MID AMERICA MOTORWORKS

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Suggested Installation Instructions for:
609-421, 1958-1974 Ignitor Conversion Kit

IMPORTANT INFORMATION

(Please read before installing your Ignitor)

The Ignitor is designed to be a bolt on part. If the Ignitor module does not fit properly, or if the magnet sleeve appears to be loose, please call our tech line before proceeding with the installation.

DO NOT MAKE MODIFICATIONS TO ANY IGNITOR COMPONENT!
This will void your warranty and may cause damage to your engine.

Some individuals may choose to use different terminals or change the length of the Ignitor wires. These are the only modifications that can be made.

GENERAL INFORMATION

The Ignitor is designed for **12V NEGATIVE GROUND** systems.

Coils:

The Ignitor is compatible with any "Point Type" after-market or OEM coil regardless of voltage output. The Ignitor does require a coil with a minimum of 1.5 OHMS resistance across the "+" and "2' of the coil.

CAUTION: NEVER use a "HE[" type coil with the Ignitor. This type of coil will provide too much current to the Ignitor, causing it to eventually "burn out" and fail, which will void your warranty. Remember, always use a coil with a **minimum of 1.5 OHMS**. If a ballast resistor is required, use the one recommended by the manufacturer.

If a High Performance coil is desired, PerTronix offers its *"Flame-Thrower" 40,000* volt coil specifically designed for use with the Ignitor. See your dealer or call us direct.

INSTALLATION REMINDERS:

Please read the instructions carefully before installing the Ignitor,

CAUTION: Be certain to connect the correct Ignitor wire to the proper side of the coil.

The **BLACK** Ignitor wire should always be connected to the same side of the coil as the "points" wire. This should be the '-" negative side of the coil (sometimes marked Dist.).

The **RED** Ignitor wire should be connected to the "+" positive side of the coil (sometimes marked Batt.). The "+° positive side is also the same side of the coil the wire from the ignition switch is on.

Some distributors have an internal around strap connecting the breaker plate to the distributor housing It is **IMPORTANT** this strap be left in place when installing the Ignitor.

MSD SYSTEM COMPATIBILITY:

The Ignitor is compatible with MSD systems in the same manner as conventional points. The Ignitor red wire connects to the MSD small red wire and the Ignitor black wire connects to the MSD small white wire. Refer to your MSD instructions. Note: MSD magnetic pickup wires are **NOT** used with the Ignitor.

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. ItshouldbeintheareaoF12tol4volts.

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 (t) 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 8 & 6 DISTRIBUTORS 1181 –1164

Refer to "pre-installation checks" on back page before beginning installation.

-Remove cap.

-Disconnect points wire at (-) of coil.

-Remove distributor - note position of rotor before removing distributor.

-Remove rotor (1).

-Remove points wire and condenser wire (2) from distributor point assembly. Remove points wire from distributor.

-Remove breaker point assembly (3). Retain screws and washers (4) to install ignitor module.

-Remove condenser (5).

-Install magnet ring (7) by slipping over advance weight assembly and insetting 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 2 and 3).

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

-Install ignitor module (11) using screws (4) that held point assembly to breaker plate - using same two holes that were used to hold in the points 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. There is vertical play in the top distributor shaft-this shaft must be seated in lowest position when measuring gap.

-Measure air gap (12) between face of magnet ring and face of ignitor module. This gap should not be less than .010" and not more than 040". If gap between .010" and .040", no further adjustment is necessary.

-In all Delco 8 Cyl. Distributors the distributor shaft has a tendency to climb, as the car is started and as the engine is accelerated. This is due to the bevel of the gear on the distributor shaft and cam shaft.

-If the clearance between the gear and the lower end of the distributor housing is too great, it may allow the clearance between the magnet ring and the module to become more than .100". This will cause the engine to miss or not fire at all.

-This can be corrected by reducing the clearance between the gear and the lower end of the distributor shaft with shims (15) to reduce this clearance and prevent the shaft from climbing.

NOTE: On small black Oldsmobile engines it is required to remove an amount equal to the thickness of the shim (5) being installed from the bottom of the gear as not to seize the distributor shaft against the engine block.

-If gap is greater than .040", record what R is. The gap is adjusted by installing flat thin (.032" Chock" 6/32 washers (13) over the 6/32 studs (6) between magnet ring and advance mechanism plate. It is necessary to remove module, rotor and ring to do this. The washers are .032" thick. From the gap measurement recorded calculate how many washers are needed and install. Always be sure there are the same number of washers on each side.

