

2009 Audi S8 Quattro

ENGINE 5.2 Liter 10-Cyl. 4V Engine Mechanical, Engine Code(s): BSM - S8

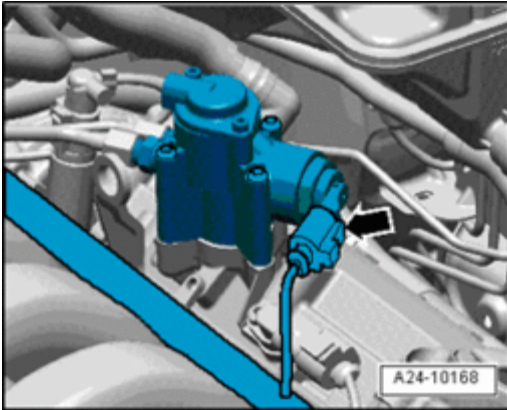


Fig. 7: Disconnecting Electrical Connector At Fuel Metering Valve 2 N402 On Left High Pressure Pump
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Disconnect electrical connector - **arrow** - at Fuel Metering Valve 2 N402 on left high pressure pump.

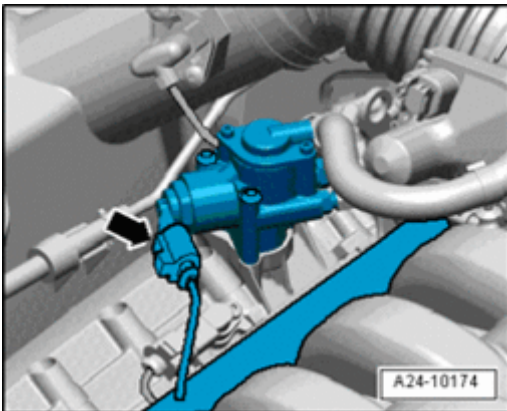


Fig. 8: Disconnecting Electrical Connector At Fuel Metering Valve 2 N290 On Right High Pressure Pump
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Disconnect electrical connector - **arrow** - at Fuel Metering Valve 2 N290 on right high pressure pump.



Fig. 9: Display On VAS 5051 - (Read-Out For Fuel Pressure In Fuel Rail)

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Display on VAS 5051B :

- Check indication in display field - 3 - :
- Fuel pressure in fuel rail must sink to approximately 6 bar.
- Switch off ignition.

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

- Reconnect electrical harness connectors.
- Start "Guided Functions" operating mode.
- Generate readiness code in ECM.

GENERAL INFORMATION

General Information

--> **Clean Working Conditions**

--> **Contact Corrosion**

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

Clean Working Conditions

Clean Working Conditions

Even a little contamination can lead to faults. Pay careful attention to the following rules for clean working conditions when working on the fuel supply and injection system:

- 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.).

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- 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.

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

Code letters		BSM
Displacement	liter	5.204
Output	kW at RPM	331/7000
Torque	Nm at RPM	540/3500
Bore	Diameter mm	84.5
Stroke	mm	92.8
Compression ratio		12.5
RON		98 1)
Fuel injection and ignition system		Bosch Motronic
Ignition sequence		1-6-5-10-2-7-3-8-4-9
Exhaust Gas Recirculation		no
Turbocharger, G-Charger		no
Knock control		yes

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Variable valve timing	yes
Variable intake manifold	yes
Secondary Air Injection System	yes
Valve per cylinder	4
1) Super unleaded RON 95 is permissible, although with reduced power.	

ENGINE NUMBER

Engine Number

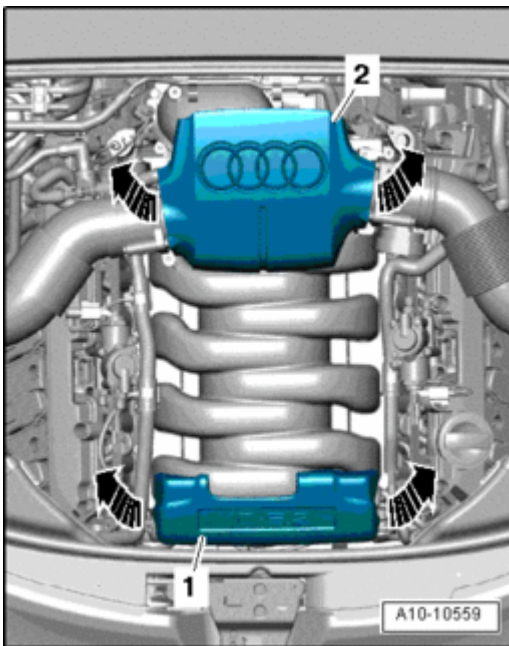


Fig. 10: Removing Front Engine Cover And Rear
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Remove front engine cover - 1 - - arrows -.

