



2 Overview of fitting locations

⇒ "2.1 Overview of fitting locations - ABS/ESP", page 12

2.1 Overview of fitting locations - ABS/ESP

1 - ABS control unit - J104-

- ❑ Location: on hydraulic unit, on left in engine compartment, under battery.
- ❑ Do not separate connector before successfully completing self-diagnosis. Switch ignition off before separating connector.

The following components are integrated into the control unit:

- ◆ Control unit for electromechanical parking brake - J540-
- ◆ Lateral acceleration sender - G200-
- ◆ Yaw rate sender - G202-
- ◆ Longitudinal acceleration sender - G251- (depending on equipment fitted)
- ◆ The components cannot be renewed individually.
- ❑ Removing and installing ⇒ [page 16](#).

2 - ABS hydraulic unit - N55-

- ❑ Location: on hydraulic unit, on left in engine compartment, under battery.

The hydraulic unit consists of the components:

- ◆ ABS hydraulic pump - V64-
- ◆ Brake pressure sender - G201-
- ◆ Valve block (contains inlet and outlet valves).
- ❑ ABS hydraulic pump - V64- and valve block must not be separated from one another.
- ❑ Removing and installing ⇒ [page 16](#)

3 - ABS warning lamp - K47-

- ❑ Location: in dash panel insert.

4 - ESP and TCS warning lamp - K155-

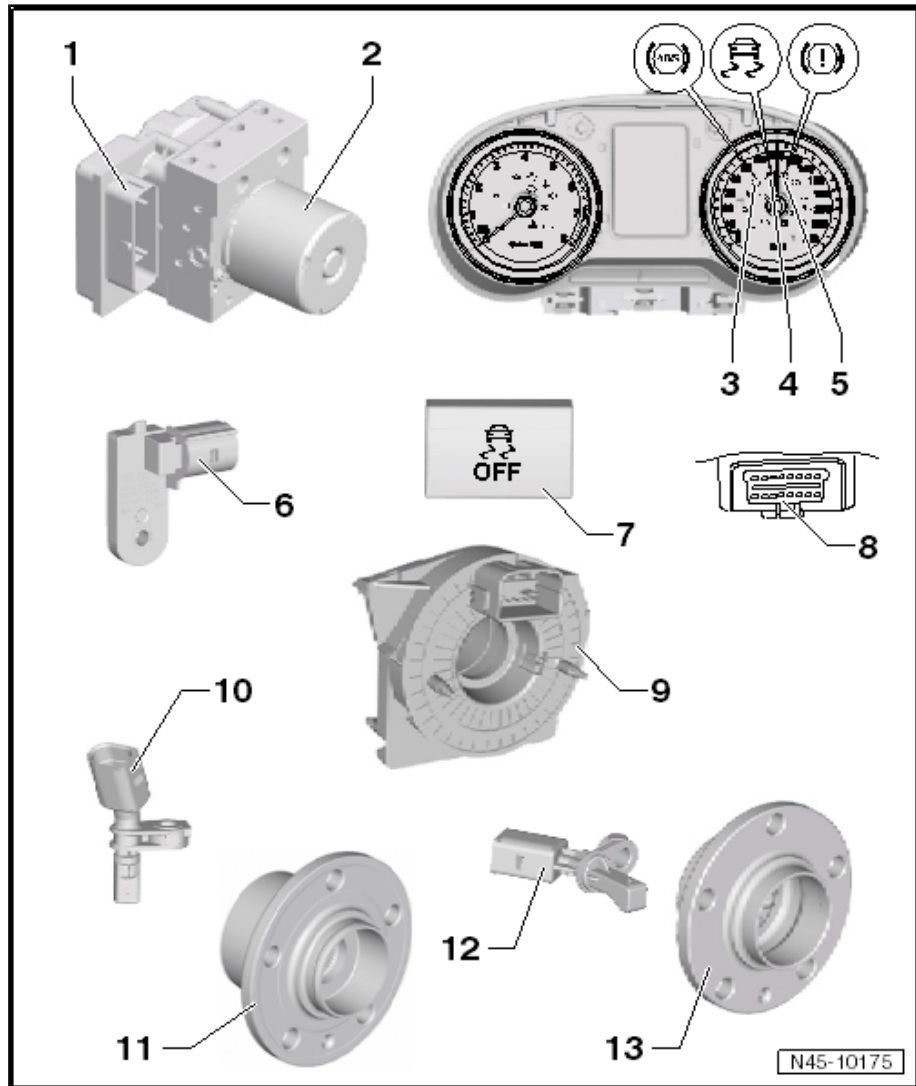
- ❑ Location: in dash panel insert.

