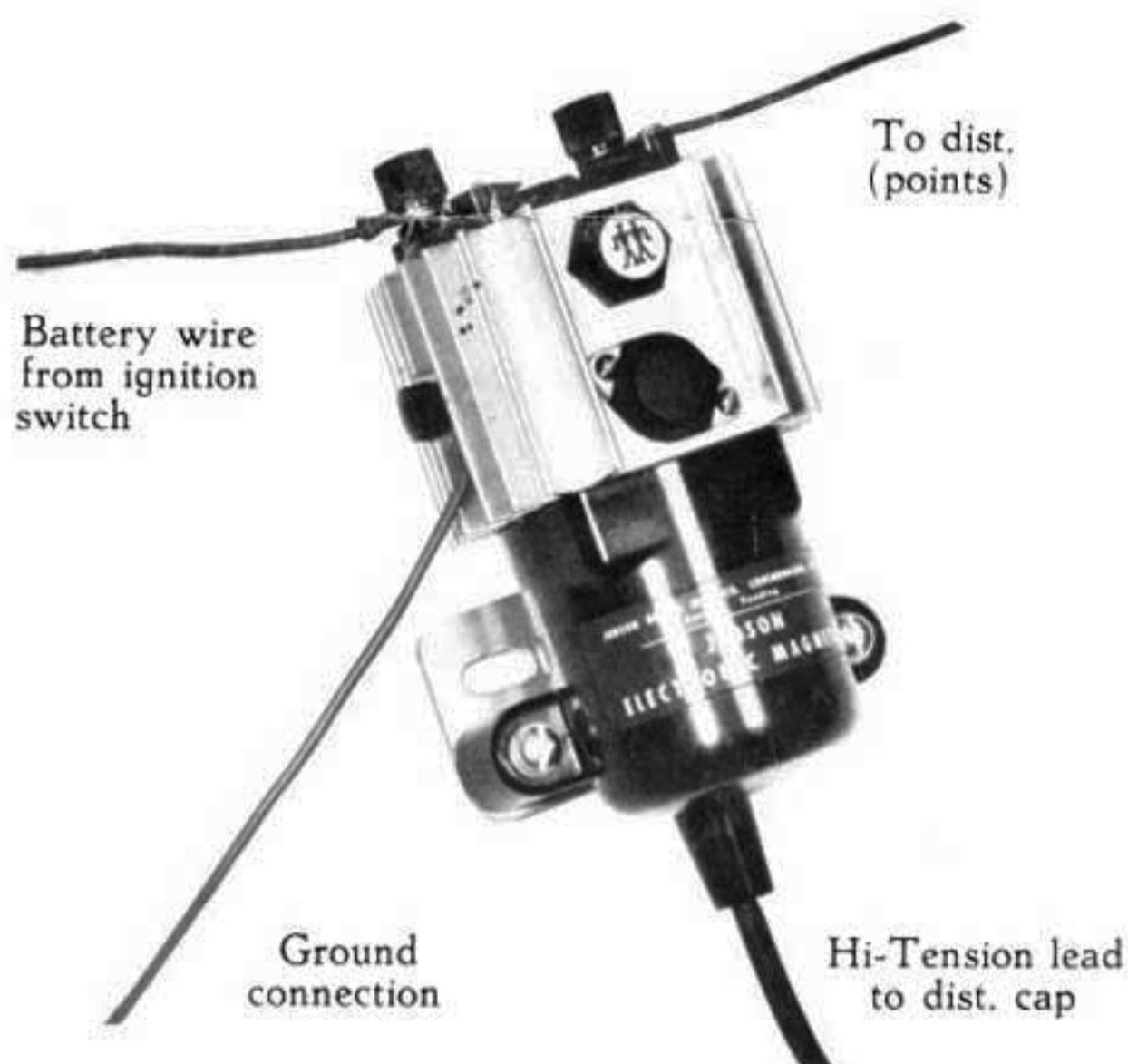


Installation Instructions

JUDSON ELECTRONIC MAGNETO



Same unit is used on both 6 volt and 12 volt systems. Installation procedure is exactly the same for both negative ground and positive ground systems. The difference is in the magneto itself, not its connection. Do not install a standard negative ground unit on an engine having a positive ground. Units for positive ground systems as required on British engines and some American engines manufactured prior to 1956 are stamped on the front "positive ground".

Before installing the electronic magneto, we recommend that the breaker points in the ignition distributor be examined and replaced if worn or pitted. Adjust the point clearance to manufacturer's specifications. The ignition timing should also be set to manufacturer's specifications. Spark plugs should be examined and must be replaced if worn or corroded. Set spark plug gap at .027 to .030 and make sure that plugs are inserted tightly into head.

Do not remove the condensor from the ignition distributor.

