

12-Volt Positive Ground Installation Instructions

For Part Number: 1142P12 & 1143P12

CAUTION!!! Before installing, please read the following important information....

1. The Ignitor is designed for 12-Volt positive ground systems.
2. Leaving the ignition "ON" with the engine "OFF" for an extended period could result in permanent damage to the Ignitor.
3. **See Chart on back page for coil recommendations.**
4. Four & Six cylinder engines require a minimum of 3.0 ohms of primary resistance. Do not remove resistors if the coil primary resistance is less than 3.0 ohms.
5. If your Ignition coil has the recommended primary resistance, remove or bypass all external resistors.

DISASSEMBLY

1. **PRIOR TO INSTALLATION TURN IGNITION SWITCH OFF OR DISCONNECT THE BATTERY**
2. Check distributor rotation before disassembly. 1142 Ignitor kits are designed for Clockwise rotating distributors and 1143 kits for Counter Clockwise rotating distributors.
3. Remove the distributor cap, and rotor. Do not disconnect spark plug wires. Examine cap and rotor for wear or damage. Replace as needed.
4. Disconnect the point wire from the negative (-) terminal of the coil.
5. Remove the point wire, point, and condenser from the distributor. 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.

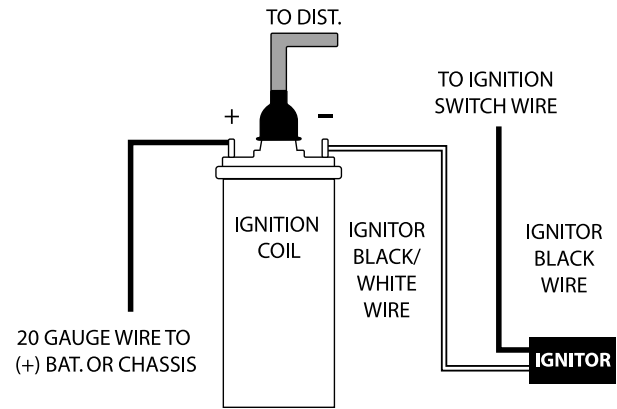
IGNITOR INSTALLATION

1. Position the Ignitor over point pivot pin and eccentric adjustment screw, rotate eccentric screw as needed to line up screw hole to breaker plate screw hole. Confirm that the Ignitor plate is flat and fits without modifications. Fasten the plate into place using the original point screw.
2. Insert wires through the wire exit hole in distributor housing. Pull the rubber grommet into place. Make sure wires do not interfere with any moving parts.
3. Install magnet sleeve over the distributor shaft, onto point cam. Rotate the sleeve until a slight locating position is felt before applying pressure. Press down firmly insuring sleeve is fully seated.
4. Module and magnet sleeve air gap is not adjustable.
5. Reinstall the rotor, and the distributor cap. Make sure all spark plug wires are securely attached.
6. See Wiring Instructions.

A. Recommended Wiring Installation:

The Ignitor ignition can be used in conjunction with most ignition coils rated at 3.0 ohms of primary resistance on one, two & three cylinder engines. For optimum performance purchase and install the recommended Flamethrower high performance coil. Many vehicles came equipped with ballast resistor or resistance wire. To achieve optimum performance from the Ignitor ignition system, we recommend the removal of these components. See last page for coil recommendations.

1. See figure "A" for wiring diagram.
2. Remove the ignition switch wire from the negative coil terminal.
3. Connect the ignition switch wire directly to the Ignitor black wire.
Note: With the Ignitor electronic Ignition the Ignition switch wire will no longer be connected to the coil.
4. Connect the Ignitor black/white wire to negative (-) side of the ignition coil. **Note: The Ignitor Black/White wire replaces the original point wire.**
5. Connect an insulated, AWG 20 copper stranded wire from the positive coil terminal to the positive battery or chassis. Note: This wire is not included in the kit.
6. Make sure all wires are connected correctly, and reconnect battery.
7. The engine can now be started. Let the engine run for a few minutes and then set the timing in the conventional manner.
8. Start the engine and allow it to reach normal operating temperature. Check ignition timing, and adjust to the desired setting.

