

ACCEL ELECTRONIC BREAKERLESS DISTRIBUTORS

FOR USE WITH ACCEL 61000, 61000V, 51000E and 51000S SERIES
DISTRIBUTORS and 6800E SERIES MARINE DISTRIBUTORS

Installation Instructions

WORK SAFELY!

Perform this installation on a good clean level surface for maximum safety and with the engine turned OFF!. Place blocks or wedges in front of and behind both rear wheels to prevent movement in either direction.

CAUTION

To avoid any possibility of bodily injury or damage to vehicle, do not attempt distributor installation until you are confident that vehicle is safely secured and will not move.

Distributor Installation Procedure

1. Remove existing distributor cap. Do not remove the spark plug wires at this time.
2. Crank the engine slowly until the rotor blade is aimed at a fixed point on the engine or firewall.
3. Mark the distributor housing directly underneath the rotor blade's pointer (tape or a marker works well here). Reinstall the distributor cap, and mark the plug wire with tape that is closest to the mark on the housing.
4. Once again remove the distributor cap leaving the spark plug wires attached. Disconnect the wiring from the coil, and remove the present distributor from the engine.
5. With the rotor installed and the cap removed, install the new distributor into the engine with the rotor blade pointing in the same direction as the discarded distributor, as noted in step 2. If the distributor does not drop all the way into the engine, the oil pump drive may not be aligned with the distributor shaft. On Chevrolet engines, the oil pump drive can be rotated by using a long flat bladed screw driver until it is aligned with the distributor shaft. On Chrysler engines it is necessary to rotate the distributor shaft to match the alignment of the pump.
6. Install the distributor hold down, but be sure the distributor can be rotated sufficiently to set the timing. If a vacuum advance is to be used, plug the line. Do not attach the vacuum line to the vacuum canister at this time.
7. Mark the new distributor cap terminal that aligns with the rotor pointer as done with the old distributor in step #3.
8. Place the marked plug wire from the old cap into the marked terminal in the new cap. Continue transferring plug wires to the new cap one at a time, making sure that they are in the same physical location as they were in the old cap. If you are unsure, verify the firing order and distributor rotation with a service manual.
9. Connect the green wire to coil negative (-), and the red wire to coil positive (+). Leave the original ignition wire on coil positive. Connect the coil high tension (spark) wire to the distributor.
10. **DO NOT USE A BALLAST RESISTOR!** Some older vehicles used resistor wire to power the coil. This must be bypassed. Using a volt meter, verify 12 volts to coil positive (+) when the key is in the RUN position as well as START. When bypassing resistor wire or running a new SUPPLY wire, use at least 14 gauge from coil + to the starter solenoid or a switched terminal in the fuse box.
11. When installing your new distributor, it is important to check the primary resistance of the coil. To do this, use an Ohms meter and with the ignition switch off, check across the + and - terminals of the coil. The resistance value should be less than 2 Ohm's. If the resistance is greater than 2 Ohm's, you have a coil which was designed for a factory points style distributor. Using a coil which was designed for a points style ignition will cause the electronic module to overheat and shutdown. ACCEL recommends using a coil designed for an electronic ignition system which, ideally, has a primary resistance of less than 1 Ohm. ACCEL part #'s 140001, 140008, or 140108 will work exceptionally well. For marine applications, ACCEL part #'s 6500, 6501 or 6503 also work exceptionally well. Failure to use a coil with the proper primary resistance (less than 2 Ohm's) will void your warranty.
12. Start the engine and set the initial timing. Start at about 2' above the manufacturer's recommendation

To determine the best advance curve for your application, we recommend a procedure called "power timing." As delivered, the mechanical advance is set at 12' distributor (24' engine) and totals at 2800 rpm. The vacuum advance is Set at 7' (14' engine) at 12" of vacuum. These settings are based on street applications for both standard and automatic applications.

After the engine is warm, (and the vacuum advance disconnected if equipped), make full throttle acceleration runs and adjust timing to just below the point of engine ping. If the initial timing is too high or too low, or the ping cannot be eliminated, the mechanical advance should be adjusted. See "Instructions for Mechanical Advance Changes." For vacuum advance models, connect advance hose to a ported (timed) vacuum source on the carburetor (usually higher up on the carburetor, not a port in the throttle plate). Test drive under part throttle operation and listen for engine ping. The vacuum advance should be adjusted to just below the point of engine ping or engine surge. See "Instructions for Vacuum Advance Changes."

