

## COMMON QUESTIONS AND ANSWERS

Q. The engine will not start or runs rough. What is the problem?

A. Perform Power and Ground Checks. Check all connections to insure that they are tight, and in the proper location. Check all grounds; if a distributor ground wire was removed make sure that it was reattached properly. Make sure that the red Ignitor II wire is supplied with a full 12 volts. The Ignitor II is designed to sense high current levels, and shut off before damage occurs. Check all wires for shorts, correct polarity and that the ignition coil's primary resistance level is acceptable.

Q. The vehicle will start, but then die. After waiting it will start again. What is wrong?

A. Perform Power and Ground Checks. The Ignitor II may have a "Low Voltage Problem." If the voltage supplied to the red Ignitor II wire is insufficient, the system may run for a period of time, and then shut down as the voltage drops due to engine heat. The period may vary from minutes to hours depending on available voltage and wiring condition. To remedy this condition refer to steps 2-4 of the wiring instructions.

Q. How do I check for a "Low Voltage Problem" or determine if I am getting adequate voltage?

A. Perform Power and Ground Checks. Also, to quickly test for a "Low Voltage Problem" or for adequate voltage, remove the Ignitor II red wire from the coil positive terminal. Attach a jumper wire from the battery positive terminal to the Ignitor II red wire. Try to start the vehicle. If the vehicle starts with this test refer to steps 2-4 of the wiring instructions for further information.

Q. How do I check my coil for primary resistance?

A. Remove all wires from the coil. Set the ohmmeter to the lowest scale. Attach one lead of the meter to the positive coil terminal. Attach the other lead to the negative coil terminal.

Q. May I modify the length of the wires?

A. Yes, you may cut the wires to any length your application requires. You may also add lengths of wire if needed (20-gauge). Make sure that all wire splices are clean and the connections are tight.

Q. Will the Ignitor II work with aftermarket capacitive discharge boxes?

A. Yes, the Ignitor II is compatible with most CD boxes in the same respect as points. Use the CD box wiring instructions for point systems and treat the Ignitor II black wire as a point wire. The Ignitor II red wire should be attached to the 12-volt power source.

Q. Will the electronic shift assist in an OMC boat work with the Ignitor II?

A. The Ignitor II will work with all OMC stern-drive applications, when our "diode fix" is used. If you've purchased a kit that didn't include the "diode fix" diagram, call our tech line.

Q. How can I receive additional help?

A. Check our web site for current trouble shooting tips and up to date technical information. Log on to [www.pertronix.com](http://www.pertronix.com). You may also contact our tech line at (909-547-9058)

# Ignitor® II

## ELECTRONIC IGNITION

### 12-VOLT NEGATIVE GROUND INSTRUCTIONS

**FOR PART NUMBERS: 9HO142, 9HO-161A, 91483A, 91484A, 91485A**

#### GENERAL INFORMATION

1. IMPORTANT: Read all instructions before starting installation.
2. DO NOT USE WITH SOLID CORE SPARK PLUG WIRES.
3. The Ignitor II ignition can be used in conjunction with most ignition coils rated at 0.45 ohms or greater.
4. All external resistors must be removed to achieve optimum performance from the Ignitor II ignition system.
5. The Ignitor II is compatible as a trigger for most electronic boxes.

#### DISTRIBUTOR DISASSEMBLY

1. PRIOR TO INSTALLATION TURN IGNITION SWITCH OFF OR DISCONNECT THE BATTERY
2. Remove distributor cap, rotor and dust cover (if equipped) from distributor. Do not disconnect the spark plug wires from cap. Examine parts for excessive wear. Replace as needed
3. Remove the snap ring that retains the vacuum advance arm.
4. Remove the screws that retain the vacuum advance cannister to the distributor housing and remove the vacuum advance cannister.

