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IGNITOR

# INSTALLATION INSTRUCTIONS FOR PART NUMBERS 1164, 1165 & 1181

STOP

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

1. The *Ignitor* is designed to be used in **12-volt negative ground** systems.
2. The *Ignitor* is compatible only with a **"points style"** coil, with a minimum of **1.5 ohms of resistance.**
3. If your ignition system presently **has a ballast resistor, do not remove it.** (See Figure 3).
4. **Caution: never** use a **"HEI" type** coil with the *Ignitor.* This type of coil will damage the module, cause it to fail, and void the warranty.
5. The **red** wire from the *Ignitor* must be connected to the **positive (+)** side of the coil, or a 12-volt switching source. The black wire must be connected to the negative (-) side of the coil. (See Figure 2 & 3).
6. **DO NOT REMOVE CLEAR TAPE FROM MAGNET RING.**

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

1. Disconnect point wire from negative (-) coil terminal.
2. Remove distributor cap.
3. Remove distributor. Note position of rotor before removing distributor.
4. Remove rotor (1).
5. Remove points wire and condenser wire (2) from distributor point assembly. Remove points wire from distributor.
6. Remove breaker point assembly (3). Retain screws and washers (4) to install *Ignitor* module.
7. Remove condenser (5).
8. Install magnet ring (7) by slipping over advance weight assembly and inserting the two threaded 6/32 studs (8) up through the two 10-32 threaded holes (9) where screws that held rotor were removed. (See figures B & C).

   IMPORTANT - If you are installing part number 1165, you will find a notch cut in the magnet ring near one of the studs. This stud must be inserted in the hole near the square cut out in the advance weight mechanism.

9. Install rotor (1) (we recommend a new rotor) over the 6/32 studs (8) and secure with 6/32 kep nuts and flat washers (10). These flat washers are the two thick ones. The thinner spacer washers are furnished for adjusting air gap. Do not tighten these kep nuts (10) at this time.

10. Install *Ignitor* module (11) in the same holes where the points were. NOTE: Dual point distributors require the module to be mounted in the place of the leading point. Use the screws (4) that held the point assembly to the breaker plate. Screws should only be finger tight at this point.

    **CAUTION** - Be sure that magnet ring is seated against the advance mechanism plate and module is seated against breaker plate. The shaft must be seated in the lowest position when measuring gap.

11. You will be trying to get an air gap between approximately 0.010" at the low end and no more than 0.060" at the high end. With the distributor shaft pulled down, rotate the shaft and make sure the magnet ring does not rub against the *Ignitor* module. If it happens to rub against the *Ignitor* module, carefully bend the Ignitor module down until it does not rub. Bend with pliers at the bracket so as not to loosen the rivets. If there is a gap, rotate the distributor shaft and measure the largest air gap (12) between the face of the magnet ring and the face of the Ignitor module. If you have an Oldsmobile, and the largest gap is no more than 0.060", go to step #14. Otherwise, continue with the next step.

12. If the gap is greater than 0.060", record what it is. The gap is adjusted by installing thin washers (13) over the 6/32 studs (8) between the magnet ring and advance mechanism plate. It is necessary to remove module, rotor, and ring to do this. The washers are 0.032" thick. From the gap measurement recorded, calculate how many washers are needed to bring the lowest part of the magnet ring to approximately 0.010" from the *Ignitor* module. Install the required washers. Always be sure that there is the same number of washers on each side. If you have an Oldsmobile, go to step #14. Otherwise, go to the next step.

13. Now push the distributor shaft up and rotate. If the highest point between the *Ignitor* module and the magnet ring is greater than 0.060", you will need to place shims (15) between the gear and distributor housing to prevent the gap from going over 0.060".

14. Reinstall magnet ring, rotor and module. Secure in position. Double check gap. If readjustment is necessary, follow above procedure.

15. Install the rubber grommet from the kits hardware into the large hole on the bottom of the distributor housing.

16. Place both the red and black wires carefully through the grommet.

17. Attach terminals to the ends of both wires. You may cut the wires to your desired length if they are too long.

18. Reinstall distributor in vehicle, making sure rotor is in same position as when removed.

19. Place distributor cap on distributor. All spark plugs should be seated securely.

20. Connect the *Ignitor* black wire to the negative (-) side of the coil.

21. For installations that do not use a primary ballast resistor, connect the *Ignitor* red wire to the positive (+) side of the ignition coil. (See Figure 2).

22. For installations that use a primary ballast resistor, connect the *Ignitor* red wire to the ignition switch side of the resistor. (See Figure 3).

23. Reconnect the battery and make sure all wires are connected.

24. The engine can now be started. Let the engine run for a few minutes and then set the timing in the conventional manner.

