

## Diagnostic Procedures

### Fuel Pressure Regulator Valve, Checking

#### Special tools, testers and auxiliary items required

◇Multimeter.

◇Wiring diagram.

#### Test requirements

◇The Fuel Pump (FP) Control Module (J538) OK.

◇ The Engine Control Module (ECM) (J623) fuses OK.

◇The fuel filter OK.

◇The battery voltage at least 12.5 V.

◇All electrical consumers switched off (radiator fan must NOT run during test).

◇A/C switched off.

◇The fuel tank at least 1/4 filled.

◇The 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

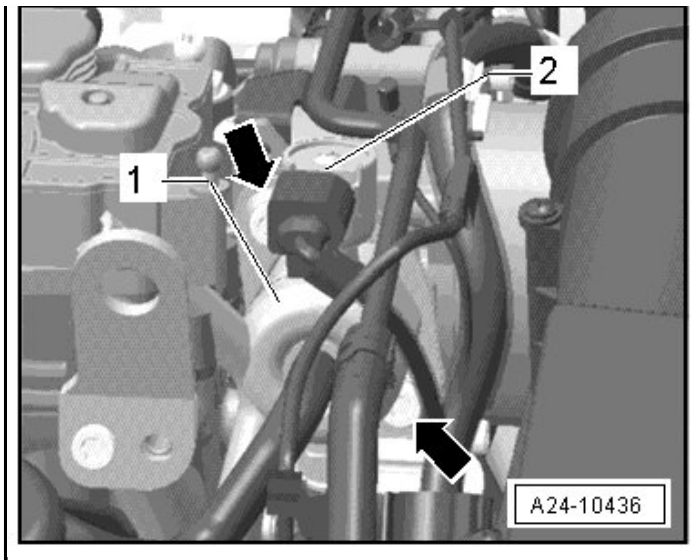
#### Start diagnosis

- Remove the engine cover.

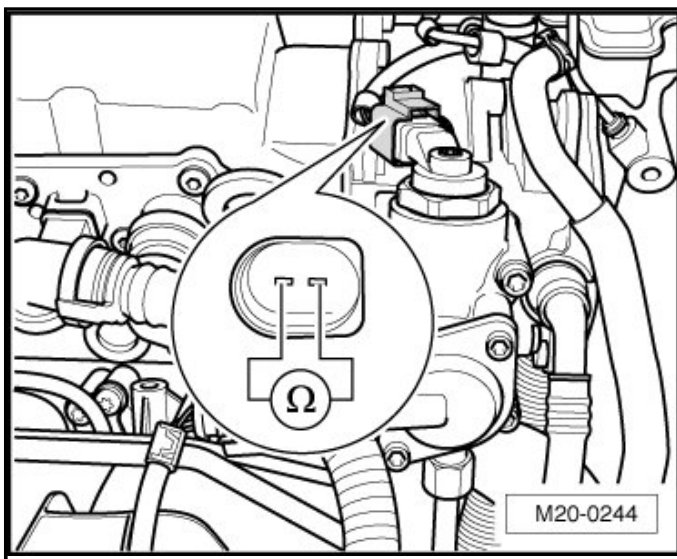
#### Checking resistance

- Disconnect the Fuel Pressure Regulator Valve (N276) electrical harness connector - **2** - from the Fuel High Pressure Pump- **1** - .





- Using a multimeter, check the Fuel Pressure Regulator Valve (N276) terminals 1 to 2 for resistance.



**Specified value: 25 to 35 ohms (at approx. 20° C)**

If the specified value was Not obtained:

- Replace the Fuel Pressure Regulator Valve (N276). Refer to the Repair Information.

