

Volkswagen > Passat > 1998-2005

Suspension, Wheels, Steering

40 - Front Suspension

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Front Suspension, Servicing

Note:

- ✦ *If a vehicle that has a drive axle removed is to be moved, an outer CV joint must be installed in place of the drive axle and be tightened to 50 Nm. Otherwise, the wheel bearing will be damaged.*
- ✦ *Welding and straightening operations are not permitted on load-bearing or wheel-controlling components.*
- ✦ *Always replace self-locking nuts.*
- ✦ *Always replaced corroded bolts/nuts.*

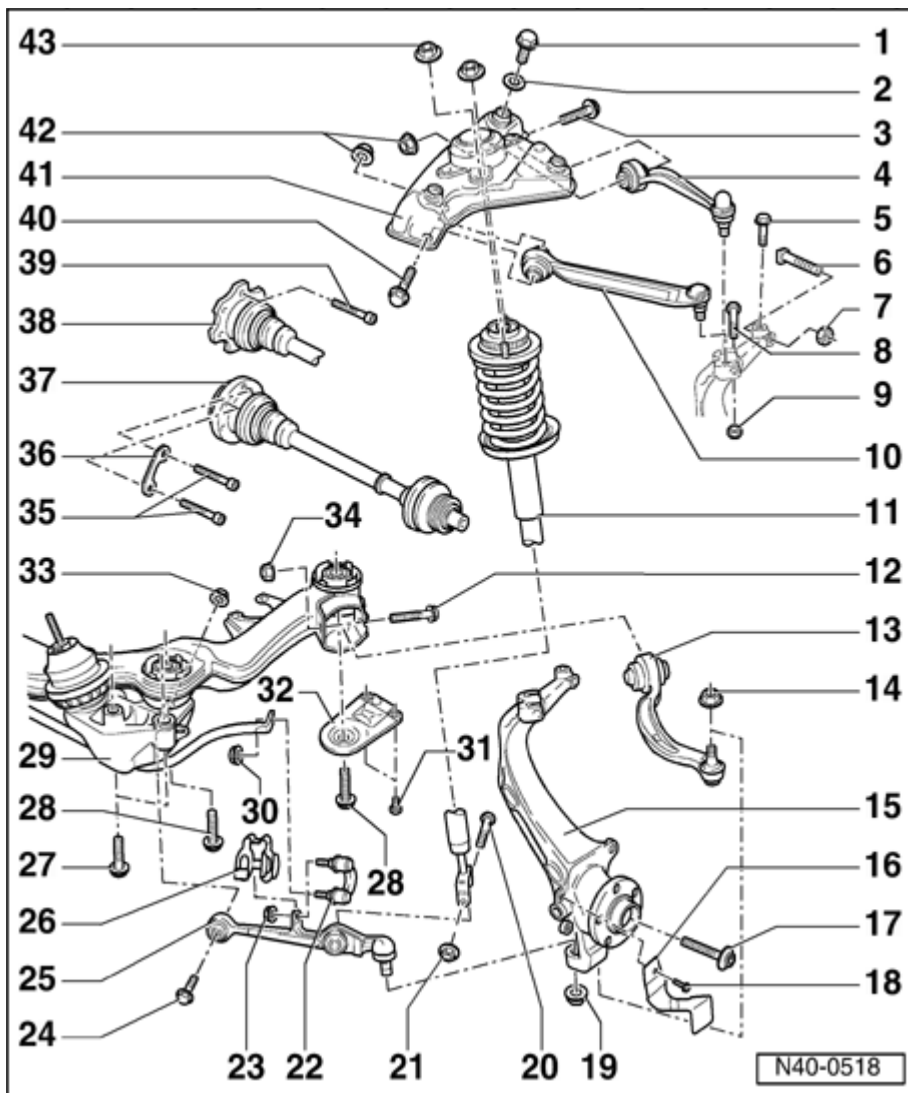
⇒ [Spring, Removing and Installing](#)

⇒ [Front Wheel Bearing, Removing and Installing](#)

⇒ [Front Wheel Bearing, Wheel Bearing Housing Installed, Removing and Installing](#)

⇒ [Stabilizer Mountings, Replacing](#)

⇒ [Subframe Mountings, Replacing](#)