5 - Brake system warning lamp - K118-

- ❑ Location: in dash panel insert.

6 - Brake light switch - F-

- ❑ Location: on brake master cylinder.
- ❑ Removing and installing (LHD) ⇒ [page 60](#)





7 - TCS and ESP button - E256-

- Location: in centre console.
- Removing and installing TCS and ESP button - E256- in centre console ⇒ Electrical system; Rep. gr. 96 ; Controls; Removing and installing TCS and ESP button - E256- .

8 - Diagnostic connection

- Location: Driver footwell cover.

9 - Steering angle sender - G85-

- Fitting location: in steering column electronics control unit - J527- on steering column
- Removing and installing ⇒ Electrical system; Rep. gr. 94 ; Steering column switch module; Removing and installing steering column switch module

10 - Front right/left speed sensor -G45- / -G47-

- Removing and installing ⇒ [page 23](#) .

11 - Wheel hub with wheel bearing

- ABS sensor ring is installed in wheel bearing.
- Check ABS sensor ring ⇒ [page 27](#)

12 - Rear right/left speed sensor -G44- / -G46-

- Removing and installing (front-wheel drive) ⇒ [page 24](#)

13 - Wheel hub with wheel bearing

- ABS sensor ring is installed in wheel bearing.
- Check ABS sensor ring ⇒ [page 27](#)



3 Control unit and hydraulic unit

⇒ [“3.1 Assembly overview - control unit and hydraulic unit”, page 14](#)

⇒ [“3.2 Removing and installing ABS control unit J104 / ABS hydraulic unit N55”, page 16](#)

⇒ [“3.3 Connecting brake lines to hydraulic unit”, page 21](#)

3.1 Assembly overview - control unit and hydraulic unit

⇒ [“3.1.1 Assembly overview - control unit and hydraulic unit, left-hand drive”, page 14](#)

3.1.1 Assembly overview - control unit and hydraulic unit, left-hand drive

1 - Brake servo

- ❑ Removing and installing
⇒ [page 64](#)

2 - Brake line

- ❑ From secondary piston circuit of brake master cylinder to hydraulic unit.
- ❑ Identification: 6.5 mm in diameter and flare nut with long thread M12 x 1
- ❑ Marked on hydraulic unit with “HZ2”
- ❑ 14 Nm