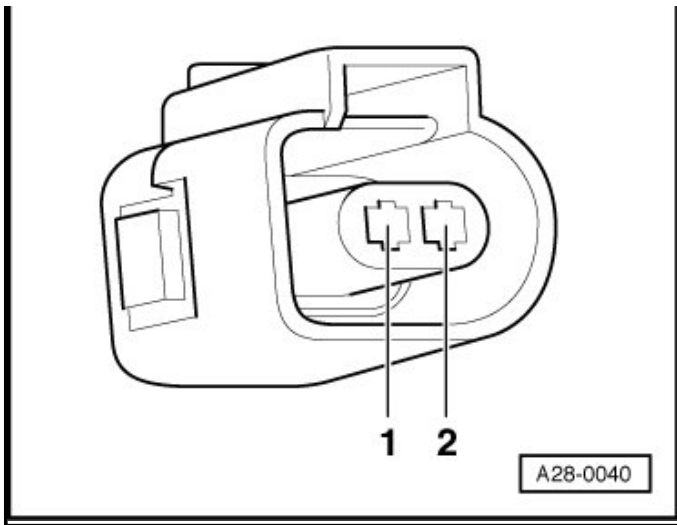
If the specified value was obtained:

**Checking voltage**

Switch the ignition ON.

- Using a multimeter, check the Fuel Pressure Regulator Valve (N276) electrical harness connector terminal 1 to Ground for voltage.





Specified value: Battery voltage.

Switch the ignition OFF.

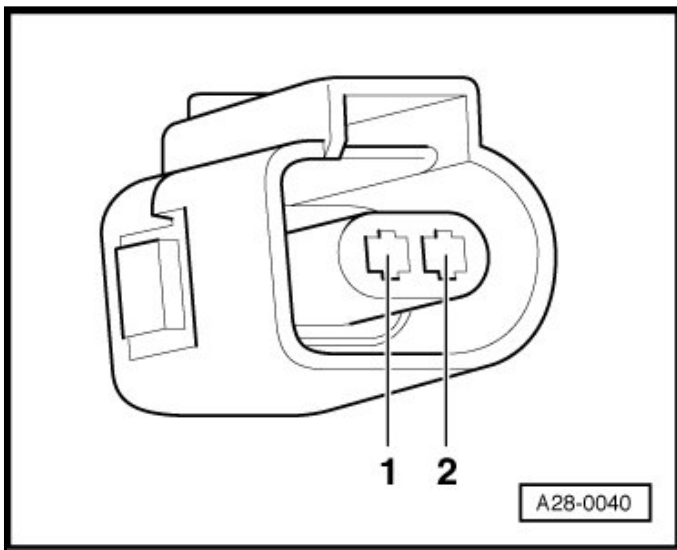
If the specified value was Not obtained:

- Make sure the relay was turned on from the ECM (ECM ground to relay present) and both power inputs to relay are present during key on. Refer to Wiring Diagrams.
- Check the wiring from the Fuel Pressure Regulator Valve (N276) electrical connector terminal 1 to the Engine Component Power Supply Relay (J757) terminal 2 (relay pin 87) for a short circuit to Ground, high resistance or an open circuit.
- Check the electrical harness connector for damage, corrosion, loose or broken terminals.
- If necessary, repair the wiring connection or replace relay as needed.
- If a short was found, replace fuse 8 in Fuse Panel B

If the specified value was obtained:

### Checking wiring

- Remove the Engine Control Module (ECM) (J623). Refer to the Repair Information.
- Using a multimeter, check the Fuel Pressure Regulator Valve (N276) electrical harness connector terminals to the Engine Control Module (ECM) (J623) electrical harness connector T60 terminals for an open circuit according to the chart below.



Fuel Pressure Regulator Valve (N276) electrical harness connector terminal	Engine Control Module (ECM) (J623 ) electrical connector T60 terminal or test box socket
2	15

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.
- Check the electrical harness connector for damage, corrosion, loose or broken terminals.
- If necessary, repair the faulty wiring connection.

If no malfunctions are found in the wiring and the voltage was present during key on:

- Replace the Engine Control Module (ECM) (J623). Refer to the Repair Information.
- Install the engine cover. Refer to the Repair Information.

### Final procedures

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 Modes 01 - 0A.
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 Modes 01 - 0A.
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.

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