

Installation Instructions for 40031, 40035 & 40037 Chrysler Electronic Ignition Conversion Kit w/ HP Electronic Trigger Vacuum Advance Distributor

Installation Instructions:

This high-performance kit includes all the parts needed to convert from points-type to an electronic ignition (HP Electronic Vacuum Advance Distributor, Electronic Control Unit-Orange Box, Wiring Harness, Ballast Resistor, and Hardware).

NOTE: This electronic conversion distributor kit will not work with fuel injection systems that require a distributor signal.

1. Unpack the distributor carefully and inspect the contents. Disconnect the negative battery cable.
2. Remove the old distributor cap. Mark the location where the rotor tip is pointing on the firewall or other engine component (this exact location will be needed later when installing the new distributor). Note the position of the vacuum canister on the old distributor (this will also be needed later). Remove the distributor hold-down bolt and clamp, and remove the old distributor.
3. Verify the air gap clearance between the reluctor wheel and pickup on the new distributor. Use a non-magnetic (brass or nylon) feeler gauge to check this clearance (it should be .008" to .018"). Check each point on the reluctor wheel to verify the proper clearance. If necessary, adjust the pick up obtain the .008" to .018" clearance.
4. Lightly coat the o-ring on the distributor shaft with motor oil and make sure it is in the groove.
5. Lower the new distributor into the engine block with the vacuum canister in about the same location as before. Use the mark you made in step #2 to locate the rotor tip in the same location as it was on the old distributor. You may need to rotate the rotor back and forth until the distributor slides into position. Reinstall the hold down clamp and bolt.
6. **Electronic Control Unit (ECU) Installation.** This kit includes the parts needed to convert from a points-type to electronic ignition. This kit can also be used as a HP upgrade on an existing electronic ignition system. If you are upgrading an existing electronic ignition, replace the ECU and ballast resistor with the new parts in this kit. If you are converting from a points-type ignition, continue with the following steps.
7. Choose a suitable location for the ECU. Choose a location that is away from exhaust heat and other moving components that could damage the wiring or control unit. The ECU is usually mounted on the firewall, or inner fender panel. The ECU should not be mounted inside the driver's compartment since it doesn't get enough air circulation to keep it cool. Make sure the wiring harness has enough length to reach the ECU and Distributor before mounting the ECU.
8. Once a suitable location is identified, use the ECU as a template and mark the installation point. Make sure there is nothing behind the panel that could be damaged when drilling. Drill two holes and install the ECU using sheet metal screws or bolts. The ECU must be grounded (add a ground wire if needed).
9. Plug the master connector on the harness into the ECU and retain it with the long screw included in this kit. Attach the special two-wire connector to the distributor.
10. The wiring harness has 3 loose wires, black/yellow, blue/yellow, and green/red. The green/red wire is not used and can be cut off. The black/yellow wire is connected to the negative (-) side of the coil using the supplied ring connector and shrink tube. The blue/yellow wire will be connected to one side of the ballast resistor. The wiring harness will likely have extra length. Determine the length and routing for each wire and cut each one to the desired length (leave enough slack to allow for movement of the engine).
11. **Ballast Resistor Installation.** The ballast resistor must be mounted near the ECU or on the firewall. Depending on the 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 of the ballast resistor must also be connected to the Ignition start wire or starter relay (if applicable). Crimp these two wires together using one connector and shrink tube, and attach it the ballast resistor.
12. Locate the main ignition feed wire that has power when the ignition key is in the "on" position (not the start position), and doesn't have power when it is turned off. Reconnect the battery terminals and use a test light and confirm that this wire has power only when the ignition key is in the "on" position. You may need to splice into this wire to extend it to the ballast resistor.



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13. Cut & strip both the blue/yellow wire and this ignition feed wire and crimp them together using one connector and shrink tube. Connect this wire to the other side of the ballast resistor.

14. Double-check all of your connections to be sure they are secure and tight. Convoluted tube and wire ties are recommended to protect the wiring.

15. **Start Up and Adjustments.** It is recommended that you install new spark plugs and wires when installing this ignition conversion kit. After installing the spark plug wires, connect timing light and 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 may smoke for a couple of minutes after start up. This is normal; it is "burning off" any oil that may be on the porous surface.

16. 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 timing by 2 degrees. Once the initial timing is set and the engine has warmed up, unplug and reconnect the vacuum hose to the distributor.

17. 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 remove 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 1/2 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 degrees 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 has the required 12.5-volt output.

The ballast resistor included with this kit is for use with a stock style Chrysler coil. If an after-market or HP coil is used, use a ballast resistor that is recommended with that coil.

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.