INSTALL ELECTRONIC MAGNETO AS FOLLOWS AND AS ILLUSTRATED ON FRONT COVER ON ALL AUTOMOBILES MANUFACTURED BY GENERAL MOTORS, FORD MOTOR CO., 1960 OR LATER MODEL CHRYSLER PRODUCTS, 1962 OR LATER MODEL STUDEBAKER AND AMERICAN MOTORS V-8 ENGINES ONLY.

1. — Remove original ignition coil.
2. — Mount Judson Magneto in same place as original coil was mounted. If this is not possible, install electronic magneto on firewall or fender well as close to ignition distributor as possible. Extra lengths of high tension cable and primary wire are included with the kit in the event that the magneto cannot be mounted in the same location as the original coil. Two contact clips are also included for the high tension wire where it is inserted into the magneto and ignition distributor.
3. — Insert new high tension cable from center of ignition distributor to socket of electronic magneto.
4. — Connect point wire from distributor to terminal on electronic magneto marked "DIST". If wire is too short, extend it with primary wire and sleeve connector furnished by removing $\frac{1}{4}$ " insulation from both wires and inserting wires into sleeve. Sleeve is then compressed or crimped with pliers and wrapped with insulation tape.
5. — Connect battery wire from switch originally fastened at coil to terminal on electronic magneto marked "BAT". If too short extend as previously instructed (there may be two wires on this one terminal).
6. — Connect short piece of primary wire with terminal lug attached from side of magneto to engine. If possible, make this ground connection from magneto to one of the screws holding the vacuum advance mechanism to the ignition distributor. This is the ground connection and must be tight and clean at both terminals.

INSTALLATION IS COMPLETE

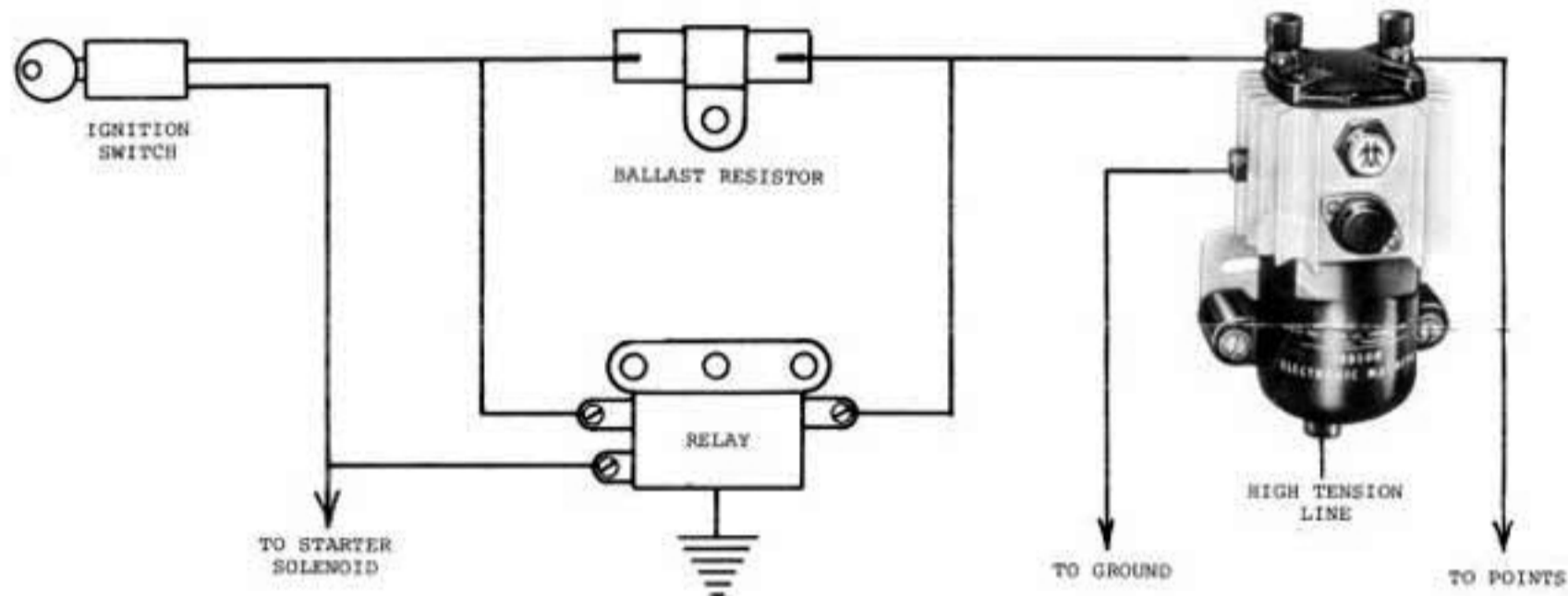
NOTE: The Judson Electronic Magneto produces a higher pressure arc than does the standard ignition system. Because of this the high tension wire if old, faulty or weak, will break down with our system. This gives the impression of magneto failure but it is the high tension wire that is breaking down resulting in faulty ignition. In other words, the high tension wire is marginal and although it will function with the coil, it breaks down with our system because of the increased current. With some high tension resistance "wire" (carbon granules) this happens gradually and gives the impression of magneto failure. The car will stall, is difficult to start and misses.