1 - Hex bolt, 75 Nm

2 - Washer

3 - Hex bolt

* Vehicles with steel mounting bracket; bolt length: M10 x 60

* Vehicles with aluminum mounting bracket; bolt length: M10 x 62

* Replace each time

4 - Upper rear control arm

* Removing and installing ⇒ [Front and Rear Upper Control Arm Bushings, Replacing](#)

5 - Hex bolt, 7 Nm

- ✦ Replace each time

6 - Bolt

7 - Self-locking hex nut, 50 Nm

- ✦ Replace each time

8 - Hex bolt

- ✦ M10 x 100

- ✦ Press out of wheel bearing housing ⇒ [Connections Between Upper Control Arms and Wheel Bearing Housing, Separating](#)

9 - Self-locking hex nut, 40 Nm

- ✦ Replace each time

10 - Upper front control arm

- ✦ Can only be removed with mounting bracket
- ✦ Mounting bracket, removing and installing ⇒ [Mounting Bracket, Removing and Installing](#)
- ✦ Mount, replacing ⇒ [Front and Rear Upper Control Arm Bushings, Replacing](#)

11 - Suspension strut

Allocation of coil spring to vehicle

12 - Hex bolt

- ✦ M12 x 1.5 x 120
- ✦ Replace each time

13 - Guide link

- ✦ Removing and installing ⇒ [Lower Control Arm, Removing and Installing](#) and ⇒ [Guide Link, Removing and Installing](#)

If hydraulic mount is leaking, it must be replaced ⇒ [Guide Link Mountings, Replacing](#)

14 - Self-locking nut

- ✦ Replace each time
- ✦ Application ⇒ See Parts Catalog

- ✦ Flange nut, M12 x 1.5, for wheel bearing housing without bushing (old design) ⇒ [Wheel Bearing Housing/Tie Rod End, Modified](#)

Tightening torque: 100 Nm

- ✦ Combination nut, M12 x 1.5, for wheel bearing housing with bushing (new design) ⇒ [Wheel Bearing Housing/Tie Rod End, Modified](#)

Tightening torque: 125 Nm

- ✦ Flange nuts should be installed on vehicles with wheel bearing housings without bushings and support arms of old design.
- ✦ When installing wheel bearing housings with bushings, flange nuts must be replaced with combination nuts

15 - Wheel bearing housing

- ✦ Application ⇒ See Parts Catalog
- ✦ Different wheel bearing housing designs (with and without bushings) ⇒ [Wheel Bearing Housing, from MY 2002, Modified](#)
- ✦ Removing and installing ⇒ [Wheel Bearing Housing, Removing and Installing](#)
- ✦ Modification ⇒ [Wheel Bearing Housing/Tie Rod End, Modified](#)

16 - Shield plate

17 - Hex bolt

- ✦ Changed from hex socket bolt
- ✦ Replace each time

18 - Socket hex head bolt, 10 Nm

19 - Self-locking nut

- ✦ Replace each time
- ✦ Application ⇒ See Parts Catalog
- ✦ Flange nut, M12 x 1.5, for wheel bearing housing without bushing (old design) ⇒ [Wheel Bearing Housing, from MY 2002, Modified](#)

Tightening torque: 100 Nm

- ✦ Combination nut, M12 x 1.5, for wheel bearing housing with bushing (new design) ⇒

[Wheel Bearing Housing, from MY 2002, Modified](#)

Tightening torque: 125 Nm

- ✦ Flange nuts should be installed on vehicles with wheel bearing housings without bushings and support arms of old design.
- ✦ When installing wheel bearing housings with bushings, flange nuts must be replaced with combination nuts.

20 - Hex bolt

- ✦ M12 x 1.5 x 85

21 - Self-locking hex nut, 90 Nm

- ✦ Replace each time

Tighten nuts in unloaded condition ⇒ [Front Axle, Lifting to Unloaded Position](#) !

22 - Connecting link

Arrow on connecting link points in driving direction

- ✦ Modification ⇒ [Stabilizer Connecting Link, Modified](#)

23 - Self-locking nut

- ✦ 40 Nm plus an additional 90 degree $\frac{1}{4}$ turn
- ✦ Replace each time
- ✦ Depending upon design, use self-locking nut or nut with ribs on the underside

24 - Hex bolt

- ✦ M12 x 1.5 x 100
- ✦ Replace each time

25 - Lower control arm

- ✦ Application ⇒ See Parts Catalog
- ✦ Different lower control arm designs (for wheel bearing housings with and without bushings) ⇒ [Control Arm, from MY 2002, Modified](#)
- ✦ Checking ⇒ [Lower Control Arm, Checking](#)

- ✦ Removing and installing ⇒ [Lower Control Arm, Removing and Installing](#)
- ✦ Mount, replacing ⇒ [Control Arm Mountings, Replacing](#)

26 - Clip

- ✦ Replace each time

27 - Hex bolt, 75 Nm

- ✦ M10 x 70
- ✦ Replace each time

If weld nut threads are damaged, threads can be repaired using Heli-Coil thread inserts.