Fig. A



Fig. B



Fig. C

FIGURE 1
WIRING DIAGRAM
CONVENTIONAL POINTS
SYSTEM
WITH BALLAST RESISTOR

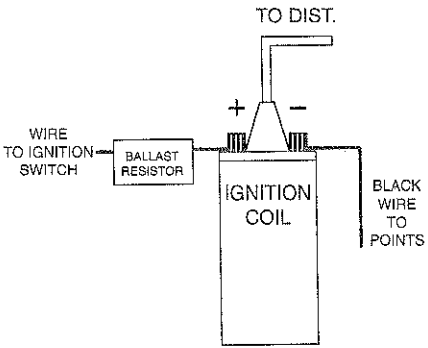



FIGURE 2
WIRING DIAGRAM
IGNITOR SYSTEM
WITHOUT BALLAST RESISTOR

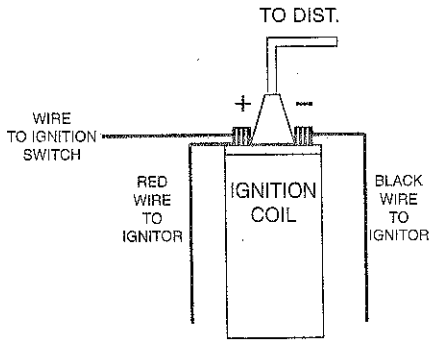
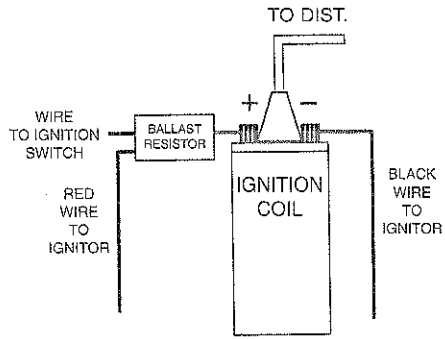



FIGURE 3
WIRING DIAGRAM
IGNITOR SYSTEM
WITH BALLAST RESISTOR




NOTE: A RESISTOR WIRE OR BALLAST RESISTOR MAY OR MAY NOT BE INCLUDED IN THE ORIGINAL EQUIPMENT. THEY ARE NOT TO BE CHANGED IN ANY WAY WITH THE INSTALLATION OF AN IGNITOR SYSTEM.

# Ignitor™ COMMON QUESTIONS AND ANSWERS

**Q. What is the first thing I should check if the engine will not start?**
A. *Make certain all wires are connected securely to the proper terminals.*

**Q. The engine still will not start run. Are there any tests I can do?**
A. *Yes, remove the red Ignitor™ wire from the coil. Connect a jumper wire from the positive side of the battery to the red Ignitor™ wire just removed from the coil. If the engine starts you have a low voltage problem (This is a very common problem). Remember this is just a test. Not intended for permanent installation.*

**Q. How can I fix a low voltage problem?**
A. *First, if you have an external ballast resistor, connect the red Ignitor™ wire to the ignition wire prior to the ballast resistor. Second, if you do not have a ballast resistor you must connect the red Ignitor™ wire to a 12-volt source that is controlled by the ignition switch.*

**Q. What type of a coil do I need?**
A. The *Ignitor™ Is compatible only with a "points style" coil. Six & eight cylinder engines require a minimum of 1.5 ohms of resistance. Four cylinder engines require a minimum of 3.0 ohms of resistance.*

**Q. How do I check my coil for resistance?**
A. *First you need an ohmmeter. Remove all the wires from the coil. Attach the meter to both the positive and negative terminals. The reading must be 1.5 ohms or greater for six and eight cylinder engines, and 3.0 ohms or greater for four cylinder engines. (Your local auto parts store can do this for you if you do not 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 you local auto parts store. You may also choose to purchase a Flame-Thrower™ 40,000-volt coil, which provides resistance internally. Note: Many vehicles come equipped with a resistor wire or a ballast resistor. These applications may not need an additional resistor.*

**Q. What happens if I 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 Ignitor™ wires?**
A. *Yes, you may cut the wires to any length your application may require. You may also add lengths of wire if needed (20-gauge wire). Please make sure all wire splices are clean and connections are secure.*

**Q. Will the shift interrupter on an OMC stern drive boat work with the Ignitor™?**
A. *The Ignitor™ is compatible with all OMC stern drive applications, when equipped with a "diode fix". If you purchased a kit that does not include the "diode fix" diagram, call our tech line.*

**Q. How can I get additional help?**
A. *Call our tech line (909-599-5955) for any further instructions or questions.*

## LIMITED WARRANTY

Manufacturer warrants to the original Purchaser of its solid state ignition system (product) that the Ignitor, magnet assembly and wiring (componets) shall be free from defects in material and workmanship for a period of (30) months from the first day of use in the Purchaser's industrial truck, stationary, auto or truck engine distributor.

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

1. Promptly notifies manufacturer in writing of such defect;
2. Delivers the defective product or component to manufacturer with proof of purchase date; and
3. Has installed and used the product in a normal and proper manner consistent with manufacturer printed instructions.

THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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