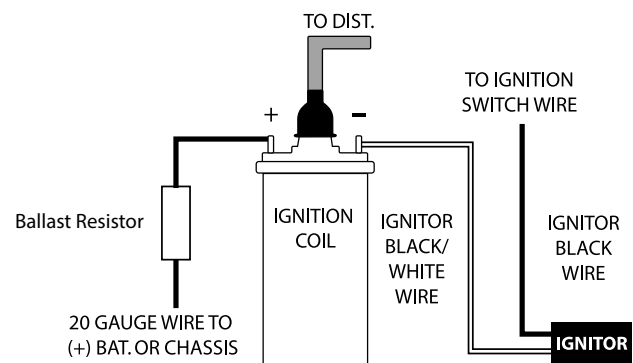


(FIGURE A)

B. Alternative Wiring Installation:

The Ignitor can also be installed in applications retaining the ballast resistor. NOTE: Too much resistance in the circuit will cause poor engine performance or no start condition.

1. See figure "B" for wiring diagram.
2. Remove the ignition switch wire from the negative coil terminal.
3. Connect the ignition switch wire directly to the Ignitor black wire.
Note: With the Ignitor electronic Ignition the Ignition switch wire will no longer be connected to the coil.
4. Connect the Ignitor black/white wire to negative (-) side of the ignition coil. **Note: The Ignitor Black/White wire replaces the original point wire.**
5. **Connect an insulated, AWG 20 copper stranded wire from the positive coil terminal to one side of the ballast resistor. Connect an insulated, AWG 20 copper stranded wire from the ballast resistor to the positive battery terminal or chassis. Note: This wire is not included in the kit.**
6. Make sure all wires are connected correctly, and reconnect battery.
7. The engine can now be started. Let the engine run for a few minutes and then set the timing in the conventional manner.
8. Start the engine and allow it to reach normal operating temperature. Check ignition timing, and adjust to the desired setting.



(FIGURE B)

Ignitor COMMON QUESTIONS AND ANSWERS

Q. What is the first thing I should check if the engine would not start?

A. Make certain all wires are connected securely to the proper terminals.

Q. The engine will not start or runs rough. Are there any tests I can do?

A. Yes, remove the black wire from the ignition switch wire. Connect jumper wire from the negative (-) side of battery to the Ignitor black wire. If the engine starts and runs well, you may have high resistance thru your Ignition switch. This is just a test. Not intended for permanent installation.

Q. How can I fix a high resistance problem?

A. High resistance can be caused by an external ballast resistor, resistance wire or in some cases a resisted ignition switch. If the recommended coil is used, remove or bypass all external resistors.

Q. Should I remove the starter bypass wire?

A. No, the starter bypass wire is needed to provide voltage while starting (cranking) the engine.

Q. What type of coil do I need?

A. The ignitor is compatible only with a "points type" coil. Eight cylinder engines require a minimum of 1.5 Ohms of resistance in the primary circuit. Four & six cylinder engines require a minimum of 3.0 Ohms of resistance (primary).

Q. How do I check my coil for resistance?

A. First you need an ohmmeter. Remove all the wires from the coil. Attach the ohmmeter to both the positive and negative terminals. The reading should be 1.5 Ohms or greater for eight cylinder engines and 3.0 Ohms or greater for four & six cylinder engines. (Your local auto parts store can do this for you if you don't have an ohmmeter)

Q. What do I do if my coil does not have enough resistance?

A. You may purchase and install a ballast resistor from your local auto parts store. You may also choose to purchase a Flamethrower 40,000-volt coil, which provides resistance internally. Note: Many vehicles come with resistor wire or a ballast resistor. These applications do not need an additional resistor.

Q. What happens if you leave the ignition switch on when the engine is not running?

A. This can cause your coil to overheat, which may cause permanent damage to the coil and the ignitor.

Q. May I modify the length of the wires?

A. Yes, you can cut the wires to any length your application may require. You may also add length of wire if needed (20-gauge wire). Please make sure all wire splice are clean and connections are secure.

