



GB

JRB5090

NOTE

Secure vehicle against rolling away.

Ensure proper cleanliness when working on the servo-steering.

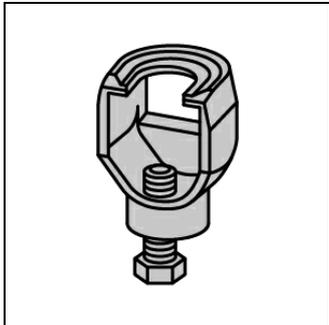
Cable connections must be cleaned before removing.

Use only fibre-free cleaning cloths.

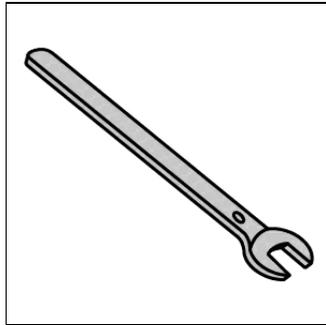
The hydraulic oil level must not drop below the minimum during bleeding.

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

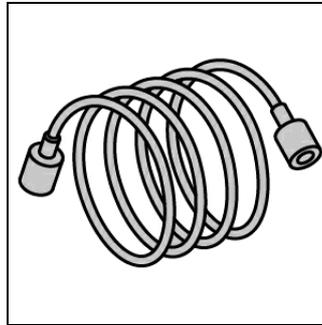
Required special tools



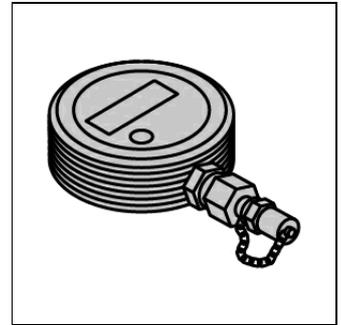
Puller
OE (625 589 00 35 00)



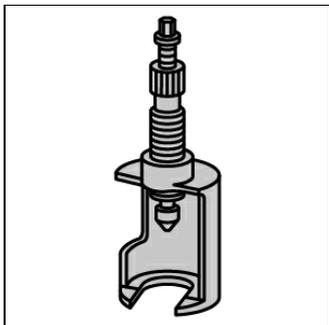
Fork wrench
OE (000 589 16 01 00)



Hose
OE (400 589 01 91 00)



Pressure gauge
OE (000 589 06 21 00)



Ball-joint puller
OE (655 589 00 35 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 2) Use new nut(s)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Steering rod (2)	(see figure 2) Use new nut(s)	Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Pressure line at steering gear		Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Return line to steering gear		Observe the vehicle manufacturers' instructions (expansion bolts, securing material).
Steering gear		Observe the vehicle manufacturers' instructions (expansion bolts, securing material).

Remove:

Lift the vehicle until the front wheels are off the ground.
Turn the steering to the right as far as the stop.

Tilt driver's cab.

Remove entry sill trim.

Remove power steering hydraulic line(s) from frame.
Disconnect hydraulic line(s) from steering gear.