#### IGNITOR II INSTALLATION

1. **Point style distributors only:**
  - The Ignitor II does not require any modifications to distributor. Therefore retain all parts and hardware for backup.
  - Disconnect point wire from negative (-) terminal of the coil.
  - Vacuum advance distributors only: Remove the snap ring that retains the vacuum advance arm.
  - Install the new Ignitor II plate assembly into distributor. Fasten the ground wire and plate assembly into place using the original screws. **Note: Ground wire is not included on Non vacuum advance distributors.**
  - Vacuum advance distributors only: Install the vacuum advance cannister. Make sure to place the vacuum advance arm over the pin on the Ignitor II plate and secure it with the snap ring that was removed. **Tip: For easier vacuum advance installation remove Ignitor II module from the new plate assembly.**
  - Insert wires and grommet into the slot/hole on the distributor housing. Remove the excess wire from inside the distributor housing by gently pulling the wire through the grommet. Make sure wires do not interfere with any moving part.
  - Go to magnet sleeve installation.

#### LIMITED WARRANTY

Pertronix, Inc. Warrants to the original Purchaser of its solid-state ignition system (product) that the Ignitor, magnet assembly and wiring (components) shall be free from defects in material and workmanship for a period of (30) months from the date of purchase.

If within the period of the foregoing warranty Pertronix finds, after inspection, that the product or any component thereof is defective, Pertronix will, at its option, repair such products or component or replace them with identical or similar parts PROVIDED that within such period Purchaser:

1. Promptly Notifies PerTronix, in writing, of such defects.
2. Delivers the defective products product or component to Pertronix (ATTN: Warranty) with proof of purchase date; and
3. Has installed and used the product in a normal and Proper manner, consistent with Pertronix printed instructions.

THE FORGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING AND IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PURPOSE.

THE FURNISHING OF A REPAIR OR REPLACEMENT COMPONENTS SHALL CONSTITUTE THE SOLE REMEDY OF PURCHASER AND THE SOLE LIABILITY OF PerTronix WHETHER ON WARRANTY, CONTRACT OR FOR NEGLIGENCE, AND IN NO EVENT WILL PerTronix BE LIABLE FOR MONEY DAMAGES WHETHER DIRECT OR CONSEQUENTIAL.



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## 2. Electronic style distributors only:

- Disconnect the red and brown wires from the positive (+) terminal and the negative (-) terminal of the coil.
- Vacuum advance distributors only: Remove the snap ring that retains the vacuum advance arm.
- Install the new Ignitor II plate assembly into distributor. Fasten the ground wire and plate assembly into place using the original screws. **Note: Ground wire is not included on Non vacuum advance distributors.**
- Vacuum advance distributors only: Install the vacuum advance cannister. Make sure to place the vacuum advance arm over the pin on the Ignitor II plate and secure it with the snap ring that was removed. **Tip: For easier vacuum advance installation remove Ignitor II module from the new plate assembly.**
- Insert wires and grommet into the slot/hole on the distributor housing. Remove the excess wire from inside the distributor housing by gently pulling the wire through the grommet. Make sure wires do not interfere with any moving part.
- Go to magnet sleeve installation.

### MAGNET SLEEVE INSTALLATION

1. There are two types of magnet sleeves. **Note: Some magnet sleeves have green tape, do not remove it.**
  - Figure 1, Install magnet sleeve over distributor shaft, onto point cam or reluctor. Rotate sleeve until a slight locating position is felt before applying pressure. With magnet sleeve lined up on point cam or reluctor, press down firmly insuring sleeve is fully seated.
  - Figure 2, Install magnet sleeve over distributor shaft, press rotor down into the magnet sleeve and onto distributor shaft. NOTE: Rotor is indexed to the sleeve by the locating ears, make sure rotor is completely seated on distributor shaft.

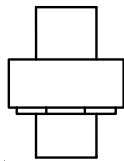


Figure 1

9HO-142, 9HO-161A

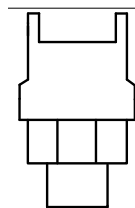
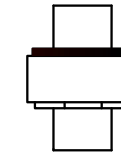


Figure 2

91483A, 91484A, 91485A

2. 9HO-142 kit, Install plastic spacer above magnet sleeve. (See Figure 4).
3. Install the dust cover over the magnet sleeve, If equipped.
4. Install the rotor and make sure it is fully seated. Note: **91483A, 91484A, 91485A**, Turn the magnet sleeve so that the rotor can engage with the shaft and the sleeve at the same time.
5. Install the distributor cap. Make sure all spark plug wires are securely attached.
6. See Wiring Instructions.



