



JRB5073

NOTE

Ensure proper cleanliness when working on the servo-steering.

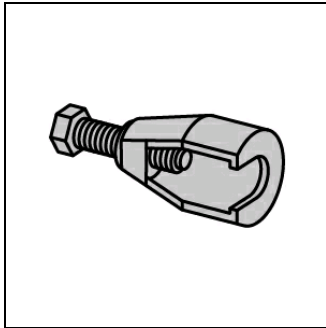
Cable connections must be cleaned before removing.

Use only fibre-free cleaning cloths.

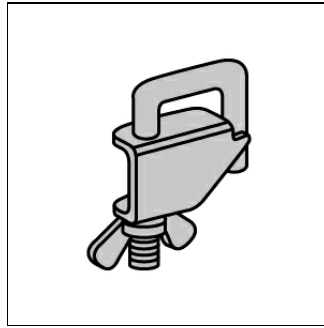
The hydraulic oil level must not drop below the minimum during bleeding.

The illustrations of these installation instructions are exemplary and are only intended for better understanding.

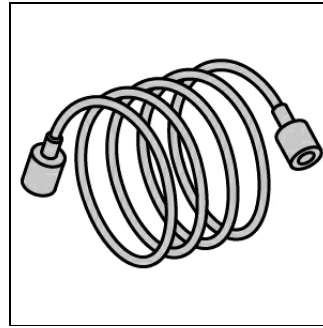
Required special tools



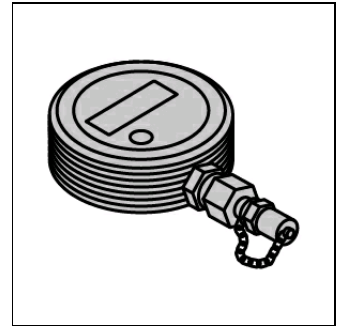
Ball-joint puller
OE (601 589 04 33 00)



Hose clamp(s)
OE (000 589 54 37 00)



Hose
OE (400 589 01 91 00)



Pressure gauge
OE (000 589 06 21 00)

Required filling quantities/torques

Filling quantities and specifications

Power steering oil	0,00 litres
Power steering oil specification	Observe manufacturer's specifications.

Required torques

Self-locking screws and nuts must always be replaced.

Steering column switch (1)	(see figure 1)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Steering rod (2)	(see figure 1)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Power steering pressure line (1)	(see figure 2)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Power steering return line. (2)	(see figure 2)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Steering gear		Observe the vehicle manufacturers' instructions (expansion bolts, securing material).

Remove:

Lift vehicle.

Remove securing cotter pin(s).

Nut - loosen steering track rod end. **(3)**

Pull off the steering rod head using a puller. **(4)**

Unscrew the steering rod head nut. **(3)**

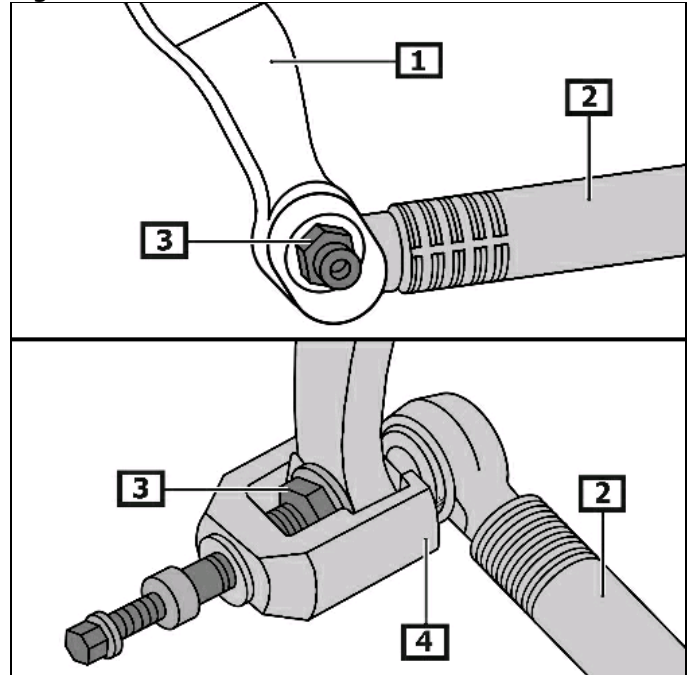
Remove steering rod from steering arm. **(2)**

Required special tools

Ball-joint puller **(4)** OE (601 589 04 33 00)

(see figure 1)

