 10.9 x 9.9 x 2.8 inches (package)
Material	Plastic
Model Name	MSD 6462 6-BTM Ignition Control Box
Part Number	MSD-6462

WARRANTY AND SUPPORT

Warranty Information:

The MSD 6462 6-BTM Ignition Control Box comes with a manufacturer's warranty. For detailed information regarding warranty terms, coverage, and claims procedures, please refer to the official warranty documentation included with your product or visit the official MSD Ignition website.

CALIFORNIA WARNING: Cancer and Reproductive Harm -www.P65Warnings.ca.gov

Technical Support:

For technical assistance, installation questions, or troubleshooting beyond the scope of this manual, please contact MSD Ignition's customer support. You can typically find contact information, including phone numbers and online support resources, on the official MSD Ignition website.

Manufacturer: MSD Ignition