For maximum performance, regardless of the type of ignition system used, the high tension resistance wire as used on late model cars between the ignition distributor and the spark plugs should be replaced with standard copper high tension ignition wire.

IMPORTANT

If the Judson Electronic Magneto is being used to replace an ordinary transistorized ignition system, the original ballast or resistance wire must be replaced or reconnected.

INSTALLATION PROCEDURE FOR ALL 12 VOLT EUROPEAN CARS, MOST MARINE ENGINES AND ANY OF THE FOLLOWING AUTOMOBILES WHICH DO NOT HAVE A RESISTOR OR RESISTANCE IN THE LINE FROM THE IGNITION SWITCH TO THE COIL: CHECKER, HUDSON, WILLYS, RAMBLER (6 cylinder), STUDEBAKER (prior to 1962) AND SOME CHRYSLER PRODUCTS MANUFACTURED PRIOR TO 1960.



On automotive engines use Delco ballast resistor No. 1957154 which can be purchased at any General Motors dealer. Marine engines use Mopar ballast resistor No. 2444142 which can be purchased at your Chrysler marine engine dealer. Ballast resistor can be fastened to the magneto mounting plate with one of the mounting screws. Ballast resistors become very hot in operation and should be kept clear of wires and hoses.

Relay can be purchased at any automotive supply store or dealer as a 6 volt headlight relay (although system is 12 volt, use a 6 volt relay).

In the event that the ballast resistor and relay are not readily available locally, they may be ordered directly from the factory. Price for the ballast resistor is .95c and for the relay \$1.45. These prices are postpaid and shipment can be made immediately from stock.

Do not install a ballast or relay on any six (6) volt system.

TEST PROCEDURE TO DETERMINE IF BALLAST AND RELAY SHOULD BE INSTALLED IN CIRCUIT

With the magneto installed and the engine running at idle, a volt meter connected from the "BAT" terminal on the magneto to the side of the aluminum case of the magneto (ground) should show a reading of 7 to 9 volts. If the volt meter shows 12 to 14 volts, a ballast resistor and relay must be installed as noted above.

BOSCH 12 VOLT SYSTEMS

The standard negative ground unit is required with a ballast resistor and relay. Some late models of the Mercedes have a ballast resistor attached to the coil. This should be removed with the coil and the recommended ballast and relay installed in the line. It is not necessary to install a ballast resistor or relay on any 6 volt system as used on the Volkswagen and Porsche.

LUCAS SYSTEMS

All Lucas ignition systems as used on British cars require a positive ground electronic magneto and a ballast resistor with a relay must be installed on the 12 volt Lucas system. A ballast resistor and relay is furnished with all positive ground units. Do not install a ballast resistor or relay on a Lucas 6 volt system.

VOLVO AND SAAB

These Swedish cars use an armored cable from the ignition switch to the coil. When installing the Electronic Magneto it is necessary to remove the original coil from the firewall and pry off the coil from the cable flange which exposes the battery lead from the switch. The original distributor wire is connected to the terminal on the magneto marked "PTS". A ballast resistor and relay must be installed in the line between the ignition switch and the magneto.

SAAB ONLY

Remove $\frac{1}{2}$ " from the leading edge of the distributor rotor (turns clockwise) to prevent two cylinders from firing at the same time because of the increased output of our system.

TACHOMETER ADJUSTMENTS

If vehicle is equipped with an electric tachometer as furnished by the automobile manufacturer, it is connected to the same terminal on the magneto as it was on the original coil. No adjustments are required.

Stewart Warner 100 series tachometer — remove cover from sender unit. Next to one of the supports is an adjustment screw. Turn the adjustment screw clockwise as far as it will go and back off approximately $\frac{1}{8}$ turn. This screw is not for calibration and does not change the original setting of the tachometer.

Sun electronic tachometer — if hand is erratic at higher speeds make the following adjustment: remove large chrome screw from top of transmitter cover. With a small screw driver turn the hex nut clockwise until the tachometer reading is steady at high engine speeds with units connected.

Avanti, Volvo P-1800 and Smith tachometers — a special unit must be ordered from the factory to operate these tachometers. An extra terminal is provided on the top of the magneto for the tachometer wire at no additional cost.

TEST EQUIPMENT

Standard ignition test equipment including a strobe light for timing and a cam dwell indicator for point setting can be used with this system. The normal connections and test procedures are followed. This system does not, however, produce a normal pattern on an ignition scope.

RADIO INTERFERENCE

If radio interference should be encountered because of replacement of resistance high tension ignition wiring, install a standard radio ignition suppressor in the high tension line at the distributor cap. Use Herman Smith ignition suppressor No. 809 or equivalent.



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