

## 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)

**FOR PART NUMBERS:  
9ML-162, 9ML-186A & 9ML-182**

### 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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# Ignitor® II

## ELECTRONIC IGNITION

### 12-VOLT NEGATIVE GROUND INSTRUCTIONS

#### 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.

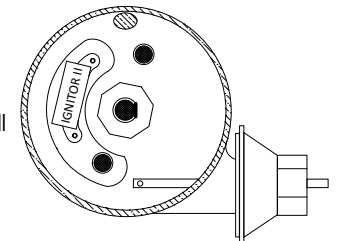
#### 9ML-162 & 9ML-186A DISTRIBUTOR DISASSEMBLY

1. PRIOR TO INSTALLATION TURN IGNITION SWITCH OFF OR DISCONNECT THE BATTERY
2. Remove the distributor cap, and rotor. Do not disconnect spark plug wires. Examine cap and rotor for wear or damage. Replace as needed.
3. Disconnect the point wire from the negative (-) terminal of the coil.
4. Remove the point wire, points, and condenser from the distributor.
5. The Ignitor does not require any modification to the distributor. Therefore the point, condenser and hardware can be used as backup.
6. Clean all dirt and excess oil from the breaker plate and point cam.

#### IGNITOR II INSTALLATION

1. Remove the Ignitor II module from the adapter plate, place the Ignitor adapter plate over the point pivot, align adapter plate to screw hole on breaker plate. See figure 1. Use the provided screw to hold the plate in place.
2. Install the Ignitor II module onto the adapter plate. Use the provided nuts and washers to fasten the module in place. Do not overtighten.
3. Place the magnet sleeve over the distributor shaft, and onto point cam. Press down firmly to insure magnet sleeve is fully seated.
4. Place spacer ring onto the bottom of the rotor.
5. Install the rotor and spacer ring onto the shaft. The rotor will only fit one way. Press the rotor down firmly.
6. Air gap between module and magnet sleeve is not adjustable.
7. Place the grommet into the hole in the distributor housing. Pull the excess wire out and insure wires do not interfere with moving parts.
8. Re-install the rotor and cap. Make sure all spark plug wires are securely attached. Warning! DO NOT USE WITH SOLID CORE SPARK PLUG WIRES.
9. See wiring Instructions.

Figure 1



## 9ML-182 ONLY DISTRIBUTOR DISASSEMBLY

### 1. PRIOR TO INSTALLATION TURN IGNITION SWITCH OFF OR DISCONNECT THE BATTERY

- Remove distributor cap and rotor from distributor. Note: Comp 9000 distributors require the removal of cap adapter. Do not disconnect spark plug wires from cap. Examine parts for excessive wear. Replace as needed.
- Disconnect the UNILITE® wire harness from the coil.
- Remove the two screws holding the UNILITE module in place, and remove module.
- Clean all grease and dirt from the breaker plate.

## IGNITOR II INSTALLATION

Note: Shutter wheel must be removed from rotor.

The magnet sleeve needs to be installed onto the rotor, replacing the shutter wheel.

A. The shutter wheel is glued to the rotor, flex shutter wheel to loosen the rotor from the shutter wheel, do not twist.

B. Tip: Install Rotor and shutter wheel assembly onto the distributor shaft, once the rotor is installed onto the distributor shaft, push down on shutter wheel until it slides off the rotor.

- Once the shutter wheel is removed from the rotor, Comp 9000 Distributors Only: Install provided spacer before installing magnet sleeve onto rotor, align groove in rotor to the magnet sleeve, slide the magnet sleeve onto the rotor, make sure the number ML-182 is facing up. Some magnet sleeves may fit loose, glue may be applied if necessary.

- Note: Do not install magnet sleeve-rotor assembly until after the ignitor is installed into distributor.

- Comp 9000 Distributors Only: Modify cap adapter to clear Ignitor (See Figure 2).

- The Ignitor can be installed in clockwise or counter clockwise positions. Determine the rotation of your distributor rotor and use figure "A" or "B" to install Ignitor.

- FOR CLOCKWISE DISTRIBUTOR ROTATION USE FIGURE "A".**
- FOR COUNTERCLOCKWISE DISTRIBUTOR ROTATION USE FIGURE "B".**

- Fasten the Ignitor plate to the distributor beginning with the correctly stamped screw hole. Line up the two screw holes in the mounting plate with the UNILITE module screw holes. Use the provided screws to hold the mounting plate in place, tighten mounting plate screws.
- Install the rotor-magnet sleeve assembly onto the distributor shaft.
- Insert wires through the hole in the distributor housing, and pull the wire grommet into place. Make sure that the wires do not interfere with any moving part.
- Install the distributor cap, and make sure all plug wires are attached securely.
- See Wiring Instructions.

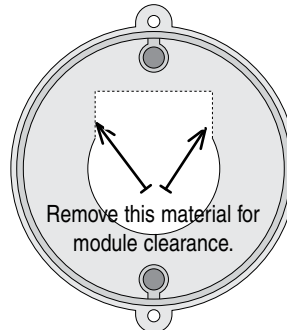


Figure 2

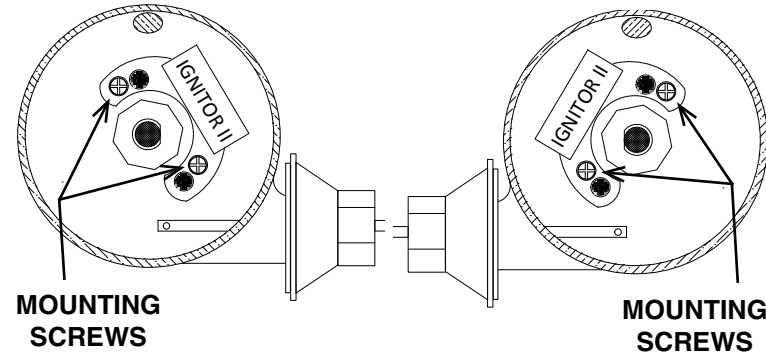


Figure A (CW)

Figure B (CCW)

## WIRING INSTRUCTIONS

- 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.
- 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.

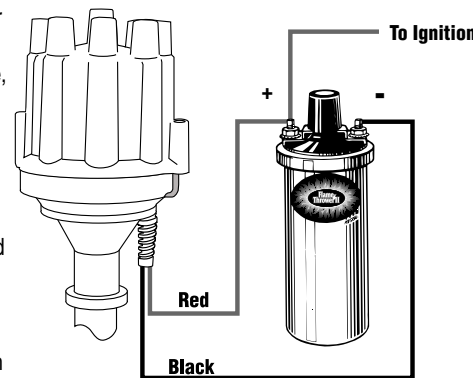


FIGURE 3  
(WITHOUT EXTERNAL RESISTOR)

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

## 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

- (Do not disconnect wires from Ignition coil). Place ignition switch in the "off" position.
- Connect a jumper wire from negative (-) terminal of the coil to a good engine ground.
- Connect the voltmeter red lead to the positive (+) terminal of the coil and the black lead to a good engine ground.
- 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.
- 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