

## 00 - TECHNICAL DATA

### SAFETY PRECAUTIONS

#### Safety Precautions

Note the following when working on the fuel system:

**CAUTION: There is a risk of injury because the fuel is under very high pressure.**

- **Before opening high pressure area of the fuel injection system, fuel pressure must be relieved to residual pressure.**
  - **To reduce remaining residual pressure, lay a clean cloth around the connector and carefully loosen connector.**
- Procedures before opening high pressure fuel injection system --> **Before Opening High Pressure Fuel Injection System.**

To prevent personal injury and damage to the injection and ignition system, observe the following:

- The ignition must be switched off before connecting or disconnecting injection and ignition system wiring or tester cables.
  - Only clean engine with ignition switched off.
  - If electrical connectors were disconnected, faults are saved in ECM:
- Connect Vehicle Diagnosis, Testing and Information System VAS 5051B.
- Start "Guided Functions" operating mode.
- Generate readiness code in ECM.

**CAUTION: Risk of destroying electrical components when battery is disconnected.**

- **Observe measures when disconnecting battery.**
  - **Only disconnect battery with ignition switched off.**
- Disconnect battery --> **27 - STARTER, GENERATOR, CRUISE CONTROL .**

Note the following when working on the cooling system:

**CAUTION: Risk of scalding due to hot steam and hot coolant.**

- **When the engine is warm the cooling system is under pressure.**
- **To reduce pressure, cover coolant reservoir cap with cloth and carefully open.**

If it is necessary to use testing and measuring devices on road tests, observe the following:

**CAUTION: Distraction and improperly secured test equipment can lead to accidents.**

**Risk of passenger airbag deploying in an accident.**

- **Operating testing and measuring equipment while driving creates a distraction.**
- **There is an increased risk of injury due to unsecured testing and measuring equipment.**
- **Always secure testers on the rear seat with a strap and have a second person on the rear seat operate them.**

**Before Opening High Pressure Fuel Injection System**

**Before Opening High Pressure Fuel Injection System**

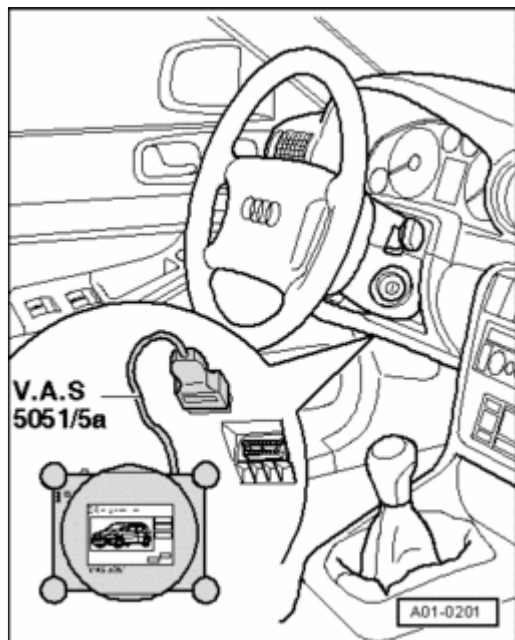
- The fuel injection system is separated into a high-pressure section (max. approximately 120 bar) and a low-pressure section (approximately 6 bar).
- Before opening high pressure area, fuel pressure must be reduced to a residual pressure of approximately 6 bar. The procedure for this is as follows.

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

- Vehicle diagnostic, testing, and information system VAS 5051B

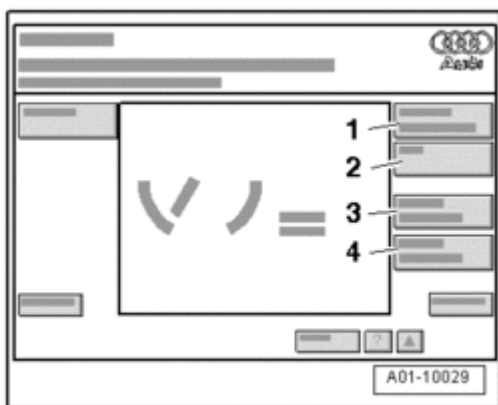
**Procedure**

Proceed as follows:



**Fig. 1: Connecting Vehicle Diagnosis, Testing And Information System VAS 5051B**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

