

Vehicle: 2011 AUDI A4 2.0L L4 CAEB-GAS-FI-T

Content: Code P0302 : Cylinder 2 Misfire Detected

Ignition Coils With Power Output Stage , Checking

Function

The ignition coil must transform the relatively low 12 V on-board vehicle voltage to the high ignition voltage required and supply the energy stored in that voltage to the spark plug. The functional principle of the ignition coil is relatively simple. It has a primary winding (small number of turns) and a secondary winding (lots of turns). The turn ratio between the number of primary and secondary winding turns determines the level of the voltage generated at the output. The Ignition Coils With Power Output Stage are plugged directly into the spark plug. This means that the ignition energy can be transferred directly to the spark plug with virtually zero power loss.

- Multimeter
- Wiring Diagram
- Scan Tool
- LED Test Lamp

Test requirements

- Fuses OK.
- Battery voltage OK.
- Switch OFF all electrical and electronic accessories.
- Vehicles with Auto. Transmission, ensure Selector Lever position is in P .
- Vehicles with Man. Transmission, ensure Shifter Lever position is in N with Parking Brake applied.
- Coolant Temperature: $\geq 80^{\circ}\text{C}$.
- Observe all safety precautions: .
- View clean working conditions: .
- For Hybrid vehicle's : .

Test Procedure

Step	Procedure	Result / Action to Take
1	PERFORM: Preliminary Check to verify the customers complaint. . – Was Complaint verified?	– YES: GO TO: Step 2 . – NO: GATHER more information from customer about the complaint.
2	IGNITION: ON. DISCONNECT: Faulty Ignition Coil With Power Output Stage harness connector. CHECK: Faulty Ignition Coil With Power Output Stage harness connector terminals 1 to 2 and 4 for voltage. SPECIFIED VALUE: Battery voltage. IGNITION: OFF. – Was Value obtained?	– YES: GO TO: Step 3 . – NO: CHECK: Wiring for opens, high resistance, short or harness connector for damage, corrosion, loose or broken terminals. REPAIR: Faulty wiring or connector. REPLACE: Any open fuses. GO TO: Step 5 .
3	REMOVE: Engine Control Module - J623- . . CHECK: Faulty Ignition Coil With Power Output Stage harness connector terminal 3 to the Engine Control Module - J623- harness connector T60 / xx for resistance. appropriate wiring diagram for proper terminal locations. SPECIFIED VALUE: $0.5\ \Omega$ ($\pm 0.3\ \Omega$). – Was Value obtained?	– YES: GO TO: Step 4 . – NO: CHECK: Wiring for open, high resistance, short or harness connector for damage, corrosion, loose or broken terminals. REPAIR: Faulty wiring or connector. GO TO: Step 5 .
4	DISCONNECT: All of the Fuel Injectors . appropriate wiring diagram. DISCONNECT: Cold Start Injector (If Applicable). CONNECT: Engine Control Module - J623- harness connector. CONNECT: LED Test Lamp to Faulty Ignition Coil With Power Output Stage harness connector terminals 3 to 2. CRANK: Engine. SPECIFIED VALUE: LED Test Lamp should Flicker ON & OFF. – Was Value obtained?	– YES: REPLACE: Faulty Ignition Coil With Power Output Stage . . GO TO: Step 5 . – NO: REPLACE: Engine Control Module -J623- . . GO TO: Step 5 .
5	Final Procedure Perform a road test to verify repair.	– YES: Check the DTC Memory . . Perform the diagnostic procedure for that DTC.