



Application: All Air-Cooled Beetle, Super, Ghia, Type 3, Thing,
& Air-Cooled Volkswagon Bus 1950-1971

Part Includes
1 - Component

Electronic Distributor



Tools Needed



WARNING

- Installing the module wires backwards will cause the module to fail.
- Leaving the ignition switched to the start position without the engine running will cause the module to fail.
- Using a coil with less than 3ohms resistance will damage the module.
- Must have a properly working electrical system. Alternator / Generator output must not exceed 13.7 volts.

BEFORE YOU START

Please read and thoroughly understand these instructions. If you do not feel comfortable with this project, we recommend that you have a professional air-cooled specialist install the distributor.

STEP 1.

Disconnect the negative battery cable.

STEP 2.

Set your motor to TDC (Top Dead Center):

- Set the emergency break.
- Prevent car from rolling by placing wheel chocks or similar beneath tires.
- Set the transmission to neutral.
- Set engine to TDC (top dead center) on #1 cylinder per manual.

STEP 3.

Remove your old distributor:

- Remove spark plug and coil wires from distributor cap.
- Disconnect condenser wire from coil. (Note: the condenser wire is attached to the negative side of the coil) Make a note of the terminal where the condenser wire is connected.
- Remove the nut that secures the distributor clamp to the case with a 13mm wrench.
- Firmly pull the distributor upwards and out of the engine case.
- Loosen the nut that secures the distributor clamp to the distributor with a 10mm wrench.
- Remove the distributor clamp from the distributor. Make note of how the clamp is fitted to the distributor (you don't want to install it upside down on the new distributor).
- WARNING: DO NOT ROTATE THE MOTOR WHILE THE DISTRIBUTOR IS OUT OF THE CASE.**



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Electronic Distributor^(cont.)

STEP 4.

- A. Liberally lubricate the the 0-ring on the new distributor with either grease or oil.
- B. Make sure the distributor clamp is loosened all of the way to prevent damage to the 0-ring when installing the clamp on the new distributor.
- C. With the correct side up, slide the distributor clamp on the new distributor.
- D. Key the distributor bottom to the gear in the case. Using a flash light note the location of the groove on the gear in the case. Rotate the distributor shaft so that the flange on the bottom of the distributor mates with the groove in the gear in the case. For the 0231 178 009EL the tip of the rotor should be pointing to the 5 o'clock position (approximately). For the 0231 170 034EL the top of the rotor should be roughly pointing to the 2 o'clock position.

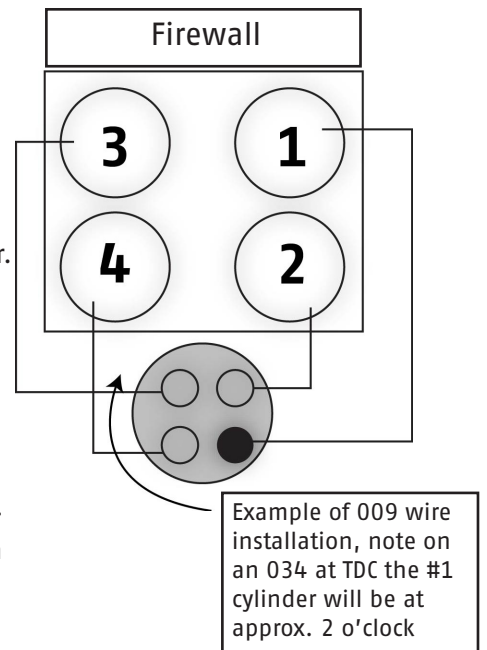
Part #	Rotor Tip Pointing at TDC on #1 Cylinder
0231 178 009EL	5 o'clock position (approximately)
0231 170 034EL	2 o'clock position (approximately)

- E. Firmly press the distributor into the case. Make sure there is no gap between the machined shoulder of the distributor, distributor clamp and engine case.
- F. When properly "keyed" the distributor shaft can not be rotated by hand.
- G. Install the nut that secures the distributor clamp to the case using a 13mm wrench.
- H. Turn the distributor body until the center of the rotor tip is aligned with the stamped notch on the edge of the distributor body.
- I. Slightly tighten the nut on the distributor clamp with a 10mm wrench. Leave the nut slightly loose until final timing is set. You will need to adjust the distributor when timing the motor.

STEP 5.

Install Spark Plug Wires – Sequence is 1,4,3,2:

- A. Since the motor is set to TDC on #1 cylinder, make a note where the tip of the rotor as it is pointing. This will be the location for the #1 cylinder on the distributor cap.
- B. Install the distributor cap.
- C. Using your note from step 5 (A), install the spark plug wire for the #1 cylinder.
- D. Clockwise from the #1 wire, install the spark plug wire for the #4 cylinder.
- E. Clockwise from the #4 wire, install the spark plug wire for the #3 cylinder.
- F. Clockwise from the #3 wire, install the spark plug wire for the #2 cylinder.
- G. Install the ignition wire from the coil to the center of the distributor cap.
- H. Double check your spark plug wire installation. Follow each wire from the distributor cap to the spark plug. Remember the #1 spark plug wire should be inserted into the distributor cap above the tip of the rotor with the motor set to TDC on #1 cylinder. This is the most common mistake when installing a new distributor.



STEP 6.

Connect Module to Coil

- A. Connect the red wire of the module to the positive (+) or (15) side of the coil
- B. Connect the black wire of the module to the negative (-) or (1) side of the coil.
- C. Make sure the module wires inside the distributor are seated against the inner wall of the distributor away from moving parts. Note if the wires rub against any moving parts the module will fail.
- D. Reinstall negative battery cable.



Electronic Distributor (cont.)

STEP 7.

Set Ignition Timing

- A. Start the engine. If the engine does not start rotate the body of the distributor slightly left or right. The engine should start when set to TDC with wires connected correctly.
- B. Set the ignition timing to the proper specification for your vehicle using a strobe style timing light. Trouble Shooting: If your car does not start, please check the following.

TROUBLE SHOOTING

If your car does not start, please check the following.

1. Confirm battery has minimum of 12v output.
2. Confirm your distributor cap and plug wires are properly installed and that the firing order is correct: 1,4,3,2. If you are not sure, rotate the crank shaft pulley until you reach TDC on #1 cylinder. At this point with cap removed and the rotor installed the tip of the rotor should be pointing to the #1 cylinder of the distributor cap.
3. Check all wire connections. Make sure the spark plug wires are properly installed and module wires are properly attached to the coil.
4. Check timing. Set initial timing to 0° TDC. After this setting follow step 7 above and set your timing to the proper specification for your car using a strobe style timing light.
5. Distributor installed 180° off. Check that your distributor is in true TDC on #1 cylinder. It is not uncommon to install the distributor with the shaft 180° off. Confirm when the engine is set to TDC on #1 cylinder, the tip of the rotor is pointing to the proper location. For the 0231 178 009EL the tip of the rotor should be roughly pointing to the 5 o'clock position. For the 0231 170 034EL the top of the rotor should be approximately pointing to the 2 o'clock position.

Part #	Rotor Tip Pointing at TDC on #1 Cylinder
0231 178 009EL	5 o'clock position (approximately)
0231 170 034EL	2 o'clock position (approximately)