Figure 1



1 Steering column switch

2 Steering rod

3 Steering rod head nut

4 Ball-joint puller

Clamp off hydraulic line(s) of steering gear using hose clamp(s). **(1)(2)**

Disconnect the pressure pipe from the steering gear. **(1)**

Unscrew return line from steering gear. **(2)**

Required special tools

Hose clamp(s) OE (000 589 54 37 00)

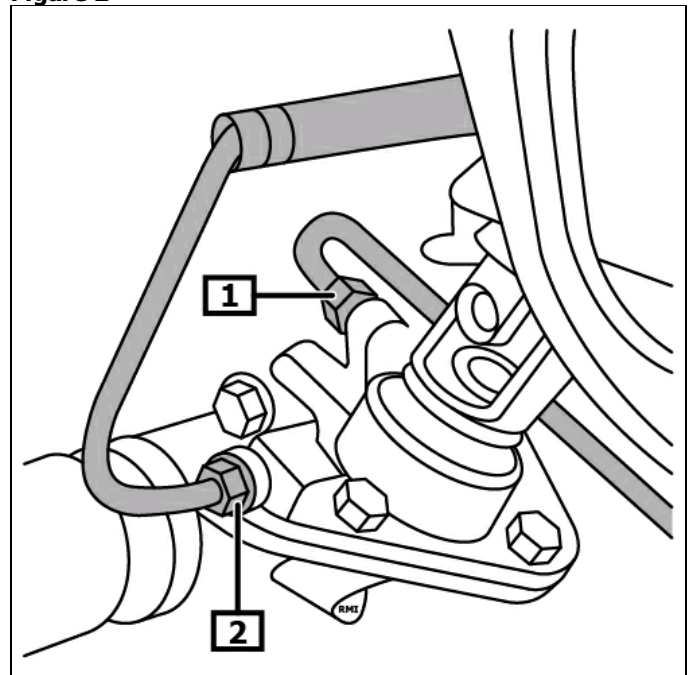
(see figure 2)

Turn the steering wheel to the central position.

Unscrew and remove steering column lower joint screw(s).

Loosen lower steering column joint from steering gear.

Figure 2



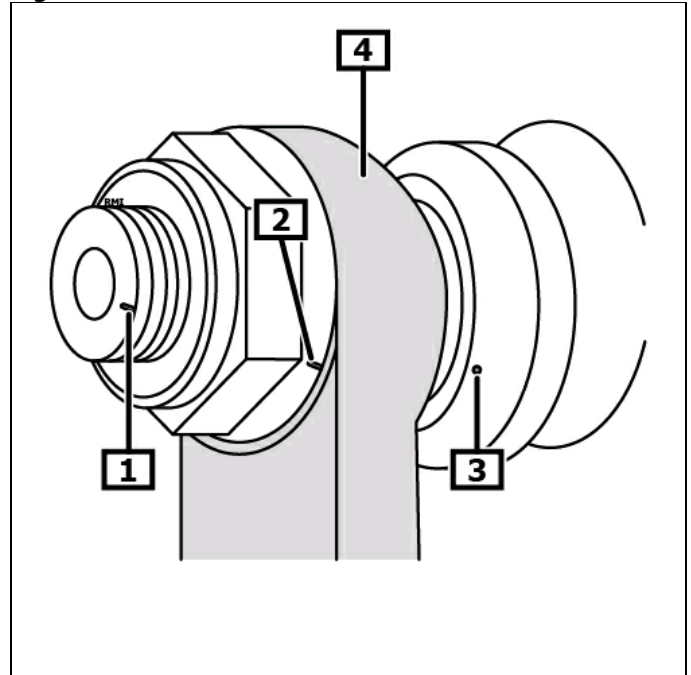
1 Power steering pressure line

2 Power steering return line.

Attach marking(s). **(1)**
Markings must align. **(1) - (3)**
(see figure 3)

Unscrew steering gear bolt(s).
Remove steering gear.

Figure 3



1 Mark(s)

2 Mark(s)

3 Mark(s)

4 Steering column switch

Install:

Installation in reverse order of removal.

Steering column joint tightening slot must check with steering gear mark.

Markings must align. **(1) - (3)**
(see figure 3)

Continue assembly in reverse order of removal.

Bleed steering system

Check power steering oil level and correct if required.
Start engine and run in idle.

