Rear axle, servicing

Rear axle, removing and installing

Special tools and equipment

- VAG 1383A transmission jack
- VAG 1869 Brake filling and bleeding unit
Removing

**Note:**

*Do not remove bearing bracket to remove rear axle*

- Remove bolts -1- with vehicle standing on its wheels (raise vehicle until bolts are accessible).
- Raise vehicle further to relieve coil spring pressure.
- Remove wheels.

- Unclip brake cable (arrows).
- Remove clips -2- on both sides.
- Disconnect brake lines.
- Remove brake caliper housing bolts -A-.

- Remove connector -1- from speed sensor.
  - Unclip speed sensor wiring from retainer.
- Support rear axle.

For example, with transmission jack VAG 1383

- Remove bearing bracket bolts -1- on both sides of rear axle, and lower rear axle.

**Installing**

- Bleed brakes.

⇒ Repair Manual, Brake System, Repair Group 47

**Grease bonded rubber bushings**

- Grease bonded rubber bushings with assembly paste before installing rear axle.
- Install in reverse sequence
- Check steering wheel position during test drive.
- Check wheel alignment if steering wheel is not in straight ahead position.

**Tightening torque:**

- Shock absorber to body: 75 Nm (55 ft lb)
- Bearing bracket to rear axle: 80 Nm (59 ft lb)
Use new nuts and bolts!
Rear axle beam, assembly overview

Note:

♦ Do not weld or straighten axle beam.
♦ Always replace self-locking nuts.

1 - Wheel bolt
   ♦ 120 Nm (89 ft lb)
2 - Screw
3 - Brake disc
4 - Dust cap
   ♦ Always replace

Note:

A perfect seal is only achieved using a new dust cap. Only then is optimum function and long service life guaranteed.
5 - Self-locking 12-point nut
- 175 Nm (129 ft lb)
- Always replace

6 - Wheel hub with wheel bearings

Note:
- Wheel bearing/hub are installed together in housing.
- Wheel bearing/hub unit is maintenance and adjustment free. Adjusting and servicing are not possible!

7 - Bolt
- 60 Nm (44 ft lb)
- Always replace

8 - Splash plate

9 - Bracket, parking brake cable

10 - Parking brake cable

11 - Self-locking nut
- 80 Nm (59 ft lb)
- Always replace
12 - Bolt
- 75 Nm (55 ft lb)
- Always replace
- If weld nut threads in long member are damaged, repair with Heli-coil.

Note:
Use this repair method on one weld nut only each side!

13 - Bolt
- 80 Nm (59 ft lb)
- Always replace

14 - Bearing bracket
- Check and if necessary adjust rear axle toe after installation
- If possible, do not loosen when removing rear axle

15 - Parking brake cable clip

16 - Bonded rubber bushing
- Removing and installing ⇒ Page 42-11
17 - Hydraulic rubber bonded bushing
18 - Axle beam
  • Stub axle contact surfaces and threaded holes are to be free of paint and dirt
19 - ABS wheel speed sensor
20 - Socket head bolt
  • 8 Nm (70 in. lb)
21 - Spacer bushing
  • Material: Zinc
  • Check for damage
22 - Coil spring
  • Determine part number from parts catalog
23 - Spring seat
24 - Bolt
   ♦ 60 Nm (44 ft lb)
   ♦ Always replace
25 - Bolt
   ♦ 75 Nm (55 ft lb)
   ♦ Always replace
26 - Shock absorber
   ♦ Functional check
   ⇒ Page 42-21
27 - Nut
- Axle beam must be centered when tightening nut
- Load vehicle with one person when tightening.

28 - Stub axle
- Do not attempt to straighten
- Do not re-cut threads

29 - Stone protection plate

30 - Bolt
- 65 Nm (48 ft lb)
- Always replace

31 - Brake caliper
- Servicing

⇒ Repair Manual, Brake System, Repair Group 46
⇒ Repair Manual, Brake System, Repair Group 47
Bonded rubber bushings, removing and installing

Special tools and equipment

- 3301 Assembly tool
- 3346 Assembly tool
- 3416/1 Press piece
- 3416/2 Press piece
- 3416/3 Support tube
Removing

- Unclip brake cable (arrows).
- Remove clips -2- both sides.
- Remove bolts -1- on rear axle bearing bracket, both sides.

- Position a wooden block approx. 100 mm (3.34 in.) long between rear axle and body.
- Position VW 771 slide hammer and pull out bonded rubber bushing
Installing

Bonded rubber bushing has mark -1- on face.

- Mark must align with edge (arrow) on trailing arm -2-.
  - Mark position of mark -1- on bonded rubber bushing.

- Assemble special tool with bonded rubber bushing.
- Install bonded rubber bushing and special tool on rear axle.
- Ensure mark aligns with trailing arm edge.
- Install (pull in) bonded rubber bushing by turning spindle.
- Check position of bonded rubber bushing after installing.

Continue rear axle installation in reverse sequence

**Tightening torque:**
Bearing bracket to rear axle  80 Nm (59 ft lb)

Use new nuts and bolts!
Hydraulic bonded rubber bushings, removing and installing

Bushings -2- cannot be pressed out or in with current shop tools.

If bushing -2- is damaged, the rear axle beam must be replaced.

Vibration damper -4- is only on axles equipped with Hydraulic bonded rubber bushings (axles with solid rubber bushings do not have damper).

Rear axle beam is supplied as a spare part assembly (including hydraulic bonded rubber bushings).
1 - Axle beam
- Stub axle contact surfaces and threaded holes are to be free of paint and dirt

2 - Hydraulic bonded rubber bushing
- Cracks and/or oil spots in rubber are indications of wear.

3 - Bolt
- 20 Nm (15 ft lb) + turn 45° further
- Always replace

4 - Vibration damper
- Vibration damper is only on axles with Hydraulic bonded rubber bushings. Axles with solid rubber bushings do not have the damper.
Shock absorber/spring, removing and installing

Special tools and equipment

- VAG 1752 Strut holder
- VAG 1752/3 Strut adaptor
- VAG 1752/9 adaptor

Spring, removing

- Position spring holder -1-.  
- Compress coil spring enough to remove.  
- Remove spring.  
1 - VAG 1752/1 Strut spring tool  
2 - VAG 1752/9 adaptor  
3 - VAG 1752/3 Strut adaptor
Removing spring

- Pull connector -1- off speed sensor.
- Unclip speed sensor wiring from retainer.

- Remove bolts -1- with vehicle standing on its wheels (raise vehicle until bolts are accessible).
- Raise vehicle to relieve pressure on coil spring.
- Remove spring.
Installing spring

- Ensure spacer bushing (zinc) is not damaged. Replace if necessary.

- Install spring together with spring seat.

- Loosen spring and remove spring compressor. Observe installation position!

- End of spring (arrow) must lie against stop on spring seat.

Shock absorber, removing

- Remove bolts -1- with vehicle standing on its wheels (raise vehicle until bolts are accessible).
- Remove shock absorber bolt -1- on rear axle.

**Note:**

*For ease of illustration work sequence is shown without wheel.*

- Remove shock absorber.
- Install in reverse sequence

**Tightening torque:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock absorber to rear axle</td>
<td>60 Nm (44 ft lb)</td>
</tr>
</tbody>
</table>

Use new nuts!

Load rear of vehicle with one person when tightening

<table>
<thead>
<tr>
<th>Component</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock absorber to body</td>
<td>75 Nm (55 ft lb)</td>
</tr>
</tbody>
</table>

Use new bolts!