Disconnect plug. **(1)**

Remove power steering equalizing tank. **(2)**

Remove holder of expansion tank on power steering. **(3)**

Disconnect hydraulic line(s). **(4)**

Remove the hydraulic line(s). **(5)**

Loosen pressure accumulator. **(6)**

Disconnect proportional valve plug. **(7)**

Remove proportional valve. **(8)**

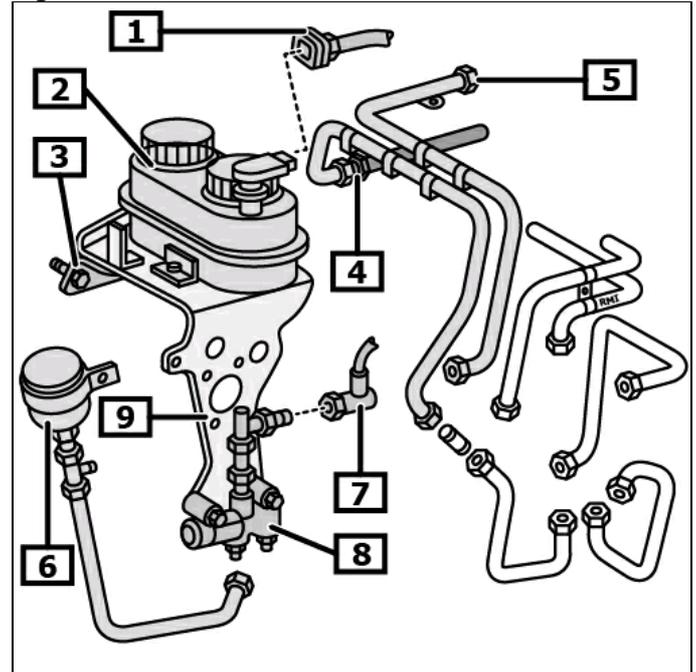
Remove the holder. **(9)**

(see figure 1)

Collect draining fluid.

Close opening(s).

Figure 1



1 Plug

2 Power steering fluid reservoir

3 Power steering expansion tank holder

4 Hydraulic line(s)

5 Hydraulic line(s)

6 Accumulator

7 Proportional valve connector

8 Proportional valve

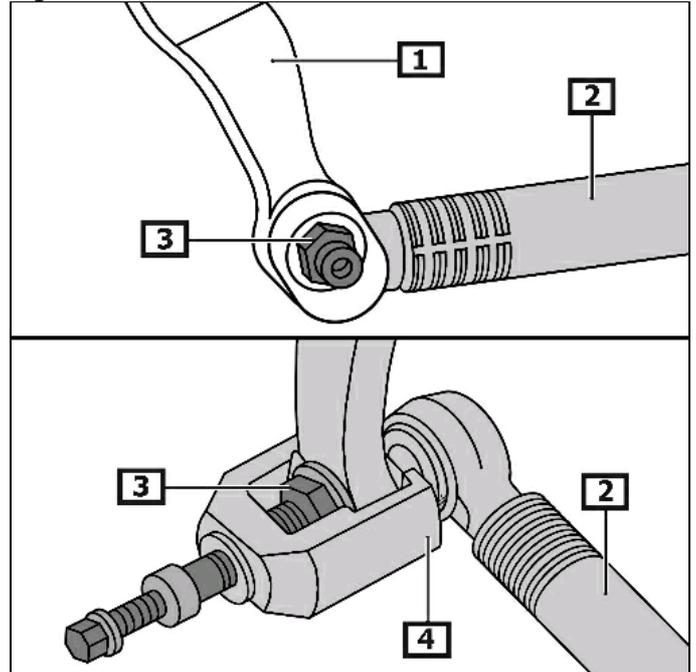
9 Support

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

Puller **(4) OE (625 589 00 35 00)**
(see figure 2)

Figure 2



- | | |
|--------------------------|----------------|
| 1 Steering column switch | 2 Steering rod |
| 3 Steering rod head nut | 4 Puller |

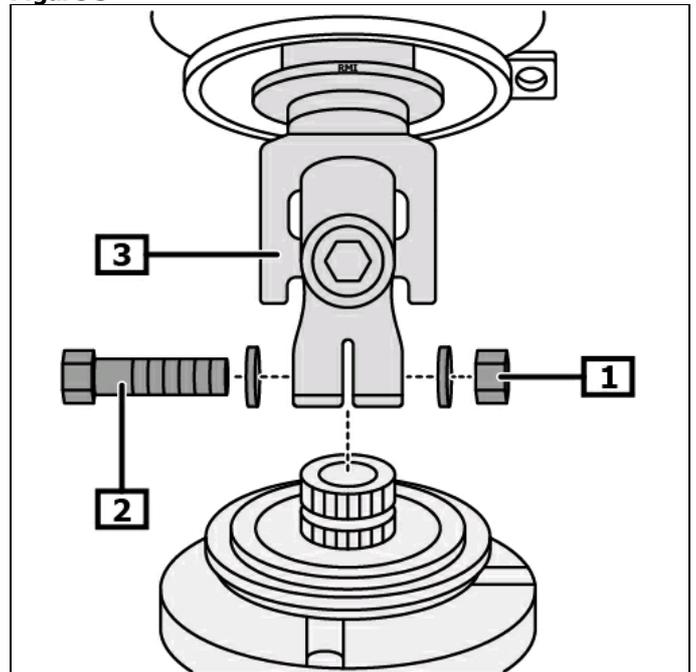
Disconnect hydraulic line(s) from steering gear.

