



Electronic Distributor Installation Instructions

For Chrysler V8 powered vehicles

Sum-850003 273-340-360 Chrysler V8

Sum-850004 383-400 Chrysler V8

Sum-850005 413-426-440 Chrysler V8

Distributor Installation

This kit includes a premium adjustable advance distributor, wiring harness, electronic control unit (ECU) ballast resistor and connectors for most applications. As this is a universal kit designed to replace existing point type distributors and also to provide initial installations in race and street applications. You may have to supply additional universal components that are commonly available such as screws, bolts, nuts, washers and connectors.

Note: This distributor kit will not work with fuel injection that requires a signal generated by the distributor such as factory fuel injection.

For All Installations:

Disconnect the negative battery cable (all installations)

On replacement installations remove the original distributor cap, mark the location with tape on an adjacent component of the engine or chassis where the rotor's tip is pointing.

Remove the distributor hold down bolt and clamp.

Remove the distributor from the engine.

Although the "air gap" has been set during the blueprinting process it is a good idea to double check. Use a non magnetic (brass or nylon) feeler gauge and verify that the clearance between the pickup and the reluctor (star) is .008 inch. Each "point" should be checked, this will assure absolute correct timing. If necessary adjust the "float" of the pick up to the .008 inch setting. When you turn the gear you will feel a magnetic resistance as the reluctor point passes the pick up.

Make sure that the o-ring on the distributor shaft is in the groove and lightly coated with motor oil.

Begin installation process by lowering the new distributor into the engine block. If you are replacing an existing distributor and have marked the rotor tip location with tape, turn the distributor rotor until it points toward the tape marking.

Slowly rotate the rotor back and forth until the distributor slides into position. Check and make sure that it is "seated" on the engine block.

Electronic Installation

The Summit Electronic Distributor and Conversion Kit is configured to be installed in an initial installation, a point type conversion or a performance upgrade to an existing factory installed electronic ignition system.

If you are upgrading the electronic installation is simply replacing the existing ECU, Ballast Resistor with the Summit replacement parts.

If you are converting an older point type or performing an initial installation follow the following step-by-step instructions.

Choose a location for the ECU. You want to pick a location that is not close to exhaust heat. The ideal mounting is under the dash in a passenger car or on a chassis mounted bracket in an open wheel car.

The radiator support or fenderwell provide safe locations in most installations. If the above is not convenient or suitable.

Connect the two-wire distributor end plug on the harness to the matching leads exiting the distributor.

Trial fit the master connector at the intended ECU location to make sure that the wires can be safely routed to the distributors leads without interference with any heat source or sharp edges that may scrape the wires.

Once fit checked, use the ECU base as a template; mark the installation point and drill for either sheet metal screws or bolts. In either case be absolutely sure that there is nothing behind the panel being drilled that could be damaged (or shorted out). (The fasteners for this process are not provided in this kit). 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

Plug the master connector on the harness into the ECU. It is a good idea to protect these wires with the use of convoluted tubing or wire ties when you have completed the installation of the electronics.

Note: The wiring harness wires have been manufactured with excess length so that many installation variations can be made. Once you have determined the required lengths. It is wise to cut each wire to fit your custom installation.

You will see two loose wires. They are:
Black with a yellow trace line
Blue with a yellow trace line

The **BLACK** wire should be connected to the negative (-) side of the coil using the "eye" connector supplied or similar.

The **BLUE** wire should be attached to one side of the ballast resistor.

BALLIST 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 you are doing, 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 using a relay switched starter).

The other side of the ballast resistor is connected to the run side of the ignition switch or to the terminal on the starter relay (if using a relay switched starter)

See wiring diagrams on reverse side for detailed schematic

Locate the main ignition feed. This will vary from vehicle to vehicle. 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 sure that the main ignition feed you identified is correct or verify the main ignition feed in a new installation by following the following procedure.

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 this verified turn off the ignition switch and disconnect the negative side of the battery**

CONTINUED ON REVERSE SIDE

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 where you installed the BLUE wire from new harness)

Allowing at least 3 extra inches for engine movement, cut both the BLUE wire and the new wire spliced into the Main Ignition Feed. Strip 1/4" of insulation from both wires. Place BOTH of the stripped wires into ONE of the 12-gauge female spade connectors and firmly crimp tight. Wrap the connection with electrical tape.

Route a 14-gauge wire from the positive side of the ignition coil to the ballast resistor. Leave an excess or 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. On the other end of that wire crimp a 14-gauge female spade connector. Wrap all exposed areas with electrical tape.

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 connection to be sure they are secure and tight.

START UP AND ADJUSTMENTS

It is always a good idea to install new spark plugs and spark plug wires at the time of an upgrade like this. Summit has everything you need in stock and ready to ship.

After installing 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 a 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 may smoke for a couple of minutes after start up. This is normal; it is simply "burning" off any oil that may have attached itself to the porous surface.

Set the initial timing at 5 degrees advance and tighten the distributor hold down.

Take a test drive with the vacuum line still plugged.

If you detect any detonation sounds (pinging) reduce the timing by 2 degrees.

Once the initial timing is set and the engine is fully warmed up unplug and reconnect the vacuum hose to the distributor.

After the engine is fully warmed up, with the vacuum line attached to the distributor, make two or three part throttle tests. If detonation or surges are encountered you may need to adjust the vacuum advance. With the engine turned off remove the vacuum line from the distributor. Carefully insert a 3/32 Allen wrench into the fitting where the vacuum hose was attached. With the Allen wrench plugged into the adjusting screw turn the Allen wrench 1/2 turn, clockwise to reduce the vacuum advance by 2-3 degrees. Remove the Allen wrench, reconnect the vacuum line and repeat the test procedure. Repeat this procedure if detonation or surging persists and adjust vacuum accordingly.

Trouble Shooting

If the 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 distributor is not "180 degree off"

Engine Idle is rough or stalls:

Make sure engine and ECU are grounded

The Coil is at least 20Kv

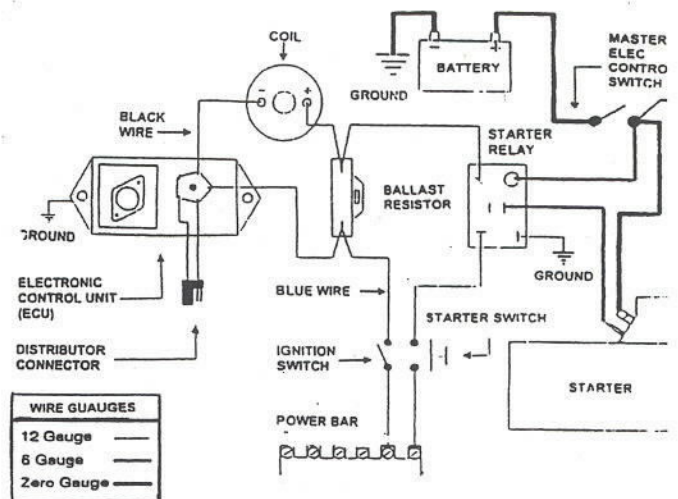
If any failure at high speed:

Check battery A 12.5 volt output is required

The most common problem is that of a poor ground.

Do not assume that your engine is grounded. Double check. If you any doubt, make sure you have a ground strap from the block to the chassis.

TYPICAL WIRING FOR A NEW INSTALLATION IN RACE CAR



TYPICAL "STREET ROD" INSTALLATION (BASIC ILLUSTRATION, INSTALLER WILL HAVE TO SUPPLY FASTNERS AND MISC. WIRES AND TERMINALS)