-(Note washers (10) are thick .048" to hold on rotor and thin washers (13) are .032" for gap adjustment.)

-Reinstall magnet disc, rotor and module and secure in position. Double check gap. If readjustment is necessary, follow above procedure.

-Remove sliding door (14) in cap by bending tab so that door can slide up and out.

-Notch a corner of door on bottom lip so that insulating sleeve can slip through freely without binding. When installed, wire fits between lip of cap and distributor body. (See figure 4).

-Re-install sliding door in cap.

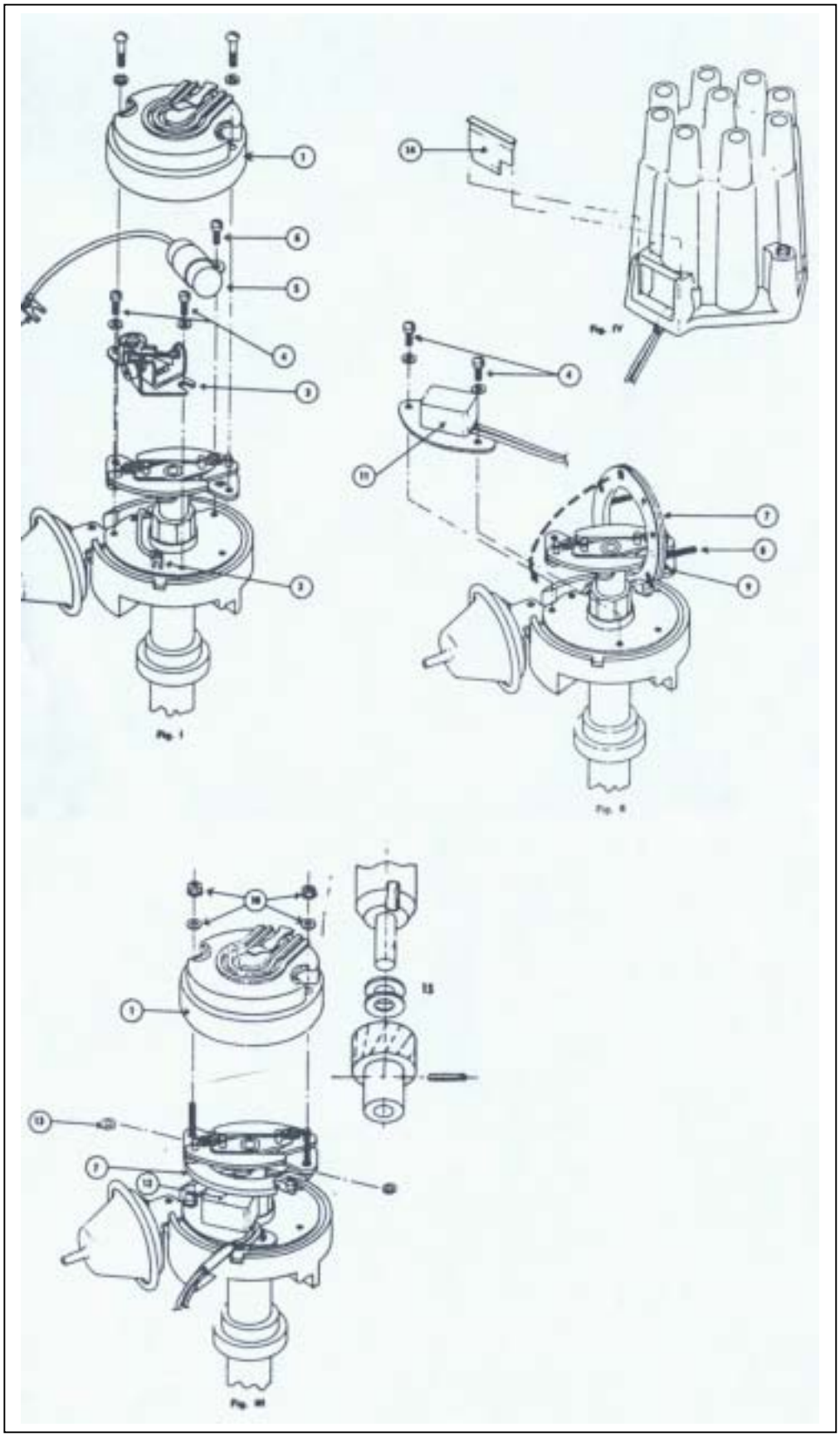
-Re-install distributor in car, making sure rotor is in same position as when removed.

