

## PRE-INSTALLATION CHECKS

1. Visually inspect plug wires, coil wire, distributor cap and rotor. Replace any components that show deterioration. It is especially important that the cap and plug wires be in good condition if a high output coil is used.
2. Check for loose or poor connections in ignition circuit. Check battery terminals for corrosion and loose connections.
3. Check battery voltage with engine off. It should be in the area of 12 to 14 volts.
4. The following procedure applies only to those installations where an external ballast resistor or resistance wire is used in the primary ignition circuit. Using a jumper wire, or clip lead, connect the minus (-) side of the coil to ground. Turn the ignition switch on. Read the voltage from the positive (+) side of the coil to ground. This voltage must not be less than 6.0 volts. If it is less than 6.0 volts the red wire from the module will have to be connected to the ignition switch side of the ballast resistor (Point A in Figure 2).

**NOTE:** In most circuits that use an external ballast resistor, this resistor is bypassed during starting putting the full battery voltage to the positive (+) terminal of the coil. In those cases where an external ballast resistor is used and it is not bypassed during starting, the red wire from the module will have to be connected to the ignition switch side of the ballast resistor (Point A in Figure 2) regardless of the voltage read at the positive (+) terminal of the ignition coil in the procedure above. In all cases the black wire remains connected to the minus (-) side of the ignition coil.

## TESTING

**If the vehicle will not start after installation or vehicle quits after starting, the following test may be done to check the system.**

1. Connect the positive (+) lead of a voltmeter to the negative (-) side of the ignition coil. Connect the negative (-) lead of the voltmeter to ground. Set the voltmeter to DC volts on at least a 15 volt scale.
2. Disconnect the high voltage wire from the center of the distributor cap and ground it to the engine block or chassis.
3. Crank engine.
4. The voltmeter should fluctuate from a range of 1 to 2 volts to a range of 10 to 12 volts as the engine is cranked.
5. If the voltmeter does not fluctuate, one of the following problems exist:
  - a. If the voltmeter shows a constant 0 reading, there is an open circuit somewhere in the primary ignition circuit.
  - b. If the voltmeter shows a constant voltage in the 1.0 to 3.5 volts range, the power transistor is shorted out.
  - c. If the voltmeter shows a constant voltage equal to the battery voltage, there is an open circuit in the Ignitor or the Hall cell is not operating.



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# IGNITOR

SOLID STATE ELECTRONIC IGNITION

**INSTALLATION INSTRUCTIONS  
FOR DELCO 4 & 6 CYLINDER DISTRIBUTORS  
PART NUMBER 18-5294 & 18-5297  
Without Vacuum Advance**

Refer to "pre-installation checks" before beginning installation.

1. Disconnect battery or make sure ignition switch is off.
2. Remove distributor cap from distributor. Leave high voltage wires connected in the distributor cap.
3. Remove rotor (1). Examine rotor and replace it if the electrode shows excessive pitting or burning.
4. Remove screws (2), dust cap (3) and entire breaker plate assembly (4). Retain these parts for back-up in the event of failure. Dust cap is not used with Ignitor installation.
5. Make sure mechanical advance is in proper working order. Oil if needed. Clean all oil and dirt from inside of distributor housing.
6. Using the same screws (2) that were removed, install the new plate (5).
7. Install the module (6). Holes (7) fit over studs (8) and module is secured by keep nuts (9). Do not tighten the nuts all the way at this time.
8. Install the magnet sleeve (10) over cam or distributor shaft. Locate on cam and press firmly into position.

**NOTE:** Sleeve fits tightly over cam. It may be necessary to use the rotor to press the sleeve over the cam. **BE SURE** sleeve is located correctly over cam (rotate it until a slight locating position can be felt) before pressing it into place. Press all the way on until fully seated.

9. Using the plastic feeler gauge supplied, adjust the gap between the module and the magnet sleeve. Gap should be approximately .030". Tighten the two kee nuts (9) securely. Rotate the distributor shaft through a complete revolution and verify that there is always an air gap between the module and the sleeve. The module must not touch the magnet sleeve at any time.

10. Install the rotor (1) making sure it is fully seated.

11. Refer to Figure 3. It is necessary to file a slot in the cap to allow for the larger grommet on the Ignitor System wire harness. Using the indentation on the rim of the cap as a guide, file away enough material so that the grommet will not be pinched when the cap is securely fastened. A slot 3/16" deep by 1/4" wide is sufficient. **IT IS IMPERATIVE THAT THIS SLOT BE FILED INTO THE CAP. FAILURE TO DO SO COULD RESULT IN AN ELECTRICAL SHORT CAUSED BY BREAKING THE INSULATION ON THE WIRE HARNESS.**

12. Adjust the grommet on the wire harness so that the wire will not come in contact with the magnet sleeve. Replace distributor cap. Make sure all high voltage wires are securely seated. Double check that cap is fully seated and that grommet and wires fit snugly without pinching.

