



**CHRYSLER® ELECTRONIC CONVERSION
DISTRIBUTOR KIT
INSTALLATION INSTRUCTIONS**

Part Nos: **66991** (273-318-340-360), **66993** (361-383-400), **66995** (413-426W-440-426 Hemi)

Congratulations, you just purchased a high performance distributor kit. This high-performance kit will convert your old point-type ignition to new electronic ignition. Your kit comes complete with a distributor, a high performance advance curve, an electronic control unit, wiring harness, and a ballast resistor.

NOTE: This electronic conversion distributor kit will not work with any fuel injection that requires a originating from the distributor (factory fuel injection).

Step 1 – Unpack the distributor carefully and inspect the contents. Disconnect the negative battery cable.

Step 2 – Remove the current distributor cap. Make sure you mark the location on an adjacent component of the engine where the rotor's tip is pointing. Now, remove the distributor hold down bolt and clamp, and then remove the old distributor.

Step 3 – Even though the air gap has been set in the development process we recommend you double check this by using a magnetic (brass or nylon) feeler gauge and verify that the clearance between the pickup and the reluctor is .008-inch. Each point should be checked to assure proper timing. If necessary, adjust the float of the pick up to the .008-inch setting. As you turn the gear you will feel the magnetic resistance as the reluctor point passes the pick up.

Step 4 – Lightly coat the o-ring on the distributor shaft with motor oil and make sure it's in the groove.

Step 5 – Lower the new distributor into the engine block. If you have marked the rotor tip location from your old distributor, turn the distributor rotor until it points toward your marking. Slowly rotate the rotor back and forth until the distributor slides into position and check to be sure it is seated on the engine block.

Step 6 – Electronic Control Unit (ECU) Installation. The distributor and conversion kit are configured for an initial installation, a point type conversion, and/or a performance upgrade to an existing electronic ignition system. If you are upgrading, you then simply need to replace the ECU and ballast resistor with the new parts included. If you are converting an older point type or doing an initial installation, please follow the following steps.

Step 7 – Choose a suitable location for the ECU. Choose a location that is not close to exhaust heat like under the dash or on a chassis mounted bracket. Another option is the radiator support and/or the fenderwell, which are typically safe locations in most installations. It is best to trial fit the master connector at the intended ECU location to be sure the wires can be safely routed to the distributor leads without interference.

Step 8 – Once you have confirmed your mounting location, use the ECU base as a template and mark the installation point. Drill for either sheet metal screws or bolts. **BE SURE THERE IS NOTHING BEHIND THE PANEL BEING DRILLED THAT MAY BE DAMAGED.** The ECU must be grounded. If installing on a non-grounded surface you must run a ground wire to an absolute grounded component of the vehicle.

Step 9 – Plug the master connector on the harness into the ECU. We recommend you protect these wires with either convoluted tubing or wire ties after you have completely installed the electronics.

Step 10 – The wiring harness wires will likely have excess length due to installation variations. After you have determined the required lengths, it is recommended that you cut each wire to fit your custom installation.

Step 11 – You will see two loose wires. One, a black with a yellow trace line and, two, a blue with a yellow trace line. The **BLACK** wire should be connected to the negative (-) side of the coil using the supplied "eye" connector. The **BLUE** wire should be attached to one side of the ballast resistor.

Step 12 – Ballast Resistor Installation. The ballast resistor should be mounted in a solid location either near the ECU or on the firewall. Depending on the type of installation there are two methods for ballast resistor wiring. Connect one side of the ballast resistor to the positive (+) side of the coil. That same side will then be connected to the start side of the ignition switch or to one side of the starter relay (if applicable).

Step 13 – The other side of the ballast resistor in connected to the run side of the ignition switch or to the terminal on the starter relay (if applicable).

Step 14 – Located the main ignition feed. This will vary from vehicle to vehicle, but if your installation is in a Chrysler product, it should be a dark blue or red in 1980-1985 pickups or vans. Check to be certain you have correctly identified the main ignition feed by following these quick steps;

- Temporarily reconnect the negative battery terminal.
- Turn the ignition switch to "on" Do not turn to "start."
- Using a 12-volt tester, verify that the feed wire you identified has power in the "on" position
- and no power in the "off" position.

With the main feed now verified, turn of the ignition switch and disconnect the negative side of the battery. Continue the main ignition feed (in new installations) or splice into the main ignition feed in existing installations to the ballast resistor (to the terminal you installed the BLUE wire from the new harness).