-Install capon distributor, locating wire through slot in door. Be sure wires are not pinched by checking that the wires move freely through the gap.

-Connect black wire to (-) side of coil where original paints wire was removed.

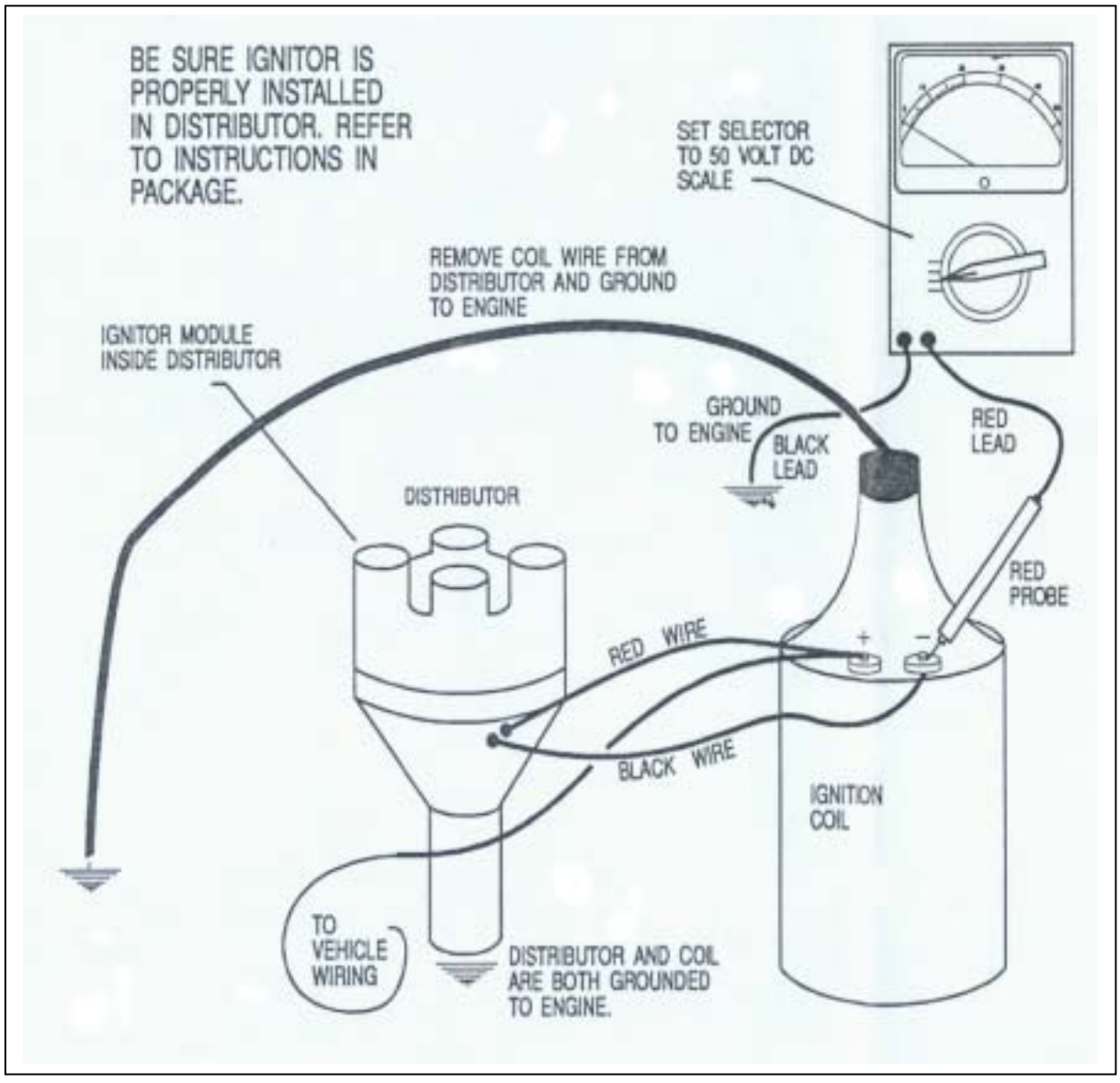
-Connect red wire to (+) side of cod.