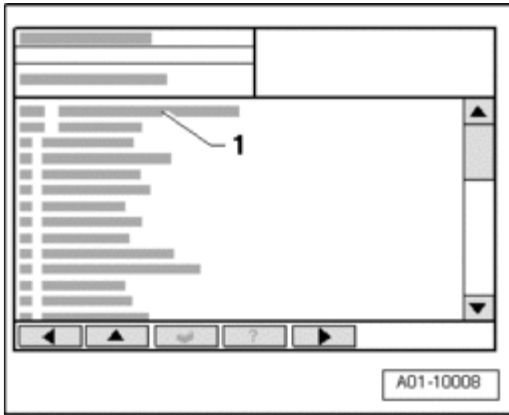
- Connect vehicle diagnosis, testing and information system VAS 5051B while the ignition is switched off.



**Fig. 2: Display On VAS 5051B - Vehicle Self-Diagnosis Button**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Display on VAS 5051B :

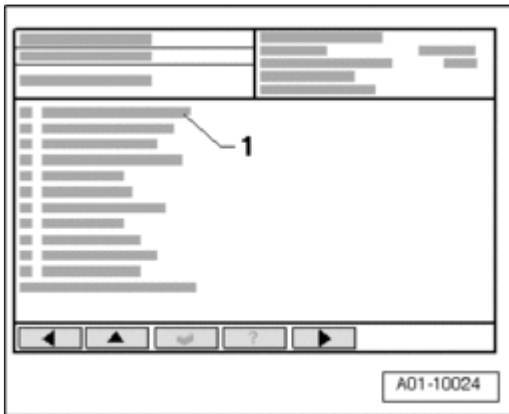
- Press Vehicle Self-Diagnosis button - **1** - in selection.



**Fig. 3: Display On VAS 5051 - "01 - Engine Electronics"**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Display on VAS 5051B :

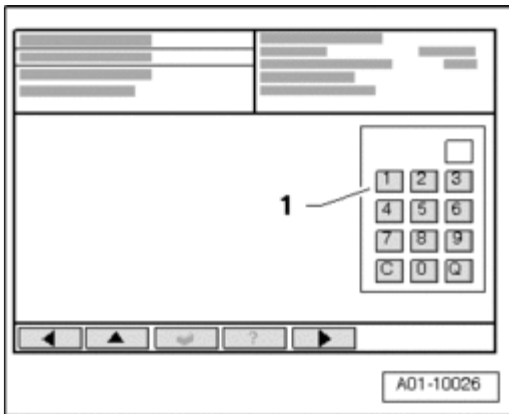
- In selection - 1 - , press "01 - Engine electronics" vehicle system and continue by pressing button.



**Fig. 4: Display On VAS 5051 - "006 - Basic Setting"**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Display on VAS 5051B :

- In selection - 1 - , press diagnostic function "006 - Basic setting" and continue by pressing the button.



**Fig. 5: Display On VAS 5051 - "Display Group 140"**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Display on VAS 5051B :

- In button field - 1 - , press the 1 4 0 buttons for "Display group 140" and confirm the entry by pressing the Q button.

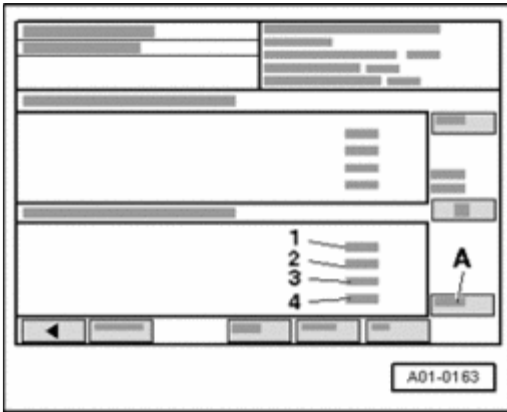


**Fig. 6: Display On VAS 5051 - (Read-Out For Fuel Pressure In Fuel Rail)**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Display on VAS 5051B :

Example:

1. 42%
2. 39.76 bar
3. 40.63 bar
4. Inactive



**Fig. 7: Diagnostic System VAS 5051: Display - Display Fields**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Press button A to activate basic setting.

Display on VAS 5051B :

Example:

1. 0%
2. 0 bar
3. 5.46 bar
4. Lower

The fuel rail will continue to be filled with fuel, but it will no longer be under high pressure.

Now components or lines can be opened.

- Lay clean cloths around connectors and catch escaping fuel.