Collect draining fluid.
Observe disposal regulations!

Unplug connector on power steering expansion tank.
 Loosen power steering expansion tank and put aside.
 Turn the steering gear to the central position.
 Secure steering wheel against unintentional turning.

Unscrew and remove lower steering column joint nut. **(1)**
 Unscrew and remove lower steering column joint screw. **(2)**
 Loosen lower steering column joint from steering gear. **(3)**
(see figure 3)

Figure 3



- | | |
|-----------------------------------|-------------------------------------|
| 1 Steering column joint nut lower | 2 Lower steering column joint screw |
| 3 Lower steering column joint | |

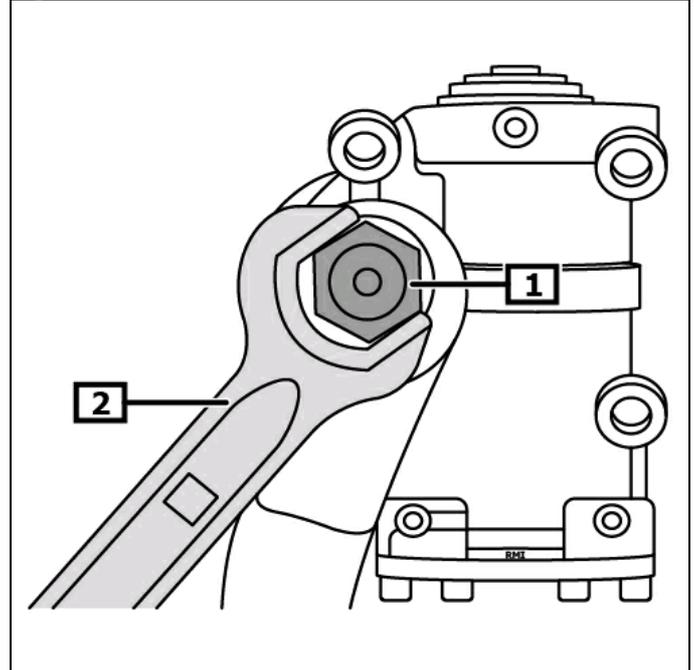
Mount tightening belt to steering gear.
Remove steering gear using suitable lifting tool.

Loosen steering arm lever nut. **(1)(2)**

Required special tools

Fork wrench **(2) OE (000 589 16 01 00)**
(see figure 4)