← Spacer

Figure 4

9HO-142

### WIRING INSTRUCTIONS

1. The Ignitor II ignition can be used in conjunction with most ignition coils rated at 0.45 ohms or greater. For optimum performance purchase and install the Flamethrower II high performance coil.
2. Attach the black Ignitor II wire to the negative coil terminal. Attach the red Ignitor II wire to the positive coil terminal. (See Figure 3)

A. Recommended Installation: Many vehicles came equipped with ballast resistor or resistance wire. To achieve optimum performance from the Ignitor II ignition system, we recommend removal of these components.

- To remove a ballast resistor, (normally white ceramic blocks 3 to 4 inches long), disconnect all wires on both ends of the ballast resistor. Remove the resistor from the vehicle and splice the disconnected wires together at a single point.
- To remove a resistance wire, trace the coil power wire, which was previously connected to the positive coil terminal, back to the fuse block. Bypass this wire with a 12-gauge copper stranded wire.

B. Alternative Installation: The Ignitor II can also be installed in applications retaining the ballast resistor or resistance wire.

- Attach the Ignitor II black wire to the negative coil terminal. Attach the Ignitor II red wire to the ignition side of resistance, or any 12 volt ignition power source.

3. Check to insure that the polarity is correct, and that all connections are tight.
4. Re-connect the battery.
5. Perform the Power and Ground tests. Refer to the Power and Ground test procedure.
6. Start the engine and allow it to reach normal operating temperature. Check ignition timing, and adjust to the desired setting.

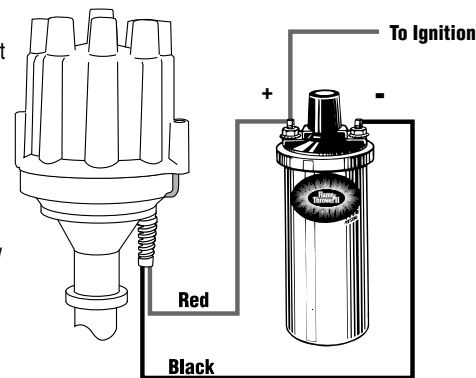


FIGURE 3

(WITHOUT EXTERNAL RESISTOR)

### POWER & GROUND TESTS

It is imperative that the power and grounds be checked as part of the installation procedure. After installing the Ignitor module and the distributor and with the distributor in the engine, use a digital multi-meter to measure the resistance from the aluminum plate holding the module to battery (-), the net resistance must be less than 0.2 ohms. (Set meter to lowest ohms setting). The net resistance is the meter reading minus the resistance of the meter leads. If the net resistance is greater than 0.2 ohms, the source of the faulty ground must be found and fixed. Usually the source of the bad ground is easily found by holding one probe on an original location and moving the second probe toward the static probe. Where the resistance drops identifies the source.

Maximum resistance from Ignitor plate to battery negative terminal.	0.2 ohms
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### EXAMPLE:

Resistance from Ignitor plate to battery negative (-) terminal.	0.4 ohms
Resistance of meter leads	0.2 ohms
After subtracting meter lead resistance, your net resistance is:	0.2 ohms

### VOLTAGE TEST

1. (Do not disconnect wires from Ignition coil). Place ignition switch in the "off" position.
2. Connect a jumper wire from negative (-) terminal of the coil to a good engine ground.
3. Connect the voltmeter red lead to the positive (+) terminal of the coil and the black lead to a good engine ground.
4. Turn the ignition switch to the "on" position and note voltage reading on the voltmeter. Quickly read the voltage and turn ignition "OFF". Leaving ignition "ON" for an extended period could result in permanent damage to the Ignitor.
5. SEE CHART BELOW FOR SPECIFICATIONS.

**Note: Low voltage can be caused by poor connections, poor contacts in the ignition switch, ballast resistor, and or a resistance wire in the wiring harness (Factory Installed).**

	Minimum	Maximum
Ignition Switch "ON"	8.0V	N/A
Cranking	8.0V	N/A
Engine Running	N/A	16.0V