

27 - Vacuum hose

- Insert into brake booster unit

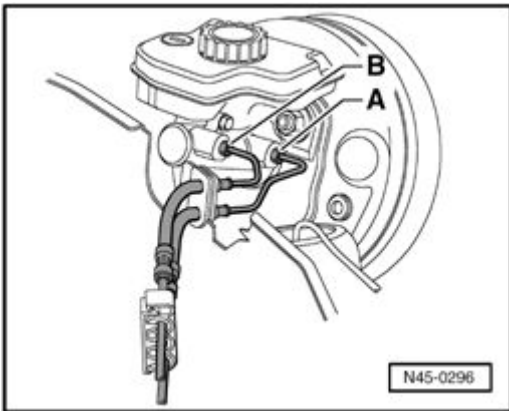


Fig. 22: Connection Of Brake Lines From Dual Master Brake Cylinder To Hydraulic Unit
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Connection of brake lines from dual master brake cylinder to hydraulic unit

A - Hydraulic unit to master cylinder primary piston circuit. Marked on hydraulic unit with - **HZ2** -

B - Hydraulic unit to master cylinder secondary piston circuit. Marked on hydraulic unit with - **HZ1** -

1 - Hydraulic unit to left front brake caliper. Marked on hydraulic unit with - **VL** -

2 - Hydraulic unit to right front brake caliper. Marked on hydraulic unit with - **VR** -

3 - Hydraulic unit to right rear brake caliper. Marked on hydraulic unit with - **HR** -

4 - Hydraulic unit to left rear brake caliper. Marked on hydraulic unit with - **HL** -

ABS Hydraulic Control Unit, Removing and Installing

Special tools, testers and auxiliary items required

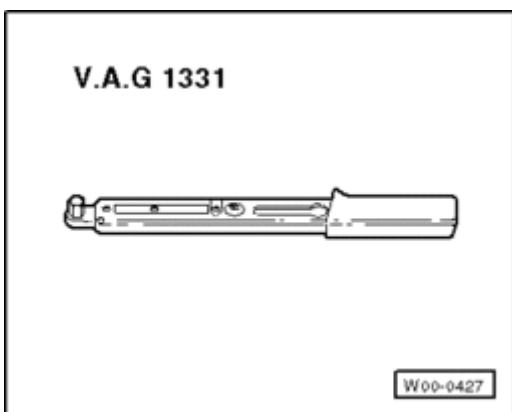


Fig. 23: Torque Wrench V.A.G 1331
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Torque wrench V.A.G 1331

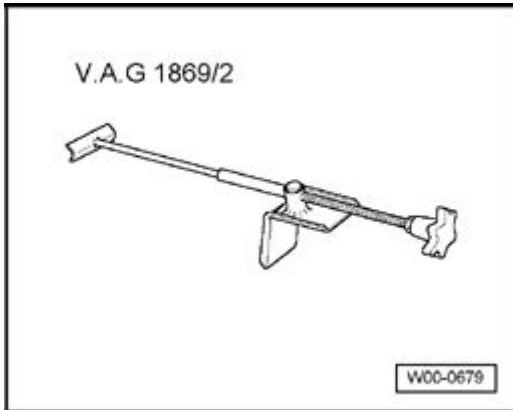


Fig. 24: Brake Pedal Actuator V.A.G 1869/2
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Brake pedal actuator V.A.G 1869/2

Component location:

The control module is bolted to the hydraulic unit and is located at left in the engine compartment.

CAUTION: Do not bend the brake lines near the hydraulic unit.

Removing

- Note or request radio code on vehicles with coded radio if necessary.
- Disconnect battery --> **27 - BATTERY, STARTER, GENERATOR, CRUISE CONTROL**

This work procedure applies only to the W12:

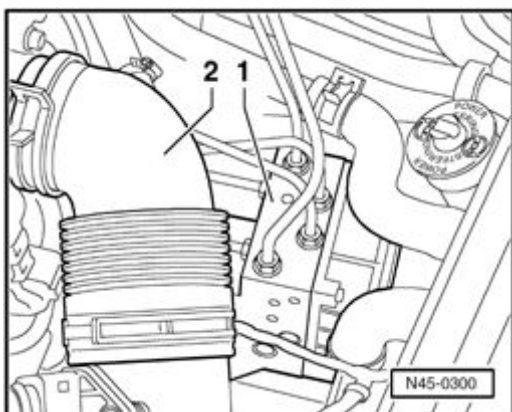


Fig. 25: Identifying Intake Tube
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Remove intake tube - 2 - and upper air filter housing with mass airflow sensor.

Continuation for all vehicles

- Disconnect connector from brake pressure sensor 1 G201.