*Some engines will require direct manifold vacuum for the advance canister to operate satisfactorily. This is usually true on older (pre-smog) engines or with some cam grinds. Some experimentation may be necessary.

Thank you for choosing ACCEL products.



Technical Service: A highly trained Technical Service Department is maintained by ACCEL to answer your technical questions, provide additional product information and offer various recommendations. See your local retailer of ACCEL products for specific prices.

For best results, Technical Service calls, correspondence and warranty questions should be directed to the address at the right:

Mr. Gasket Performance Group
8700 Brookpark Road
Cleveland, Ohio 44129-6899
216-398-8300, Ext. 500
www.mrgasket.com
tech@mrgasket.echlin.com

Instructions for Mechanical Advance Curve Changes

To change the mechanical advance curve, your new distributor should be removed from the engine.

- Remove the cap and rotor.
- Remove the electronic module and magnetic pick-up. There are two regular headed screws in each. Be sure to note the location of the screws and the orientation of the components in the distributor bowl.
- Remove the round clip that retains the reluctor wheel (8 pointed wheel) to the distributor shaft. This is best accomplished by using a small gear puller. Place the three legs of the puller underneath the thick washer directly under the reluctor, and the plunger on the top of the shaft. This will remove the reluctor and clip without damage.
- 61000 series:** Remove the two 3/32" allen headed screws that hold the magnetic pick-up mounting plate inside the bowl. Remove the plate.

61000V series (vacuum advance): Remove the snap ring that holds the advance plate inside the bowl. Remove the plate. Remove the vacuum advance canister from the distributor, noting the direction of the tab on the canister where it engages the advance plate. Remove the two 3/32" headed screws that hold the lower advance plate to the bowl. Remove the lower plate.

51000E & S series: Remove the two screws on the bottom (outside) of the bowl assembly. Remove the entire upper bowl section from the distributor.

- Remove the allen head screw from the center of the upper shaft assembly and lift the assembly out.
- By using the diagram below, determine which hole the stop screw should be located in and which direction the arrow should be pointed for your distributor advance specifications. For example, if you require a distributor advance of 14° and your distributor is right-hand rotation (clockwise), the stop screw would be placed in the bottom hole marked 14° and the cam assembly would be installed with the arrow pointing to the 10°-13° indicator on the stop bracket. Note figures A and B. Keep in mind that distributor advance is half of crankshaft advance. 14° of distributor advance will give 28° at the crankshaft when checking the advance at the harmonic balancer.
- With the upper shaft assembly placed in the proper location, replace the allen head screw and the advance springs. The upper shaft assembly should move freely and have a minimum amount of end play without binding.
- Replace distributor head assembly in the reverse order of disassembly. When reinstalling the electronic module, apply a generous coat of white thermal silicone grease underneath the module before installing. The air gap on the magnetic pick-up should be set to .005"-.007" with a non-magnetic feeler gauge. Note figure E.
- Replace the distributor in the engine and set timing per installation instructions.

MECHANICAL ADVANCE CURVE OPTIONS

FIGURE A

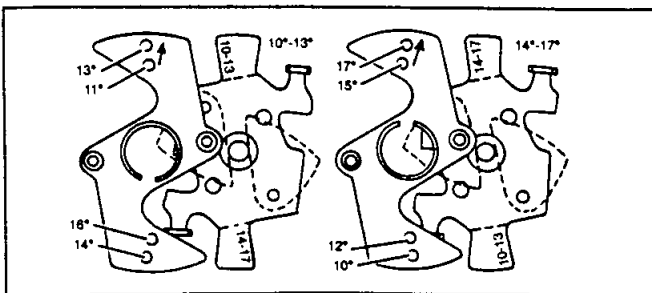
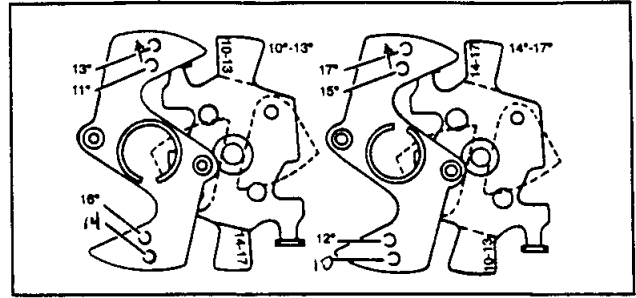


