45-1

General information on the Anti-lock Brake System (ABS)

Information for repair work on ABS

WARNING!

Brake fluid is poisonous.

- ***It must NEVER be removed by siphoning with your mouth.***
- ***If brake fluid contacts skin or eyes, flush or wash adequately to prevent irritation. Get medical attention immediately if necessary.***
- ***Brake fluid must be disposed of properly in compliance with environmental regulations.***

CAUTION!

- ***The anti-lock brake system is basically maintenance-free.***
- ***Specialist knowledge is required for performing any work on this system.***
- ***Failure to observe the instructions presented in this Repair Manual may result in damage***

to the system and to loss of vehicle safety.

45-2

CAUTION!

- ***Brake fluid must never be brought into contact with liquids containing mineral oils (e.g. oil, fuel, cleaning agents). Mineral oils damage the plugs and seals in the brake system.***
- ***Brake fluid must not be allowed to come into contact with paintwork because of its caustic effect.***
- ***Brake fluid is hygroscopic (i.e. it absorbs moisture from the surrounding air) and should therefore always be stored in airtight containers.***
- ***Always dispose of used brake fluid properly.***
- ***Make sure that brake fluid does not enter the electrical harness connectors.***
- ***During painting operations, the electronic control module can be exposed to a max. temperature of 95° C (203° F) for only a short period, and to a maximum of 85° C (186° F) for longer periods (approx. 2 hours).***

- ***Before carrying out work using electric welding equipment, refer to safety precautions ⇒ Repair Manual, "Body-Collision Repair."***

- ***Thoroughly clean all unions and the adjacent areas before loosening. Do not use aggressive cleaning agents such as brake cleaner, fuel, thinners or similar chemicals.***

- ***Place removed components on a clean surface and cover.***

45-3

CAUTION! (continued)

- ***Carefully cover or seal open parts if repairs cannot be carried out immediately (use sealing plugs from repair kit 1H0 698 311 A). Part numbers are listed here for reference only. Always check with your Parts department for the latest information.***
- ***Do not use fluffy cloths.***
- ***Only remove replacement parts from packaging immediately prior to installation.***
- ***When the system is open do not work with compressed air and do not move the vehicle.***

- Before carrying out repairs to the ABS, determine the cause of the malfunction using On Board Diagnostic (OBD).

⇒ Repair Manual, ABS/EDL/ASR On Board Diagnostic (OBD), Repair Group 01

- Always check the control module coding when installing a new hydraulic control unit.

⇒ Repair Manual, ABS/EDL/ASR On Board Diagnostic (OBD), Repair Group 01

- Always switch the ignition off and disconnect the battery Ground (GND) strap before carrying out installation or repair work.

CAUTION!

Before disconnecting the battery, determine the correct coding for the anti-theft radio.

- After finishing any work that requires opening the brake hydraulic system, bleed the brake system ⇒ page 47-23 . In addition, carry out a high and low-pressure test of the brake system ⇒ page 45-5 .

- Use only packaged genuine Audi replacement parts.

- During the final road test, at least one ABS-controlled braking operation must be performed (normal pulsations must be felt at the brake pedal).

⇒ Repair Manual, ABS/EDL/ASR On Board Diagnostic (OBD), Repair Group 01

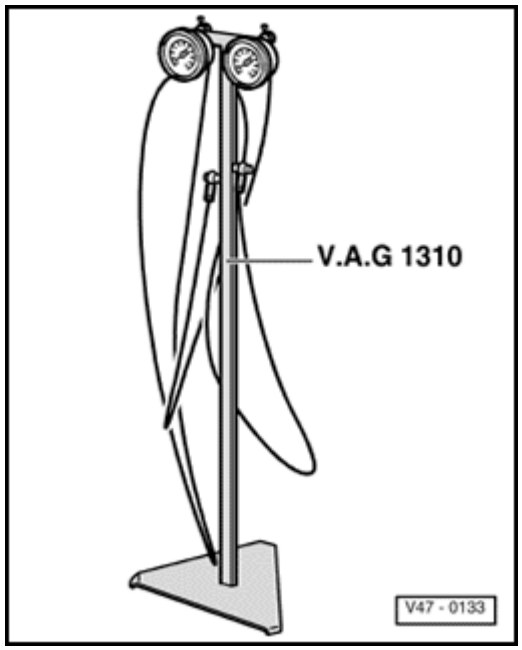
45-5

High- and low-pressure test

Requirement

- The conventional brake system (brake master cylinder, brake hoses, brake lines and brake calipers) are in proper order and free of leaks.

High-pressure test



- Remove bleeder screw at front brake caliper. Connect pressure gauge VAG1310 or VAG1310A and bleed.
- Insert brake pedal depressor between brake pedal and driver's seat. Apply pressure to brake pedal until gauge indicates pressure of 50 bar (725 psi).
  - Pressure must not drop by more than 4 bar (58 psi) during the test period of 45 seconds.
- If pressure drop is greater, replace ABS hydraulic unit.

Low-pressure test

- Turn back brake pedal depressor until pressure gauge indicates system pressure of 6 bar (87 psi).
  - Pressure must not drop by more than 1 bar (14 psi) during test period of 3 minutes.
- If pressure drop is greater, replace ABS hydraulic unit.