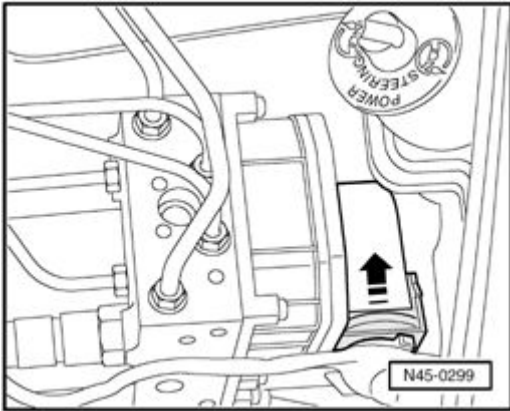


Fig. 26: Disengaging Connector From Control Module
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Disengage connector from control module in direction of arrow and disconnect.
- Install brake pedal loading device V.A.G 1869/2.
- Attach bleeder hose of bleeder bottle to left front brake caliper bleeder valve and open bleeder valve.
- Operate brake pedal using brake pedal depressor V.A.G 1869/2 at least 60 mm.
- Close front left bleeder valve.
- Place sufficient lint-free cloths under the control module and hydraulic unit.

Make sure that brake fluid does not come in contact with the terminals.

- Identify brake lines and remove at hydraulic unit.
- Seal brake lines and threaded holes with **Plugs 1H0 698 311 A** from repair kit.

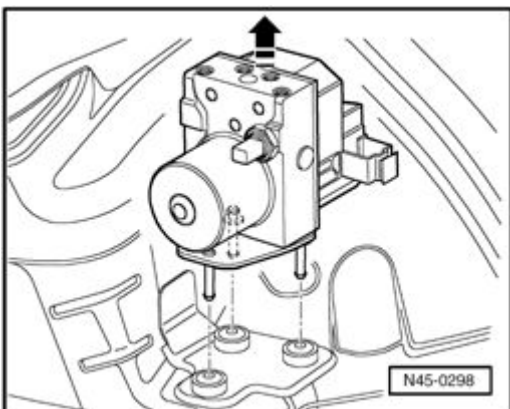


Fig. 27: Pulling Hydraulic Unit With Control Module Upward Out Of Shock Absorbers
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Pull hydraulic unit with control module upward out of shock absorbers.

Installing

2006 Volkswagen Phaeton

BRAKES Brake System

NOTE:

- Remove sealing plugs on new hydraulic unit when the corresponding brake line is going to be installed.
- If the sealing plugs are removed too early, brake fluid can escape. If this occurs, unit may not be sufficiently filled or adequately bled.

- Installation is performed in reverse the order of removal.
- Remove brake pedal loading device V.A.G 1869/2.
- Bleed brake system --> **Brake System, Bleeding**.
- Enter radio code.
- Perform ABS Control Module J104 coding using in "Guided Fault Finding".

Tightening specifications	
Brake lines at ABS aggregate:	
Thread M 12 x 1, SW 11	15 Nm

Brake Pressure Sensor 1, Removing and Installing

The sensor 1 for brake booster is located on the hydraulic control unit - 1 -.

This work procedure applies only to the W12:

Removing

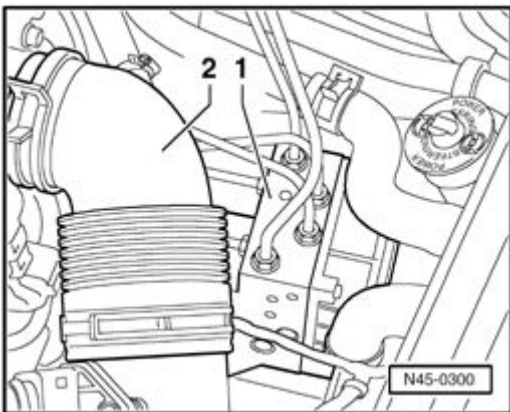


Fig. 28: Identifying Intake Tube

Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Remove intake tube - 2 -.

Continuation for all vehicles

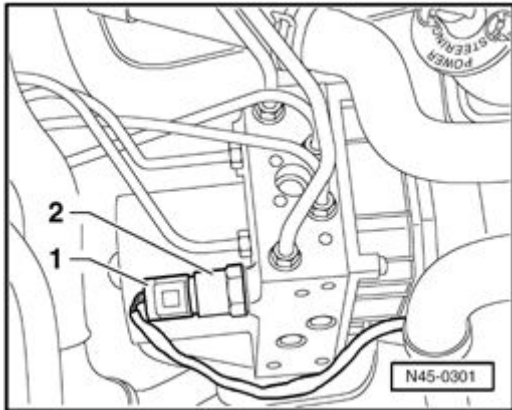


Fig. 29: Identifying Connector From Sensor 1 For Brake Booster
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Disconnect connector - **1** - from sensor 1 for brake booster - **2** -.
- Place sufficient lint-free cloths under the control module and hydraulic unit.
- Remove sensor 1 for brake booster.