3 - Brake line

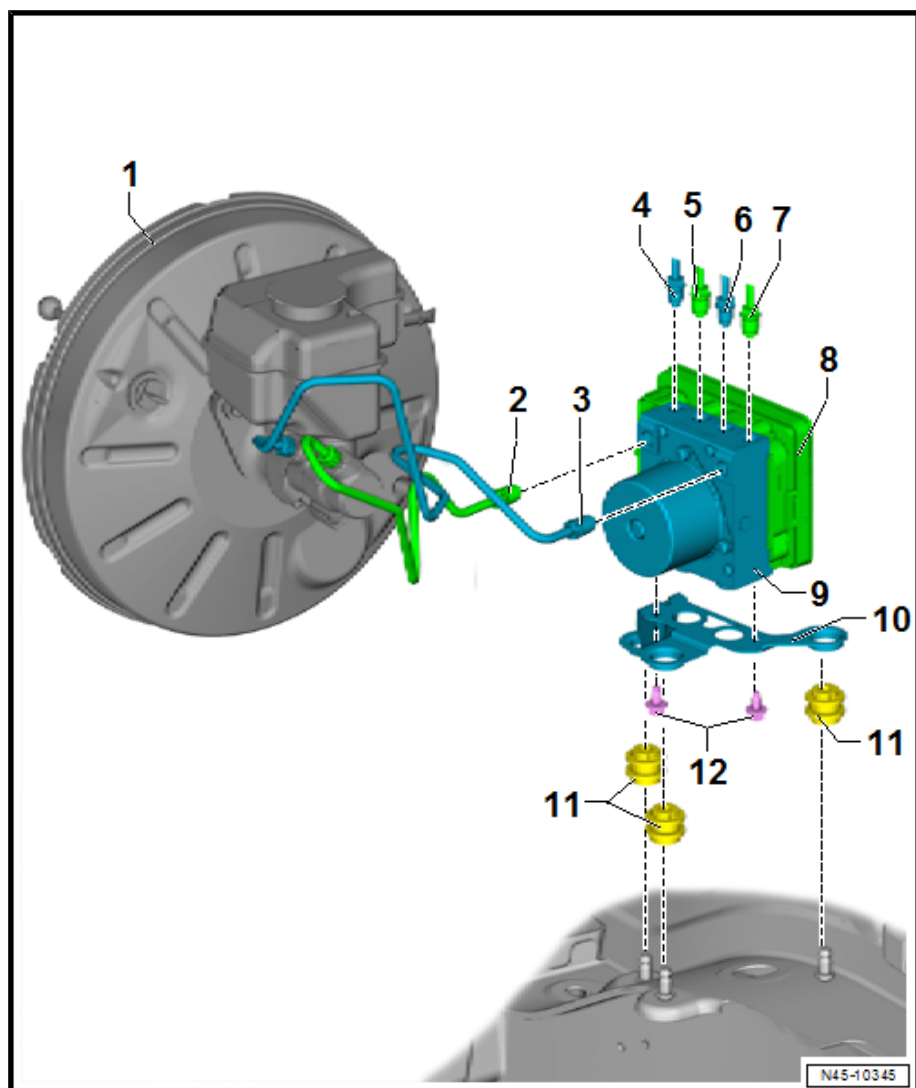
- ❑ From primary piston circuit of brake master cylinder to hydraulic unit.
- ❑ Identification: 6.5 mm in diameter and flare nut with long thread M12 x 1
- ❑ Marked on hydraulic unit with “HZ1”
- ❑ 14 Nm

4 - Brake line

- ❑ To front right brake caliper
- ❑ Identification: 5.25 mm in diameter and flare nut with thread M 10 x 1
- ❑ Marked on hydraulic unit with “FR”
- ❑ 14 Nm

5 - Brake line

- ❑ To rear left brake caliper
- ❑ Identification: 5.25 mm in diameter and flare nut with short thread M 12 x 1
- ❑ Marked on hydraulic unit with “RL”
- ❑ 14 Nm





6 - Brake line

- To rear right brake caliper
- Identification: 5.25 mm in diameter and flare nut with thread M 10 x 1
- Marked on hydraulic unit with "RR"
- 14 Nm

7 - Brake line

- To front left brake caliper.
- Identification: 5.25 mm in diameter and flare nut with short thread M 12 x 1
- Marked on hydraulic unit with "FL"
- 14 Nm

8 - ABS control unit - J104-

The control unit and hydraulic unit cannot be separated.

- Removing and installing ⇒ [page 16](#) .

9 - ABS hydraulic unit - N55-

The control unit and hydraulic unit cannot be separated.

- Removing and installing ⇒ [page 16](#) .