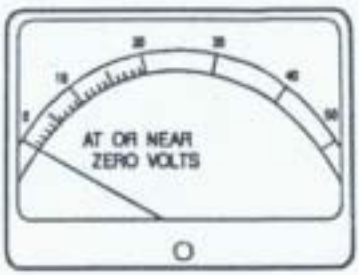
-Start engine, allow to run 5 minutes and time in conventional manner.



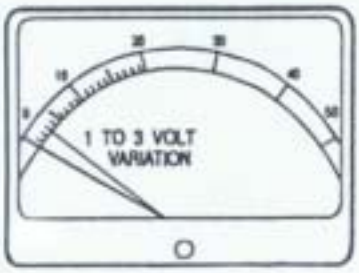
TROUBLESHOOTING GUIDE FOR THE IGNITOR

IF ENGINE DOES NOT START OR RUN, REFER TO THIS CHART TO DETERMINE POSSIBLE CAUSES. BE SURE TO GROUND HI-VOLTAGE COIL LEAD WHEN CRANKING ENGINE. USE SIMPSON MOD. 260 VOM, OR EQUIV. ATTACH EXACTLY AS SHOWN.

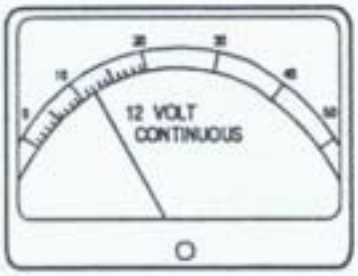




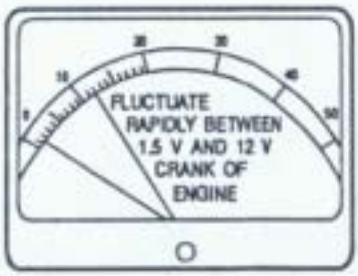
IF METER READS ZERO VOLTS, CHECK WIRING! THIS IS TYPICAL OF AN OPEN CIRCUIT OR DEFECTIVE BALLAST RESISTOR (VEHICLE COMPONENT)



IF METER READS CONSTANT VOLTAGE BETWEEN 1 AND 3 VOLTS, THE IGNITOR MODULE IS SHORTED AND MUST BE REPLACED.

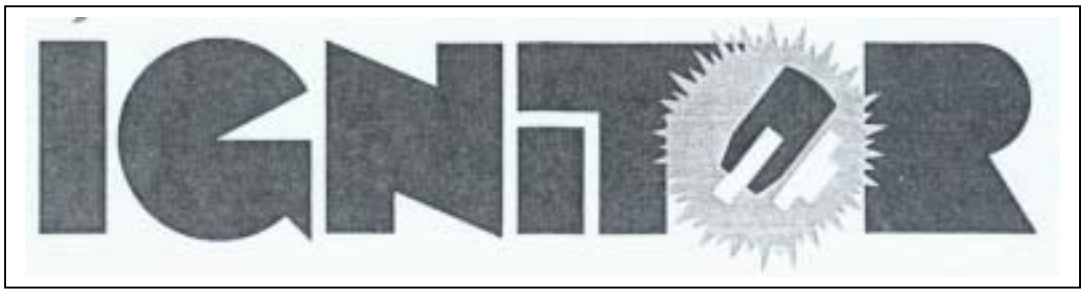


IF METER SHOWS CONSTANT BATTERY VOLTAGE DURING CRANKING, CHECK RED AND BLACK WIRES BETWEEN DISTRIBUTOR AND COIL (OPEN CIRCUIT) THEY MAY BE LOOSE, ETC.



SYSTEM IS FUNCTIONING NORMALLY WHEN METER RAPIDLY FLUCTUATES BETWEEN 1.5 V AND 12 V DURING ENGINE CRANKING

USE THIS CHART TO DETERMINE CAUSE OF FAILURE. IF CAUSE IS STILL NOT DETERMINED, CONTACT YOUR DEALER TO REQUEST A RETURN AUTHORIZATION OR CALL *PERTRONIX inc.* AT (909) 599-5955 MONDAY-FRIDAY



LIMITED WARRANTY

Manufacturer 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 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 OR 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 CONSEQUENTIAL.

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