

2014 Volkswagen Passat Sedan (A32) L4-2.0L DSL Turbo (CKRA)

Vehicle > Powertrain Management > Computers and Control Systems > Testing and Inspection > Component Tests and General Diagnostics > Fuel Injectors, Checking

## GENERIC SCAN TOOL

### Fuel Injectors, Checking

Observe all safety precautions: => [ Safety Precautions ] See: Computers and Control Systems > Technician Safety Information > Generic Scan Tool

View clean working conditions: => [ Clean Working Conditions ] See: Computers and Control Systems > Technician Safety Information > Generic Scan Tool

Prior to repair work, perform a preliminary check to verify the condition. Refer to => [ Preliminary Check ] See: Computers and Control Systems > Scan Tool Testing and Procedures > Preliminary Check.

Use only gold-plated terminals when servicing any component with gold-plated electrical harness connector terminals.

For wiring diagrams, component locations, and connector views, Refer to the applicable wiring diagram.

The following test procedure is used to diagnose all fuel injectors.

### Special tools, testers and auxiliary items required

- ◆ multimeter.
- ◆ Wiring diagram.

### Test requirements

- ◆ The Engine Speed (RPM) Sensor (G28) OK.
- ◆ Battery voltage at least 12.5 volts.
- ◆ All electrical consumers such as, lights and rear window defroster, switched off.
- ◆ Vehicles with automatic transmission, shift selector lever into position "P" or "N".
- ◆ A/C switched off.
- ◆ Ground connections between engine/transmission/chassis OK.
- ◆ Ignition switched off.

### Test procedure

- Perform a preliminary check to verify the customers complaint. Refer to => [ Preliminary Check ] See: Computers and Control Systems > Scan Tool Testing and Procedures > Preliminary Check

#### Start diagnosis

- Remove the engine cover.
- Disconnect the Fuel Injectors electrical harness connectors from Fuel Injectors (N30, N31, N32, N33).

#### Checking internal resistance

- Using a multimeter, Check the Fuel Injector terminals 1 to 2 for resistance.

50 K ohms - 700 K ohms ( Depending on Temperature )

If the specified value was Not obtained:

- Replace the malfunctioning Fuel Injector.

If the specified value was obtained:

- Remove the Engine Control Module (J623). Refer to the Repair Manual.
- Using a multimeter, Check the Fuel Injectors electrical harness connector terminals to the Engine Control Module (J623) electrical harness connector T60 terminals for a short to ground or voltage, high resistance or an open circuit.

Component	Fuel Injector electrical harness connector terminals	Engine Control Module (J623) electrical connector T60 terminals
Cylinder 1 Fuel Injector (N30)	1	46
	2	31
Cylinder 2 Fuel Injector (N31)	1	2
	2	17
Cylinder 3 Fuel Injector (N32)	1	1
	2	16
Cylinder 4 Fuel Injector (N33)	1	47
	2	32

Specified value: 1.5 ohms Max.

If the specified value was Not obtained:

- Check the wiring for an open, high resistance or short to ground or voltage.
- Check the electrical harness connector for damage, corrosion, loose or broken terminals.
- If necessary, repair the faulty wiring connection.

If the specified value was obtained:

- Replace the Engine Control Module (J623). Refer to the Repair Manual.

Final procedures

- Install the engine cover with air filter.

After the repair work, the following work steps must be performed in the following sequence:

- 1.** Check the DTC memory. Refer to => [ Diagnostic Mode 03 - Read DTC Memory ] See: Computers and Control Systems > Scan Tool Testing and Procedures > Diagnostic Mode 03 - Read DTC Memory.
- 2.** If necessary, erase the DTC memory. Refer to => [ Diagnostic Mode 04 - Erase DTC Memory ] See: Computers and Control Systems > Scan Tool Testing and Procedures > Diagnostic Mode 04 - Erase DTC Memory.
- 3.** If the DTC memory was erased, generate readiness code. Refer to => [ Readiness Code ] See: Computers and Control Systems > Monitors, Trips, Drive Cycles and Readiness Codes > Readiness Code.