Servicing thread in side rail ⇒ [Longitudinal Member Threads, Servicing](#)

28 - Hex bolt

- ✦ M12 x 1.5 x 110
- ✦ 110 Nm plus an additional 90 degree $1/4$ turn
- ✦ Replace each time

If weld nut threads are damaged, threads can be repaired using Heli-Coil thread inserts.

Servicing thread in side rail ⇒ [Longitudinal Member Threads, Servicing](#)

29 - Subframe/engine carrier

- ✦ Removing and installing ⇒ [Subframe, Removing and Installing](#)

30 - Self-locking nut

- ✦ 40 Nm plus an additional 90 degree $1/4$ turn
- ✦ Replace each time
- ✦ Modification ⇒ [Stabilizer Connecting Link, Modified](#)

31 - Hex bolt

- ✦ M8 x 25

Was modified ⇒ [Modified bolts for subframe supports](#)

If weld nut threads are damaged, threads can be repaired using Heli-Coil thread inserts.

Servicing thread in side rail ⇒ [Longitudinal Member Threads, Servicing](#)

32 - Subframe support

33 - Self-locking nut

- ✦ 80 Nm plus an additional 90 degree $1/4$ turn

- ✦ Replace each time

Tighten nuts in unloaded condition ⇒ [Front Axle, Lifting to Unloaded Position](#) !

34 - Self-locking nut

- ✦ 80 Nm plus an additional 90 degree $1/4$ turn

- ✦ Replace each time

Tighten nuts in unloaded condition ⇒ [Front Axle, Lifting to Unloaded Position](#) !

35 - Multi-point socket head bolt

36 - Backing plate

37 - Drive axle

38 - Drive axle with triple roller joint

39 - Socket head bolt

40 - Hex bolt

Note:

- ✦ Vehicles with steel mounting bracket; bolt length M10 x 60

- ✦ Vehicles with aluminum mounting bracket; bolt length M10 x 62

- ✦ Replace each time

41 - Mounting bracket

Material was revised from steel to aluminum.

Installing different mounting brackets is not permitted.

- ✦ Removing and installing ⇒ [Mounting Bracket, Removing and Installing](#)

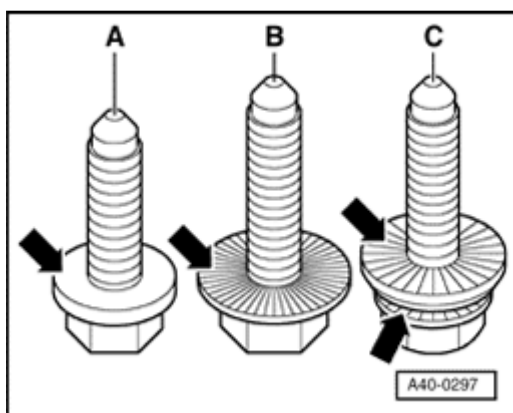
42 - Self-locking nut

- ✦ 50 Nm plus an additional 90 degree $\frac{1}{4}$ turn
- ✦ Replace each time

Tighten nuts in unloaded condition ⇒ [Front Axle, Lifting to Unloaded Position](#) !

43 - Self-locking hex nut, 22 Nm

- ✦ Replace each time



Modified bolts for subframe supports

The subframe support bolts were changed three times since start of production.

Bolt - **A** - was used at start of production.

Bolt - **A** - has no ribs on the underside of the washer, it is smooth.

Then the bolt was changed to bolt - **B** - .

Ribbed bolt - **B** - is ribbed on the underside - **arrow** - .

As of 04.99, bolt - **C** - has been put into use. It can be installed in all vehicles.

Bolt - **C** - is ribbed on the underside of the bolt head and washer.

The bolts have different tightening torques.

Tightening torques:	
Hex bolt A	25 Nm
Ribbed bolt B	75 Nm
Ribbed bolt C	30 Nm

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