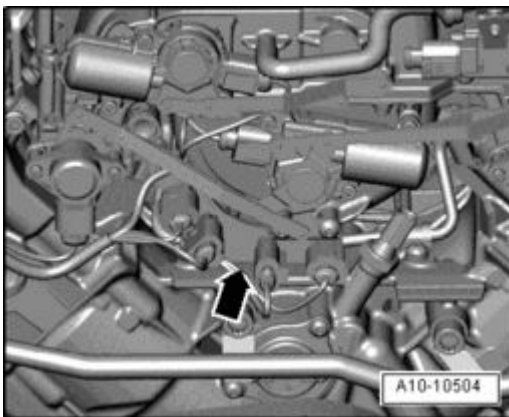


Fig. 11: Identifying Engine Number Stamped On Engine Block

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Engine number ("engine code" and "serial number") is located at front on cylinder block at top - **arrow** -.

NOTE:

- The engine code is also located on the vehicle data plate.

10 - ENGINE, REMOVING AND INSTALLING

ENGINE, REMOVING

Engine, Removing

NOTE:

- With lock carrier installed, engine is removed downward with transmission and subframe.
- Drained coolant must be stored in a clean container for disposal or reuse.
- During installation, reinstall all heat insulation sleeves and heat shields at the same locations.
- All cable ties opened or cut during engine removal must be reinstalled at the same locations during installation.

Special tools, testers and auxiliary items required

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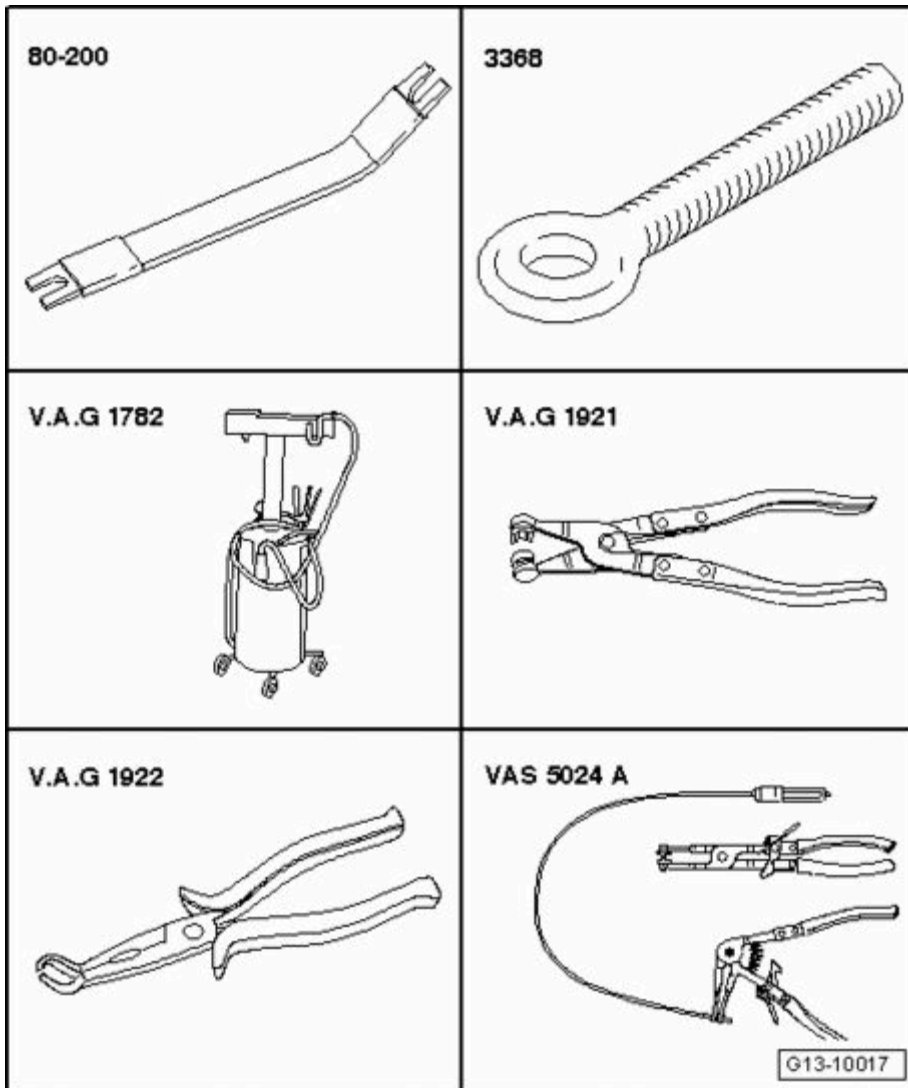


Fig. 12: Identifying Special Tools - Engine, Removing (1 Of 2)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Pry Lever - Rmv Outside Mirror 80 - 200
- Ring screw 3368
- Old oil collecting and extracting device V.A.G 1782
- Hose clamp pliers V.A.G 1921

- Spark plug connector pliers V.A.G 1922
- Hose clip pliers VAS 6340 (formerly: VAS 5024 A)

Special tools, testers and auxiliary items required