### Final procedures

- Start "Guided Functions" operating mode.
- Generate readiness code in ECM.

### GENERAL REPAIR INFORMATION

#### General Repair Information

--> **Clean Working Conditions**

--> **Contact Corrosion**

--> **Lines, Routing and Securing**

**Clean Working Conditions****Clean Working Conditions**

Even a little contamination can lead to faults. When working on the fuel supply and on the fuel injection system, observe the following guidelines for a clean working environment:

- Before loosening, connections and surrounding areas must be cleaned thoroughly with engine or brake cleaner, and then cleaned area must be dried completely.
- Plug open lines and connections immediately with appropriate protective caps.
- Place parts that have been removed on a clean surface and cover them. Use lint-free cloths.
- Only install clean components: Only unpack replacement parts immediately prior to installation. Do not use parts that have been stored unpacked (e.g. in tool boxes etc.).
- When the system is open: Do not work with compressed air. Do not move vehicle unless absolutely necessary.
- Protect disconnected electrical connectors from dirt and moisture and only connect if dry.

**Contact Corrosion****Contact Corrosion**

Contact corrosion can occur if incorrect fasteners (bolts, nuts, washers, etc.) are used.

For this reason, only install connecting elements that are treated with a special coating.

Also, rubber or plastic parts and adhesive consist of non-conductive materials.

If there are doubts about the suitability of parts, generally use new parts .

**NOTE:**

- **Only original replacement parts are recommended, they are checked and compatible with aluminum.**
- **Audi accessories are recommended.**
- **Damage due to contact corrosion is not covered by warranty.**

**Lines, Routing and Securing****Lines, Routing and Securing**

To prevent mistakes and ensure the original installation location is kept, mark the hydraulic lines, vacuum lines or electrical lines before removing them. If necessary, draw sketches or take pictures.

**ENGINE DATA****Engine Data**

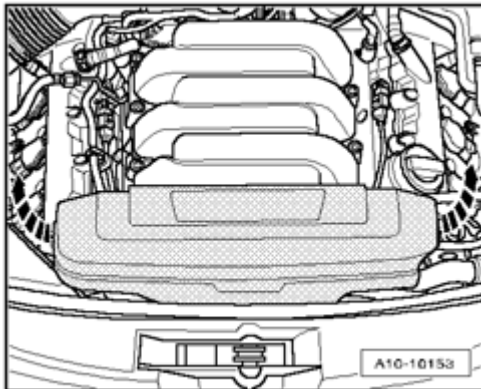
## 2008 Audi A6 Quattro

ENGINE 3.2 V6 4V Engine Mechanical, Engine Code(s): BKH

Code letters		BKH
Displacement	Liter	3.123
Output	kW at RPM	188/6500
Torque	Nm at RPM	330/3250
Bore	Diameter mm	84.5
Stroke	mm	92.8
Compression ratio		12.5
RON	min.	95 1)
Fuel injection and ignition system		Simos
Ignition sequence		1-4-3-6-2-5
Exhaust gas recirculation		No
Turbocharger, G-Charger		No
Knock control		Yes
Variable valve timing		Yes
Variable intake manifold		No
Secondary Air Injection System		No
Valves per cylinder		4
1) Unleaded RON 91 is also permitted, but performance is reduced.		

### ENGINE NUMBER

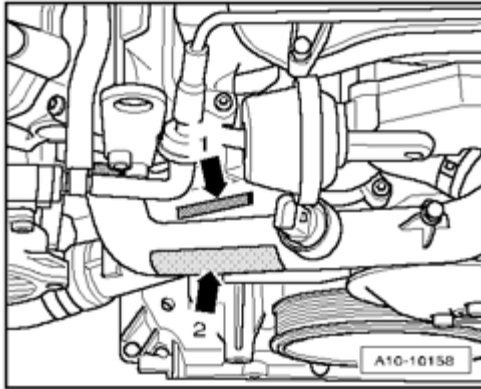
#### Engine Number



**Fig. 8: Identifying Front Engine Cover**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Remove front engine cover - **arrows** -.





**Fig. 9: Identifying "Engine Code" And "Serial Number"**  
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- The engine number ("engine code" and "serial number") is located at front on cylinder block, below the right cylinder head - **arrow 1** -.
- Additionally, a sticker - **arrow 2** - is affixed to the front coolant line with the "engine code" and "serial number".
- The engine code is also located on the vehicle data plate.