

Replacement Plus Series Ignition Coil

Thank you for your purchase of a **Replacement Plus** series coil. This quality, American made coil features a heavy gauge steel housing coated with a durable enamel finish. All electrical terminals are brass, for superior electrical conductivity and corrosion resistance, and an extended tower design is employed to prevent flashover. This coil has been carefully selected to provide optimum performance and trouble-free service when used with the original equipment ignition, or one of the M&H Electric Breakerless SE ignition systems.

Description

This coil is designed for use with breaker-point type ignitions and aftermarket electronic ignition conversions kits. It is a compatible replacement for original equipment coils having a primary resistance in the range of 1.2 to 1.8 ohms.

Installation

Before removing the old coil, make a quick sketch of which wires are connected to the (+) and (-) terminals of the coil. Install the **Replacement Plus** coil and reattach the wires according to your sketch, using the new hardware included in this kit.

If the coil is to be moved from the factory location, it may be mounted in any position, but should be kept at least 12" away from the exhaust manifold to prevent unnecessary heat stress.

General Info

This information is not required for installation of the product. It is provided to assist in troubleshooting an existing problem, or to aid in completion of a vehicle restoration.

Ballast Resistor - The coil must be used in conjunction with a ballast resistor. The ballast prevents the coil from overheating and protects the ignition by limiting the amount of current that flows through the system. The ballast takes the form of either resistance wire that is part of the vehicle's wiring harness, or a small, white ceramic block-shaped resistor, usually mounted on the firewall or near the coil. If you are not having a problem with the coil overheating, rapid burning of breaker points, or early failure of ignition modules, then the ballast is in place and functioning correctly.

To determine if the ballast is present, disconnect the wire from the distributor that is attached to the coil (-) terminal. Connect a test light between ground and the coil (+) terminal. Turn the ignition key to the RUN position. The test light will be at full brightness. Momentarily ground the coil (-) terminal. If the light dims to approximately half brightness, the ballast is present. If it dims only very slightly or not at all, the ballast probably has been removed or altered.

This test can also be performed with a voltmeter. The voltage should swing between full battery voltage, and *roughly* half of battery voltage. Do not try to check voltage with the engine running, as results can vary widely.

Ballast Bypass – During cranking, the starter may pull the battery voltage down by several volts. To compensate and allow the coil to develop sufficient voltage to fire the plugs, the ballast resistor is bypassed when the key is in the start position. This is typically accomplished with a wire that connects between a terminal on the starter solenoid and coil (+), but other methods may be employed.

This function may be checked attaching a test light between coil (+) and ground, and grounding the (-) terminal of the coil. With the key in the RUN position, the test light should be at half brightness. When the key is turned to the START position, the light should become brighter indicating the coil is receiving full battery voltage (i.e., ballast is being bypassed).

Coil Testing – Coils fail with age primarily due to loss of insulation resistance. This may result in voltage breakdown between windings (internal leakage), or between the high voltage tower and the primary terminals (external leakage). If the leakage is excessive, the coil will not develop sufficient voltage to jump the spark plug gaps under all operating conditions.

Since this breakdown usually occurs at several thousand volts, a battery operated multimeter cannot spot this type of problem. The recommended procedure is to attach a test plug (KD tools part# 2757 or equivalent) to the hood hinge, connect the plug to the coil with a spark plug wire, and observe the test plug while cranking the engine. This will force the coil to generate a known acceptable voltage.

Caution! High voltage can be *lethal*. Under no circumstances should you be touching any of the components while performing this test. Make sure any spilled fuel has been cleaned up and any accumulated vapors have been allowed to dissipate before beginning test.

The coil may be tested for open or shorted primary or secondary windings using a multimeter with an accurate low resistance range (≤ 2 ohms). Measurement of the primary resistance is made between the (+) and (-) terminals. Secondary resistance is measured between the (-) terminal and the high-voltage tower. Remember to zero the meter or subtract the lead resistance from the final reading. Bad coils will usually have readings that have changed significantly (e.g., more than 30%). Nominal specs for this **Replacement Plus** series coil are listed below.

Primary Resistance: 1.3 ohms
Primary Inductance: 7.5 mH
Turns Ratio: 60:1
Body Diameter: 2.125"

Secondary Resistance: 6800 ohms
Secondary Inductance: 26 H
Available Voltage: 29Kv (loaded)* / 35Kv (unloaded)
Finish: Painted, Gloss Black

* Measured in accordance with Society of Automotive Engineers recommended practice - Ignition System Measurements Procedure SAE J973a (50pF load).

ONE YEAR LIMITED WARRANTY

M&H Electric Fabricators, Inc. warrants the enclosed product to be free of defects in materials and workmanship for a period of one (1) year from the date of original purchase by the end user.

M&H Electric Fabricators, Inc. will repair or replace the enclosed product in the event of a manufacturing defect as follows:

Parts: Repair or replacement in exchange for defective parts returned to our facility for one (1) year after the date of original purchase.

Labor: Repair or replacement of defective product returned to our facility for one (1) year after the date of original purchase.

This warranty does not cover postage, freight or delivery fees for sending the product to and from our service facility.

Warranty service can be obtained during the warranty period by bringing or shipping the product to:



13537 Alondra Blvd. Santa Fe Springs, CA 90670

A purchase receipt or other proof of date of original end user purchase will be required before warranty service can be rendered. This warranty covers normal consumer use and does not cover damage which occurs in shipment or failure which results from alteration, accident, misuse, abuse, neglect, installation or improper maintenance. Under any circumstances, the liability of the manufacturer shall be limited to the original cost of the product(s) paid by the end user and the manufacturer shall not be liable for any consequential or incidental damages which occur as a result of the use of any of our product(s). This limit on liability may vary in your state and you may have additional rights and/ or remedies depending on the state in which you live.



The enclosed product is warranted to fit and operate properly in the specific application for which it is intended.

If the product is tampered with in any way, all warranties are void.

If you experience any difficulties with the installation or the performance of any of our products, do not attempt any modifications without first contacting our technical support department at (562) 926-9562.

Specifications and design subject to possible modification without notice, due to improvements.