FIGURE B



INSTRUCTIONS FOR VACUUM ADVANCE CURVE CHANGES

The vacuum advance chamber on your new distributor is easily adjusted by simply inserting and turning a 3/32" allen wrench into the hose nipple (Figure C). The reason for an adjustable vacuum advance is to enable you to obtain maximum ignition advance under cruise conditions for your vehicle.

As received the vacuum advance is adjusted four turns clockwise. This is 7° distributor (14° engine) at approximately 12" of vacuum (figure D). If surging or pinging is noticed at cruise RPM, turn the adjustment counterclockwise, one turn at a time, until the condition is no longer noticed. If more advance is needed, turn the adjustment clockwise.

FIGURE C

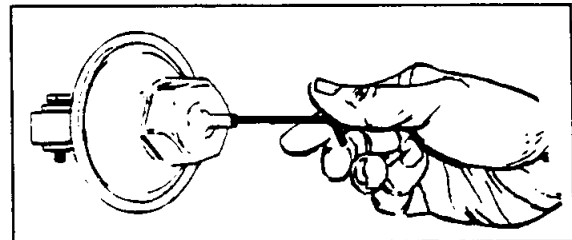
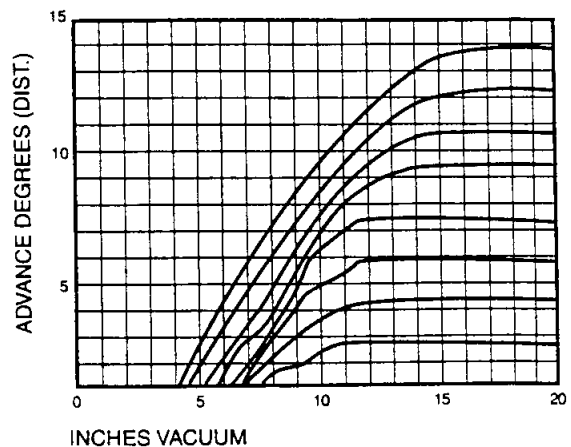


FIGURE D



**INSTRUCTIONS FOR CONNECTION
TO ACCEL 300+ IGNITION
or other CDI box, ignition amplifier
or multiple strike unit.**

Your new distributor is designed as a stand alone unit. It does not require an external ignition/enhancer box to operate. To use the ACCEL 300+ (or other) ignition system with this distributor, the electronic module must be bypassed.