Installing

- Installation is performed in the reverse order of removal.

Tightening specifications	
Sensor 1 for brake booster	20 Nm

- Bleed brake system --> **Brake System, Bleeding.**

ABS COMPONENTS, FRONT AND REAR AXLES

--> **Front Axle ABS Components, Removing and Installing**

--> **Rear Axle ABS Components, Removing and Installing**

Front Axle ABS Components, Removing and Installing

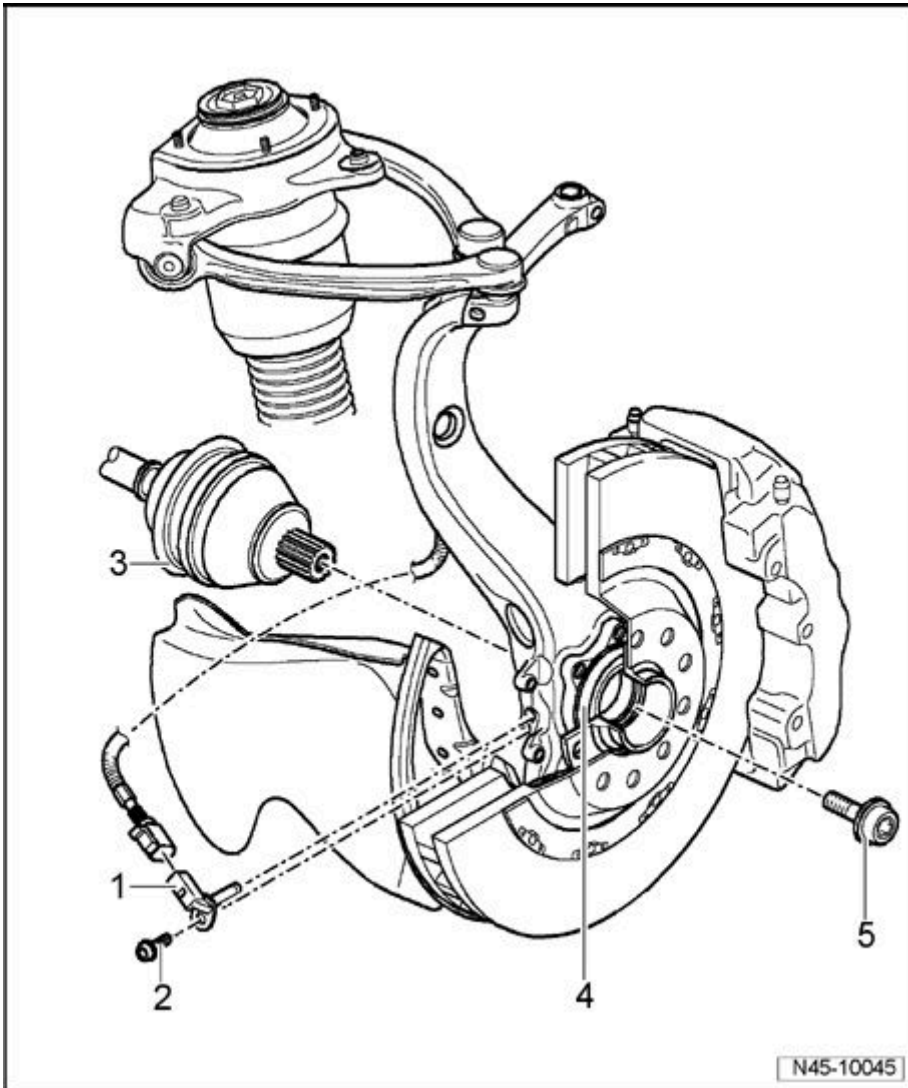


Fig. 30: Front Axle ABS Components, Assembly Overview
Courtesy of VOLKSWAGEN UNITED STATES, INC.

1 - ABS wheel speed sensor

- Before inserting sensor, clean inner surface of mounting hole and coat with **Polycarbamide grease G 000 650**
- Replace --> **Front Axle Speed Sensor, Removing and Installing**

2 - Hex socket bolt, 10 Nm

3 - Axle shaft

4 - Wheel hub with wheel bearing

- The ABS sensor ring is installed in the wheel bearing

5 - Socket head bolt

- Always replace. --> **40 - FRONT SUSPENSION** .

Front Axle Speed Sensor, Removing and Installing

Removing

- Raise vehicle.

