Mercedes Benz Diesel (OM617A)
Tachometer Amplifier
Installation Instructions and User Guide

Doc. Rev. Special

Introduction:

The Diesel Tachometer Amplifier is a plug compatible replacement for the stock tach amp which was provided in Mercedes Benz diesel models equipped with the OM617A engine prior to the 1985 model year. It is based on modern electronics, and utilizes an 8-bit RISC microcontroller for input pulse detection and output waveform generation. It includes a self test function that provides a visual indication of proper functioning of the amplifier, tachometer gauge, and associated wiring.

Installation:

The tachometer amplifier plugs into the connector on the inner left fender under the circular “trash can” cap.

1) Remove the “trash can” cap by gently unscrewing it. Verify that the cap is approximately 2 inches tall. Later model years do not use tachometer amplifiers, but have a “diagnostic plug” in place of the tach amp. The diagnostic plug has a similar circular cap, but is not as tall as the cap used with the tach amps.

2) Verify that there is an electronic module inside the “trash can” cap. You should see six metallic connector pins inside the cap. If the cap is empty, your car has a diagnostic plug and does not use a tach amp.

Installation (continued):

3) Gently extract the electronics module from the cap. This is best done by grabbing the module with pliers and gently “walking” the module out of the cap by rocking the cap back and forth while pulling the module out. Set the module aside, but leave the cap connected to its tether.

4) Orient the new module with the contacts inside the connector plug. There will be a group of three contacts across the bottom at the 5, 6 and 7 o’clock positions, two contacts at 10 and 11 o’clock, and a single contact at the 3 o’clock position.

5) Guide the connector pins into the socket contacts. Once the pins have been started into the socket, press the PC board gently but firmly into the socket by pressing around the entire circumference of the board. It will seat about 0.25 inches into the socket and then bottom out. Do not force it further into the socket after it bottoms. When properly inserted it will ride about 0.2 inches above the plane of the socket.

Installation (finish):

5) Once the PC board is seated in the socket, take the now empty cap and screw it back on to the socket housing. Installation is now complete.

Operation:

Using the key, place the ignition switch in the “GLOW” position, just as you would normally do when starting the car. The tach amp will then execute a self test, and the tach needle should swing quickly from 0 RPM to about 5k RPM, pause momentarily, and then sweep back to 0 RPM. This verifies the proper functioning of the amp, the gauge, and the wiring between the two. If the tach needle does not move when the key is first placed in the “GLOW” position, troubleshooting is needed.

After completion of the GLOW cycle, start the car normally. The tachometer should now be operational, and performance should be indistinguishable from a properly functioning stock tach amp.

It is not necessary to wait for the self test to complete before starting the car. If the car is started during execution of the self test, the test will complete normally and RPM will be displayed immediately after completion.