

Brake hydraulic system, bleeding and changing brake fluid

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!

- ◆ ***Do not allow brake fluid to mix with liquids that contain mineral oils (e.g. motor oil, cleaning agents). Mineral oils damage the plugs and seals in the brake hydraulic system.***
- ◆ ***Brake fluid must not be allowed to come into contact with paintwork due to its caustic effect.***

- ◆ ***Brake fluid is hygroscopic, in other words it absorbs moisture from the surrounding air, and must therefore always be stored in airtight containers.***

Note:

- ◆ *Only use new brake fluid conforming to US standard FMVSS 116 DOT 4.*
- ◆ *Genuine VW/Audi brake fluid conforms to this specification.*
- ◆ *Rinse off any spilled brake fluid using plenty of water.*
- ◆ *When the system is open do not work with compressed air and do not move the vehicle.*
- ◆ *During the final road test, make sure at least one ABS-controlled braking operation is carried out (normal pulsations must be felt at the brake pedal).*

Bleeding using US1116 brake bleeder

- Connect US1116 brake bleeder.
- Open bleeder screws in following sequence and bleed brake calipers.

Bleeding sequence

1 - Right-rear brake caliper

2 - Left-rear brake caliper

3 - Right-front brake caliper

4 - Left-front brake caliper

Brake fluid, changing (every two years)

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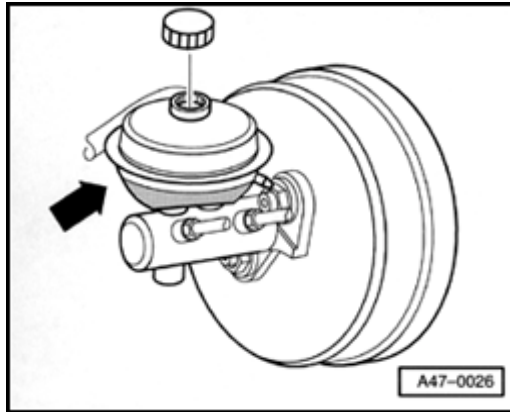
⇒ Repair Manual, "ABS/EDL/ASR On Board Diagnostic (OBD)," Repair Group 01

Changing brake fluid using US1116 brake bleeder

- Open brake fluid reservoir.

Note:

The brake fluid reservoir must be kept adequately filled to prevent air from entering the brake system through the reservoir.

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- With engine running and bleeder screw on right-rear brake caliper open, use brake pedal to pump brake fluid out of reservoir until level goes down as far as opening for hydraulic clutch supply hose.
- Collect used brake fluid in suitable container, then close bleeder screw.

CAUTION!***Always dispose of used brake fluid properly.***

- On vehicles with manual transmission, the clutch slave cylinder must also be flushed out with new brake fluid.
- On models with the electronic Stability Program (ESP), note that the hydraulic pump is actuated for 10 seconds using "Basic Settings" function 04, display group 002 ⇒ [page 45-49](#) .

Note the following when bleeding clutch hydraulics:

- Connect US1116 but do not switch on yet.
- Open bleeder screw on clutch slave cylinder.
- Attach collector bottle hose.
- Switch on bleeder unit and allow approx. 100 cc (6 oz.) of brake fluid to flow out of clutch slave cylinder.
- Close bleeder screw.

The sequence described below must be followed for all four brake calipers.

1 - Right-rear brake caliper

2 - Left-rear brake caliper

3 - Right-front brake caliper

4 - Left-front brake caliper

- Attach bleeder hose from brake fluid collector to bleeder screw.
- Open bleeder screw and allow about 250 cc (15 oz.) of brake fluid to drain out.

The action of pumping in new brake fluid flushes the used brake fluid out of the system.

- Close bleeder screw.
- Check brake pedal pressure and pedal free play.

Max. free play: 1/3 of pedal travel.