13. Refer to Figure 2. Connect the black wire to the minus (-) side of the ignition coil. For installations that do not use a primary ballast resistor, connect the red wire to the positive (+) side of the ignition coil (point B in Figure 2). For installations that use a primary ballast resistor, it is preferable to connect the red wire to the ignition switch side of the resistor (point A in Figure 2), rather than to the positive (+) side of the coil. For installations that use primary ballast resistor, **and this resistor is not bypassed during starting**, the red wire **must** be connected to the ignition switch side of the ballast resistor (point A in Figure 2).

14. The engine can now be started. Let the engine run for a few minutes and then set the timing in the conventional manner. It will be worth the time to set the timing exactly as it will never have to be reset.

15. The wiring diagram of the original and conversion systems is shown in Figures 1 & 2.

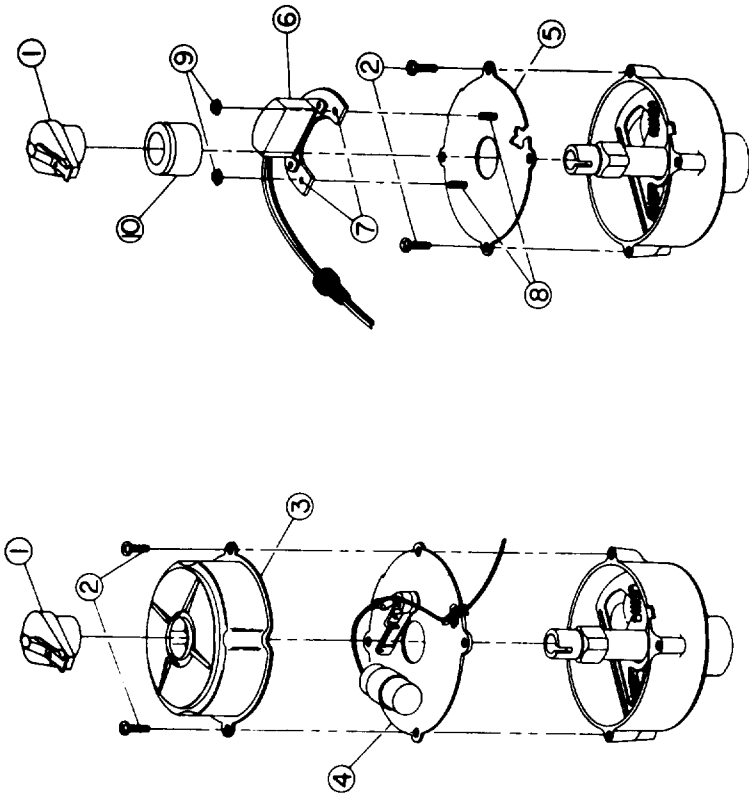


FIGURE 1  
WIRING DIAGRAM  
CONVENTIONAL SYSTEM

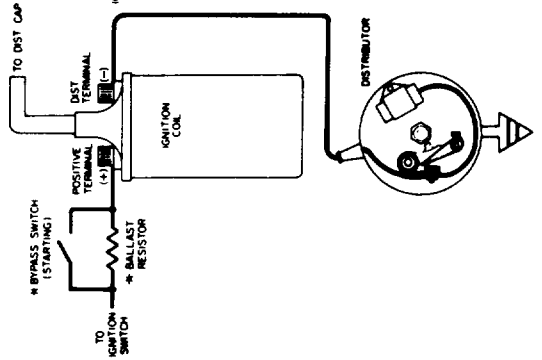
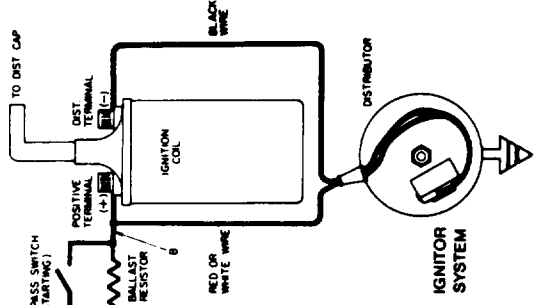


FIGURE 2  
WIRING DIAGRAM  
IGNITOR SYSTEM



\*THESE COMPONENTS MAY OR MAY NOT BE USED IN THE ORIGINAL EQUIPMENT. THEY ARE NOT CHANGED IN ANY WAY WITH THE INSTALLATION OF AN IGNITOR SYSTEM.

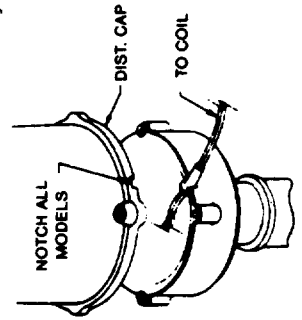


FIGURE 3