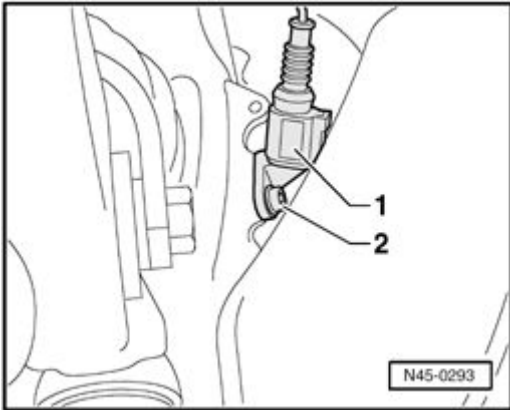


Fig. 31: Identifying Speed Sensor, Speed Sensor Wiring Connector & Bolt
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Separate speed sensor and speed sensor wiring connector - **1** -.
- Remove bolt - **2** - from wheel bearing housing.
- Remove ABS speed sensor from wheel bearing housing.

Installing

- Before inserting speed sensor, clean hole inner surface and coat speed sensor all-round with Polycarbamide grease G 000 650.
- Insert the speed sensor into the hole in the wheel bearing housing and tighten the bolt to 10 Nm.
- Connect speed sensor to speed sensor wiring.

Rear Axle ABS Components, Removing and Installing

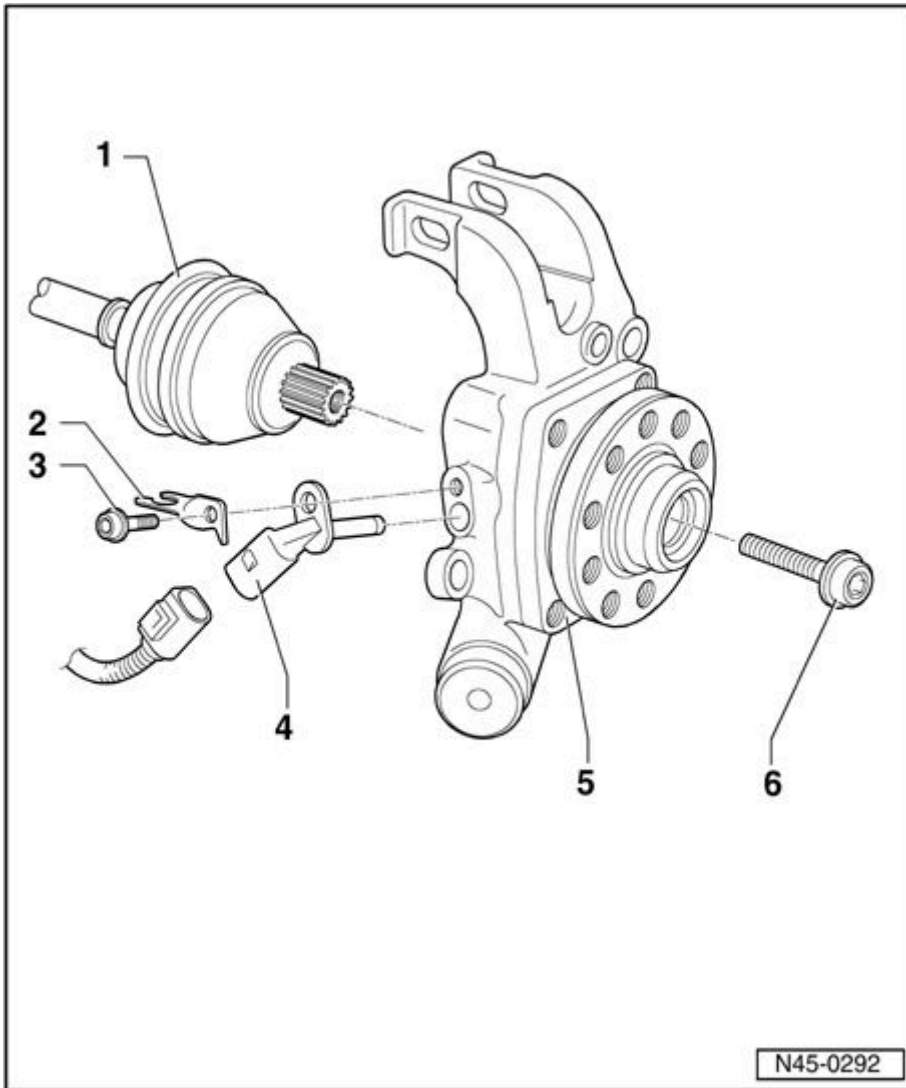


Fig. 32: Rear Axle ABS Components
Courtesy of VOLKSWAGEN UNITED STATES, INC.

1 - Drive axle

2 - Bracket

- For speed sensor harness

3 - Hex socket bolt, 10 Nm

4 - ABS wheel speed sensor

- Before inserting sensor, clean inner surface of mounting hole and coat with **Polycarbamide grease G 000 650**
- Replace --> **Rear Axle Speed Sensor, Removing and Installing**

5 - Wheel bearing/hub unit

- The ABS sensor ring is installed in the wheel bearing