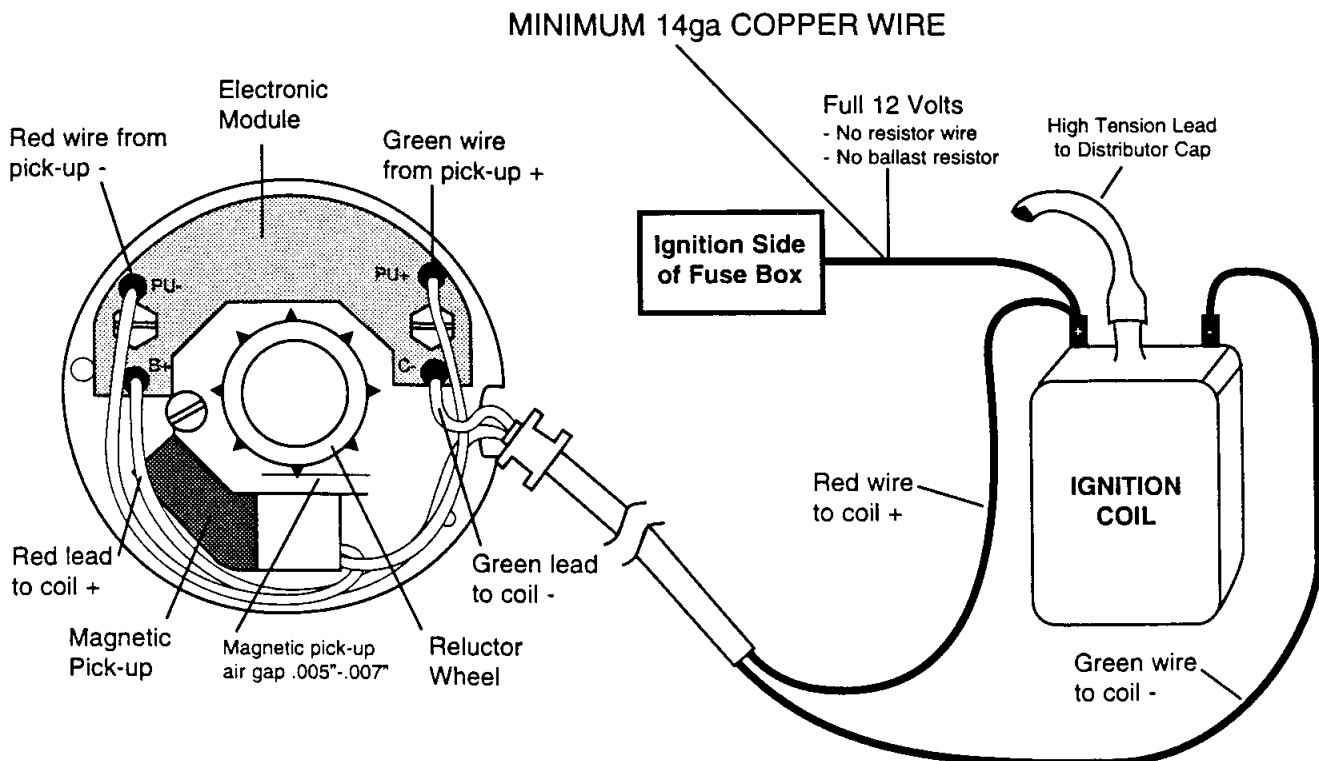
1. Remove the cap and rotor.
2. The electronic module is the green, half-circle shaped piece with four wires attached to it. Remove the four wire leads (two red and two green) from the module. They are attached with spade connectors.
3. The module may be removed from the distributor if desired.
4. Connect the two leads from the magnetic pick-up directly to the 300+. The green lead from the magnetic pick-up to ACCEL 300+ purple (magnetic pick-up positive +). Connect the red wire from the magnetic pick-up to ACCEL 300+ orange (magnetic pick-up negative -).
5. Other 300+ connections: Red - 12 volts key, Black - engine ground, Yellow - 300+ Coil positive (+), Brown - 300+ coil negative (-).
6. Check magnetic pick-up for proper air gap. Using a non-magnetic feeler gauge, set gap to .005"-.007" (Note Figure E).
7. Follow instructions in ACCEL 300+ booklet regarding spark plug gap and ignition timing under "Technical Tips and Hints" section.

ACCEL strongly recommends the use of ACCEL silicone ignition wires and a fresh set of ACCEL U-Groove spark plugs with the installation of all new distributors.

ATTENTION: All ACCEL distributors are guaranteed to be free of defects in material or workmanship. However, ACCEL will not accept warranty claims for any products unless a customer warranty card properly filled out is in our files at the time of the warranty. Please fill out and return to the ACCEL factory the enclosed warranty card as soon as possible to protect your rights under this warranty. Refer to the warranty card for specific warranty information. Insist on ACCEL starting, charging, and ignition components for all your tune-up needs.

REPLACEMENT PARTS

| | |
|--------------------------------|-----------------------------|
| Cap and Rotor Kit | #8320 |
| Cap | 120326 |
| Rotor | 130319 |
| Marine Cap and Rotor Kit | 6900 |
| Marine Cap | 6302 |
| Marine Rotor | 6362 |
| Electronic Module | #35366 |
| Reluctor Wheel..... | #G19401 |
| Reluctor Clip | #M390 |
| Magnetic Pick-up..... | #GG34056 |
| Vacuum Advance | #GI7314 (clockwise) |
| Vacuum Advance | #GI7315 (counter-clockwise) |



NOTE: RETAIN THIS INSTRUCTION SHEET FOR FUTURE REFERENCE.