10 - Spring retainer

11 - Rubber damper

12 - Hexagon bolt

- 8 Nm






3.2 Removing and installing ABS control unit - J104- / ABS hydraulic unit - N55-

⇒ ["3.2.1 Removing and installing control unit and hydraulic unit, LHD", page 16](#)

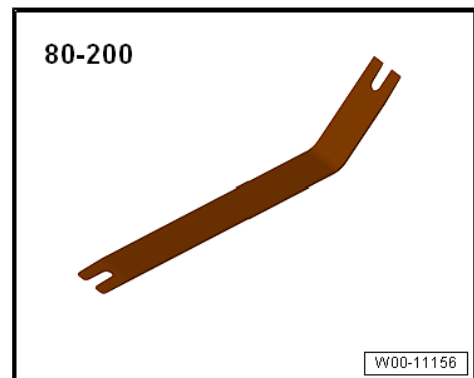
3.2.1 Removing and installing control unit and hydraulic unit, LHD

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1410-
- ◆ Brake pedal depressor - V.A.G 1869/2-

<p>V.A.G 1331</p> 	<p>V.A.G 1410</p> 
<p>V.A.G 1869/2</p> 	
	<p>W45-0003</p>

Removal lever - 80 - 200-





Sealing plugs from repair kit, part number 1 H0 698 311 A

- 1 - Transport protection for contact pins (foam)
- 2 - Sealing plug M10
- 3 - Sealing plug M12

Removing

Location:

The control unit is bolted to the hydraulic unit and is located on left in the engine compartment, under the battery tray.



Risk of damage to brake lines if bent.

- Never excessively bend the brake lines in the area of the hydraulic unit.
- Read out and note the existing control unit code.
- If vehicle has a coded radio, note radio code or, if necessary, request it.
- Remove engine cover panel.

Vehicles with diesel engine:

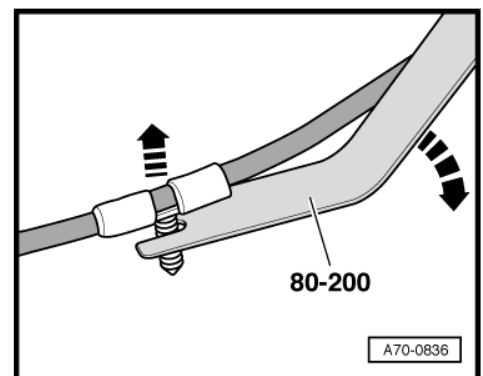
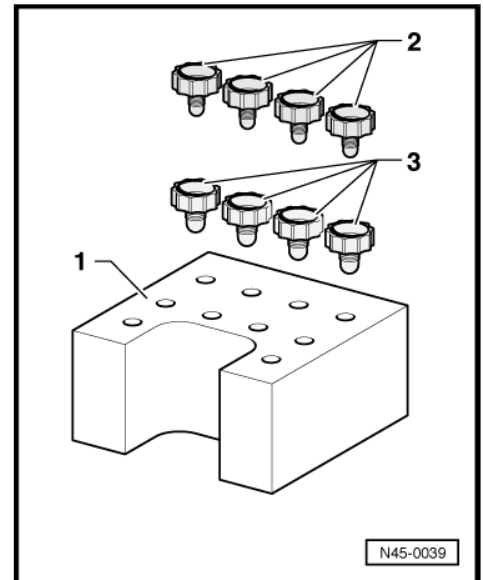
- Remove air hose and air filter housing ⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing .

Vehicles with 2.0 l petrol engine:

- Remove air hose and air filter housing ⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing .

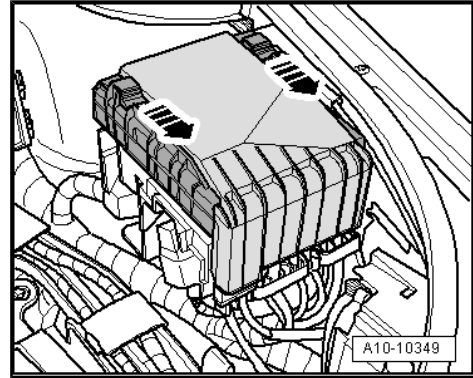
Continuation for all models:

- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and reconnecting battery .
- Remove battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery .
- Remove battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .
- Use removal lever - 80 - 200- to unclip the binding clips.

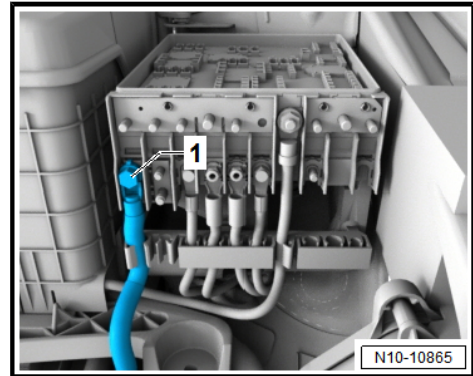




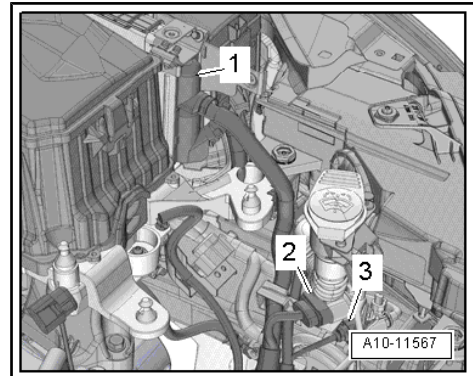
- Slide the two clips in -direction of arrow-, and remove cover from electronics box in engine compartment.



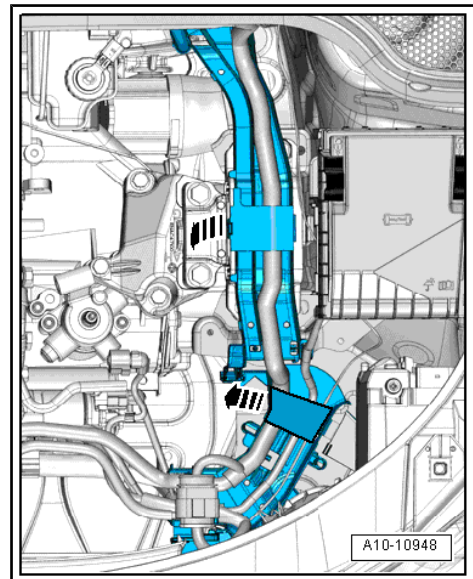
- Unbolt cable -1- for alternator from fuse holder.



- Disconnect connector -3- for electromechanical steering.
- Unbolt earth cable of electromechanical steering from earth point.

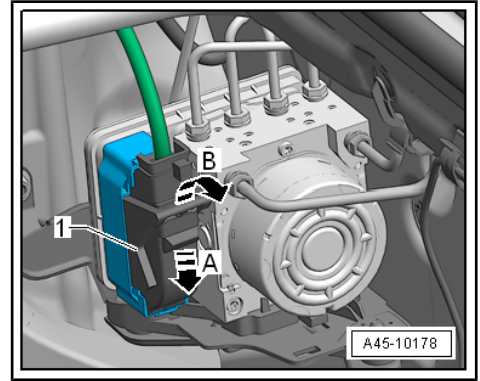


- Open cable duct -arrows-, remove the two wiring harnesses, and lay them to one side.
- Remove cable duct from console.