Unscrew nut(s). **(1)**
Bring steering into central position.
Screw in adjusting screw(s) up to the stop. **(2)**
Tighten nut(s). **(1)**
(see figure 4)

Left-hand steering

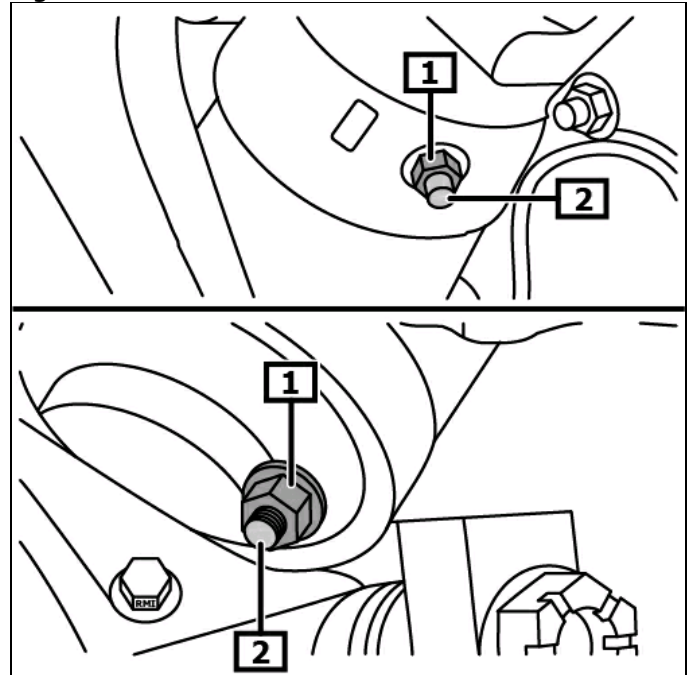
Turn steering to the left and hold at the stop for approx. 5 s.
Turn steering wheel several times against the end stop.
Repeat bleeding process until air bubbles do not show any longer.
Check power steering oil level and correct if required.

Right-hand steering

Turn steering to the right and hold at the stop for approx. 5 s.
Turn steering wheel several times against the end stop.
Repeat bleeding process until air bubbles do not show any longer.
Check power steering oil level and correct if required.

Switch off engine.

Figure 4



1 Nut(s)

2 Adjusting screw

Check the final pressure limit.

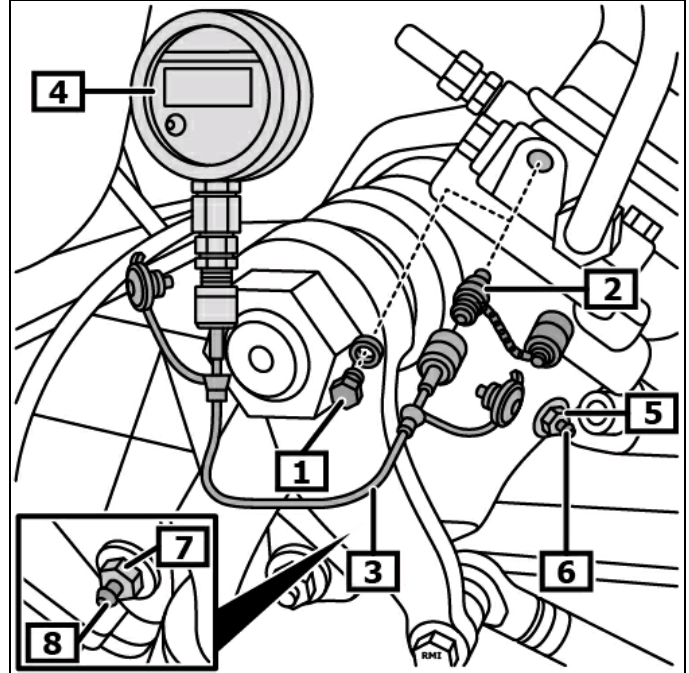
Position front wheels centrally onto the turntables.

- Unscrew closing screw. **(1)**
- Screw in connecting piece. **(2)**
- Connect hose. **(3)**
- Connect the pressure gauge. **(4)**

Required special tools

Hose **(3)** OE (400 589 01 91 00)
Pressure gauge **(4)** OE (000 589 06 21 00)
(see figure 5)

Figure 5



- | | |
|-----------------|-------------------|
| 1 Locking screw | 2 connection |
| 3 Hose | 4 Pressure gauge |
| 5 Lock nut | 6 Adjusting screw |
| 7 Lock nut | 8 Adjusting screw |

Start engine and run with idling speed at approx. 1400 - 1500 rpm.

Turn steering wheel several times back and forth to the limit positions until power steering oil temperature has reached approx. 50 °C.

- Turn the steering wheel to the left up to the stop.
- Read and note pressure on the pressure gage.
- Turn the steering wheel to the right up to the stop.
- Read and note pressure on the pressure gage.
- Turn the steering wheel to the central position.
- Switch off engine.

The final limiting pressure must be 30 - 50 bar.

The final limiting pressure must be adjusted if it is out of tolerance.