Step 15 - Cut both the BLUE wire and the new wire spliced into the main ignition feed, allowing at least 3 extra inches for engine movement. Strip ¼" of insulation from both wires and place BOTH of the stripped wires into ONE of the 12-gauge female spade connectors and firmly crimp tight. Finish by wrapping the connection with electrical tape.

Step 16 - Route a 14-gauge wire from the positive (+) side of the ignition coil to the ballast resistor, leaving an excess of length at the ballast resistor end. Install a 14-gauge eyelet connector on the end of the new wire and connect it to the positive (+) side of the coil. Crimp a 14-gauge female spade connector on the other end of that wire. Finish by wrapping all exposed areas with electrical tape.

Step 17 - Plug the terminal on the end of the BLUE wire from the new harness and the main ignition feed wire into one end of the new ballast resistor. Double-check all of your connections to be sure they are secure and tight.

Step 18 - Start Up and Adjustments. It is recommended that you install new spark plugs and wires at the time on an upgrade such as this. After installing the spark plug wires, connect a timing light to the # 1 spark plug wire and the power lead to the positive side of the battery (or similar 12-volt source). Temporarily plug the vacuum line from the intake or carburetor. Start the engine. If you have installed the distributor and wiring correctly, it should start immediately. The ballast resistor make smoke for a couple of minutes after start up. This is normal; it is simply "burning off" any oil that may be on the porous surface.

Step 19 - Set the initial timing at 5 degrees advance and tighten the distributor hold down clamp. Take a test drive with the vacuum line still plugged. If you detect any detonation sounds (sounds like "pinging"), reduce the time by 2 degrees. Once the initial timing is set and the engine has warmed up, unplug and reconnect the vacuum hose to the distributor.

Steps 20 - After the engine has warmed up with the vacuum line attached to the distributor make several part throttle tests. If detonation or surges are encountered you will need to adjust the vacuum advance. To do this, turn the engine off and removed the vacuum line from the distributor. Carefully insert a 3/32 Allen wrench into the fitting where the vacuum hose was attached. Turn the wrench ½ turn clockwise to reduce the vacuum advance by 2-3 degrees. Now remove the wrench, reconnect the vacuum line and repeat the test procedure. It is recommended you repeat this procedure if detonation or surging persists and adjust the vacuum advance accordingly.

Trouble Shooting Steps:

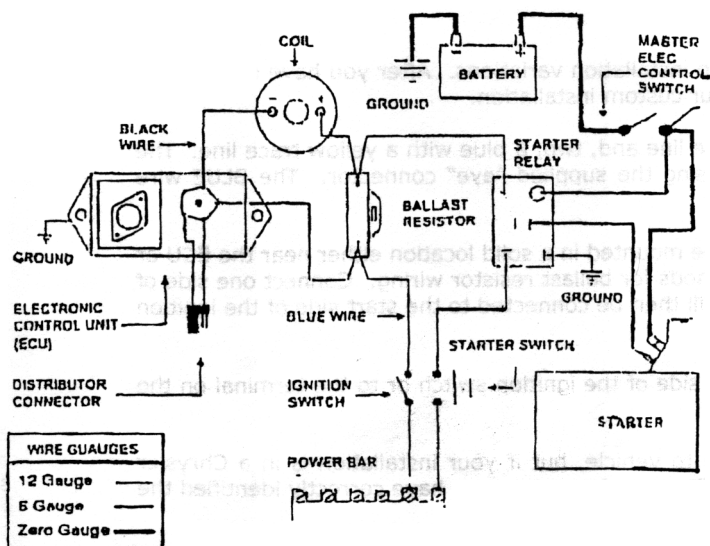
If your vehicle does not start - Check all connections. Make sure the ECU and engine block are grounded. Be sure the Main Ignition Feed is spliced correctly. Be sure the distributor is not "180 degree off."

If your vehicle idles rough or stalls - Make sure the engine and ECU are grounded and the coil is at least 20Kv.

If your vehicle fails at high speeds - Check to see that your battery is the required 12.5-volt output.

PLEASE NOTE: The most common problems are the result of a poor ground. It is recommended that you do not assume your engine is grounded.

TYPICAL WIRING FOR A NEW INSTALLATION IN RACE CAR



TYPICAL WIRING FOR "STREET ROD" INSTALLATION