TESTS

VOLTAGE TESTS (ENGINE DOES NOT START):

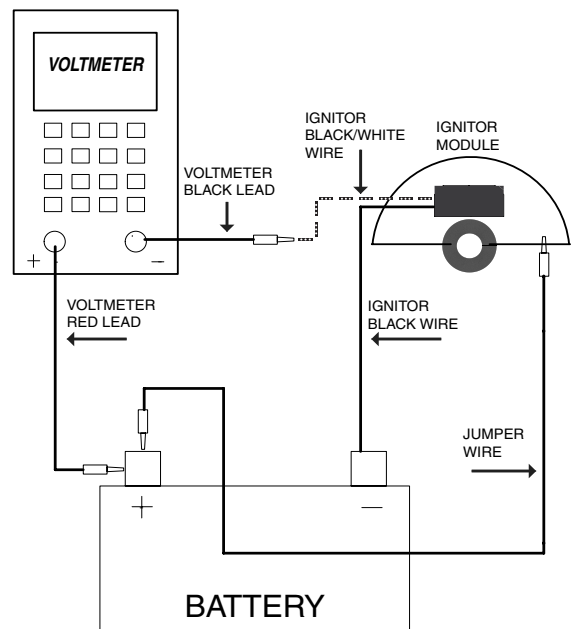
1. Connect Voltmeter red lead to positive (+) and black lead to negative (-) terminal of the battery.
2. Crank engine and note voltmeter reading. Make sure that the voltage does not drop 8.0 volts while the engine is cranking. Check your battery, cables, connections, and starter draw if the voltage drops under 8.0 volts.
3. Attach the voltmeter red lead to the Ignitor mounting plate and the voltmeter black lead to the negative terminal of the battery.
4. Crank engine and note voltmeter reading. The voltage should note drop under 8.0-volts.

ENGINE STARTS AND STALLS (For testing only):

1. Remove Ignitor black wire from the ignition switch wire.
2. Connect Ignitor black wire to (-) negative terminal of battery. Make sure you make a good connection at the battery.
3. Crank Engine and see if engine starts. If engine starts, check your Ignition circuit for bad connections, poor contacts in the Ignition switch, or some form of resistor in the circuit.

IGNITOR BENCH TEST:

1. Remove the Ignitor from the distributor, this is a bench test.
2. Connect a jumper wire from the Ignitor plate to the battery positive (+) terminal.
3. Attach the black/white Ignitor wire to the voltmeter black lead.
4. Attach the Ignitor black wire to the negative terminal of the battery.
5. Attach the red lead from the voltmeter to the battery positive terminal.
6. The voltmeter should read battery voltage once all the connections are made.
7. The magnet sleeve uses one magnet per cylinder. Using a paper clip, locate and mark one magnet.
8. Rotate the magnet in front of the module; the meter should drop from battery voltage to 2-3 volts every time the magnet passes the module. Note: The voltage may drop to 0 volts, this is normal.
9. If the voltage doesn't drop and you read constant battery voltage, the Ignitor has failed.



(FIGURE C)

FLAME-THROWER COIL APPLICATIONS						
Use with:	System Voltage	Cylinders	Primary Resistance	Recommended Flamethrower Coils		
				Black	Chrome	Epoxy
Ignitor Only	12V	8	1.5 ohms	40011	40001	40111
Ignitor Only	12V	4 & 6	3.0 ohms	40511	40501	40611
	Agricultural & Industrial					
Ignitor Only	12V	1,2,3,4, & 6	2.8 ohms	28010 or 40511, 40501, 40611		
Ignitor Only	12V	8	1.5 ohms	40011	40001	40111
NOTE: REMOVE OR BYPASS EXTERNAL BALLAST RESISTOR OR RESISTANCE WIRE WHEN INSTALLING THE RECOMMENDED FLAME-THROWER COIL.						