Set final limiting pressure

Left-hand steering

Unscrew nut(s). **(5)**

Screw in adjusting screw(s) up to the stop. **(6)**

Unscrew adjusting screw by 5 turns. **(6)**

Tighten the nut(s) slightly. **(5)**

Start engine and run with idling speed at approx. 1400 - 1500 rpm.

Turn the steering wheel to the left up to the stop.

Read pressure on the pressure gage.

If final limiting pressure should be out of tolerance, screw adjusting screw by 1/4 turns in or out and check pressure again.

Switch off engine.

Tighten nut(s). **(5)**

Hold screw(s) in place. **(6)**

Turn the steering wheel to the central position.

Unscrew nut(s). **(7)**

Screw in adjusting screw(s) up to the stop. **(8)**

Unscrew adjusting screw by 5 turns. **(8)**

Tighten the nut(s) slightly. **(7)**

Start engine and run with idling speed at approx. 1400 - 1500 rpm.

Turn the steering wheel to the right up to the stop.

Read pressure on the pressure gage.

If final limiting pressure should be out of tolerance, screw adjusting screw by 1/4 turns in or out and check pressure again.

Switch off engine.

Tighten nut(s). **(7)**

Hold screw(s) in place. **(8)**

(see figure 5)

Right-hand steering

Unscrew nut(s). **(5)**

Screw in adjusting screw(s) up to the stop. **(6)**

Unscrew adjusting screw by 5 turns. **(6)**

Tighten the nut(s) slightly. **(5)**

Start engine and run with idling speed at approx. 1400 - 1500 rpm.

Turn the steering wheel to the right up to the stop.

Read pressure on the pressure gage.

If final limiting pressure should be out of tolerance, screw adjusting screw by 1/4 turns in or out and check pressure again.

Switch off engine.

Tighten nut(s). **(5)**

Hold screw(s) in place. **(6)**

Turn the steering wheel to the central position.

Unscrew nut(s). **(7)**

Screw in adjusting screw(s) up to the stop. **(8)**

Unscrew adjusting screw by 5 turns. **(8)**

Tighten the nut(s) slightly. **(7)**

Start engine and run with idling speed at approx. 1400 - 1500 rpm.

Turn the steering wheel to the left up to the stop.

Read pressure on the pressure gage.

If final limiting pressure should be out of tolerance, screw adjusting screw by 1/4 turns in or out and check pressure again.

Switch off engine.

Tighten nut(s). **(7)**

Hold screw(s) in place. **(8)**

(see figure 6)

Continuation for all vehicles

Remove special tools. **(2) - (4)**

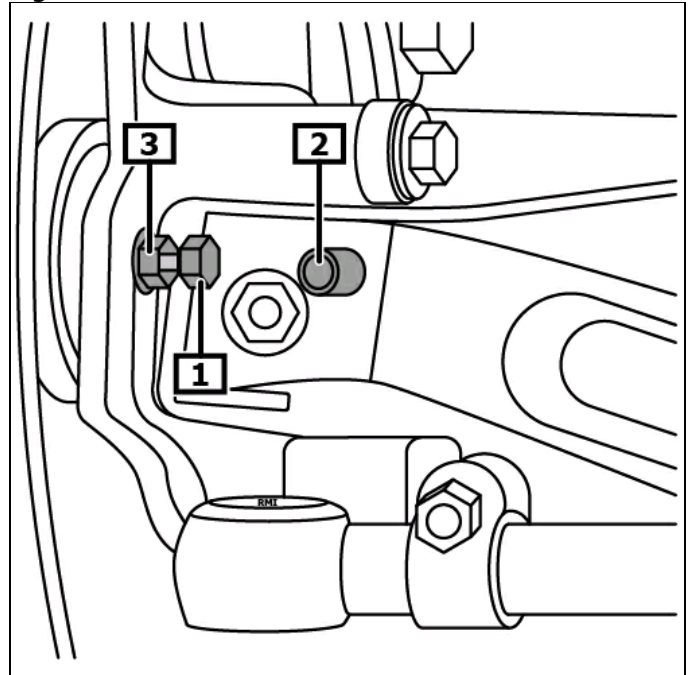
Screw in closing screw. **(1)**

(see figure 5)

Check power steering oil level and correct if required.

Turn the steering wheel to the left up to the stop.
Check whether the screw is snug, (1)(2)
Loosen lock nut and screw out screw up to contact, if screw has
no contact. (1)(3)
Tighten lock nut(s). (3)
Repeat operation for the right-hand side.
(see figure 6)

Figure 6



**1 End of travel stop adjusting
screw**

2 Axle body

3 Lock nut