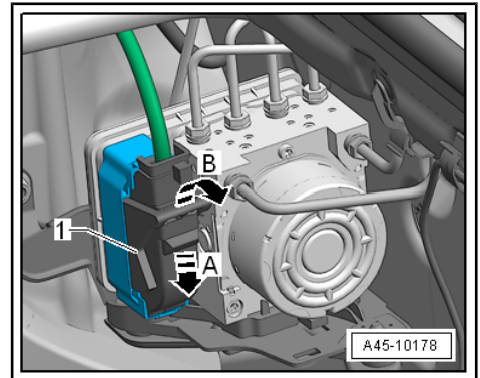




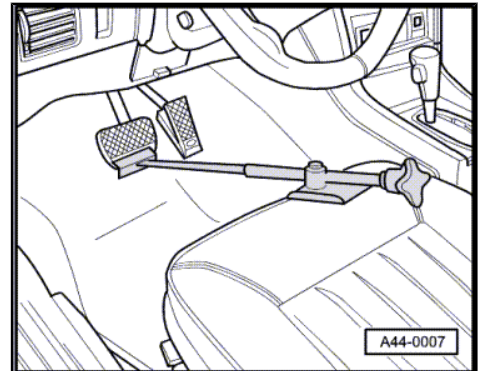
- Press down retainer catch -arrow A-.



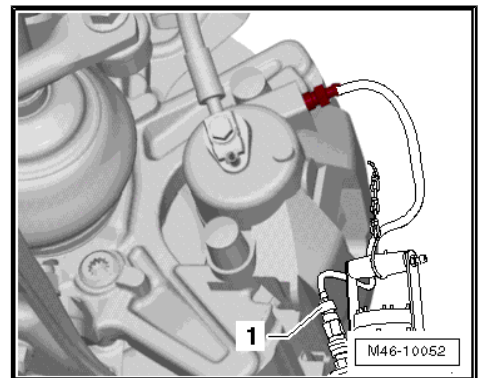
- Release electrical connector -arrow B-.
- Pull off connector -1-.



- Apply brake pedal depressor - V.A.G 1869/2- .

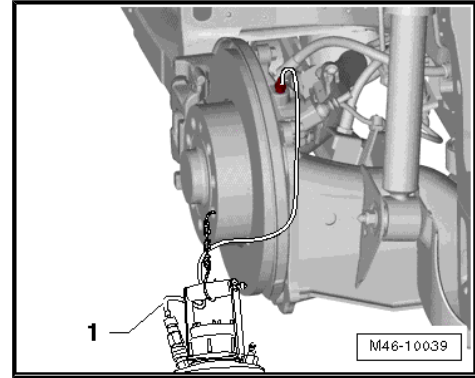


- Connect hose of bleeder bottle -1- to bleeder valve of front left brake caliper.
- Open bleeder valve.





- Connect hose of bleeder bottle -1- to bleeder valve of rear left brake caliper.
- Open bleeder valve.
- Depress brake pedal at least 60 mm using brake pedal depressor - V.A.G 1869/2- .
- Close front left and rear left bleeder valves.
- Do not remove brake pedal depressor - V.A.G 1869/2- .
- Place sufficient lint-free cloths under the ABS hydraulic unit - N55- .



Note

Ensure no brake fluid gets onto contacts.

- First identify both brake lines from brake master cylinder and then remove.
- Immediately seal threaded holes with seal plugs from repair set with Part No. 1H0 698 311 A.
- Mark, unscrew and seal threaded holes of remaining brake lines (brake calipers).
- Fit dust caps of bleeder valves onto brake lines.
- Pull hydraulic unit together with control unit upwards out of dampers -arrow-.

Installing

Installation is performed in reverse sequence; note the following:



Note

- ◆ *Remove sealing plugs from new hydraulic unit only when the corresponding brake line is going to be fitted.*
- ◆ *If sealing plugs are removed too early from the hydraulic unit, brake fluid can escape, and it can then no longer be guaranteed that the unit can be sufficiently filled and bled.*
- ◆ *When installing the hydraulic unit, ensure that the rubber dampers are not pressed out of bracket.*