Figure 4



1 Steering arm lever nut(s).

2 Fork wrench

Remove the steering arm lever from the steering gear using a puller. **(1)(2)**

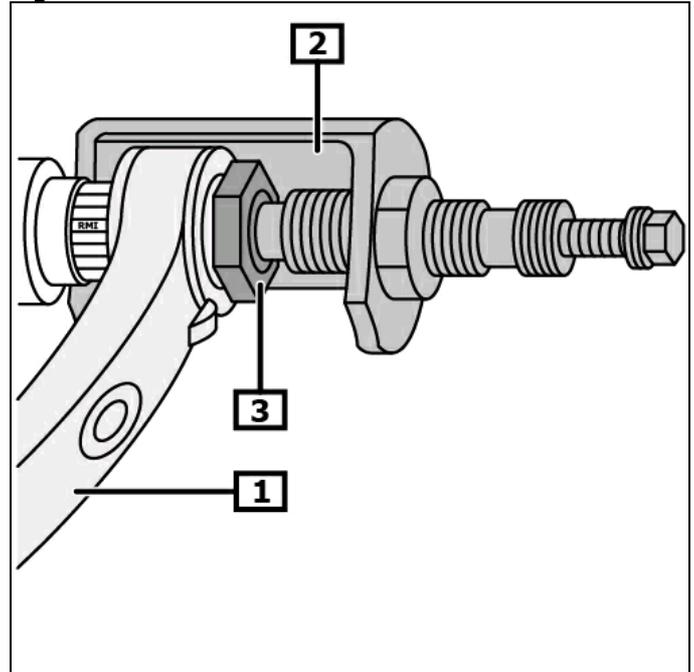
Unscrew the steering arm lever nut(s). **(3)**

Remove steering column control stalk. **(1)**

Required special tools

Ball-joint puller **(2) OE (655 589 00 35 00)**
(see figure 5)

Figure 5



1 Steering column switch

2 Ball-joint puller

3 Steering arm lever nut(s).

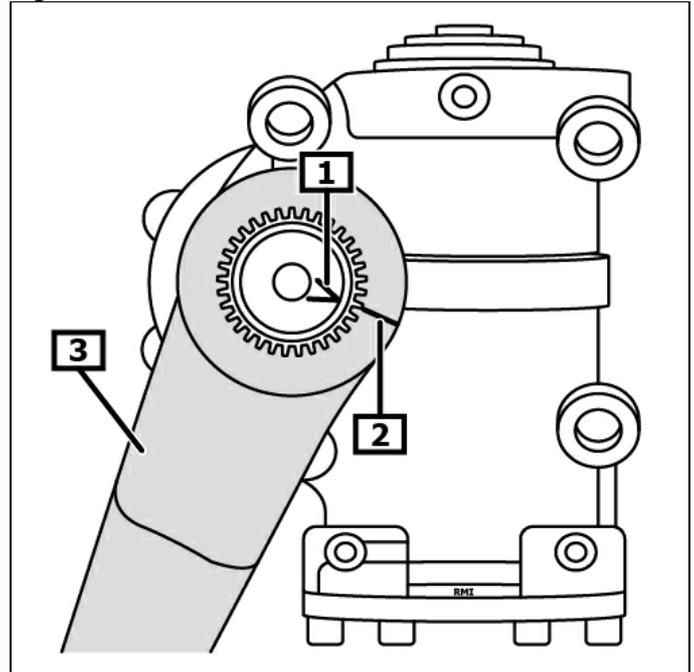
Install:

Install steering column control stalk. **(3)**
Markings must align. **(1)(2)**
(see figure 6)

Continue assembly in reverse order of removal.

Steering track rod may only be mounted onto the steering column control stalk with the venting process completed.

Figure 6



1 Mark(s)

2 Mark(s)

3 Steering column switch

Bleed steering system

Disconnect the propeller shaft from the gearbox flange and secure to the side.

Check power steering oil level and correct if required.

Turn steering wheel 2 times from stop to stop.

Check power steering oil level and correct if required.

Engage forward gear.

Start the engine and run at idling speed for approx. 1 min.

Watch the oil level.

With the engine running, rotate steering wheel several times from stop to stop, permanently checking the hydraulic fluid level in the process.

The bleeding process is complete when no more air bubbles rise in the tank during the bleeding.

Switch off engine.

Air is still in the system and the bleeding process must be repeated if the oil level in the power steering expansion tank rises by more than 2 cm.

Install drive shaft.

Install the steering rod into the steering rod. **(1)(2)**
(see figure 2)

Check power steering oil level and correct if required.

Check the final pressure limit.

Position front wheels centrally onto the turntables.

Unscrew closing screw.

Screw in connecting piece. (1)

Connect hose. (2)

Connect the pressure gauge. (4)

Required special tools

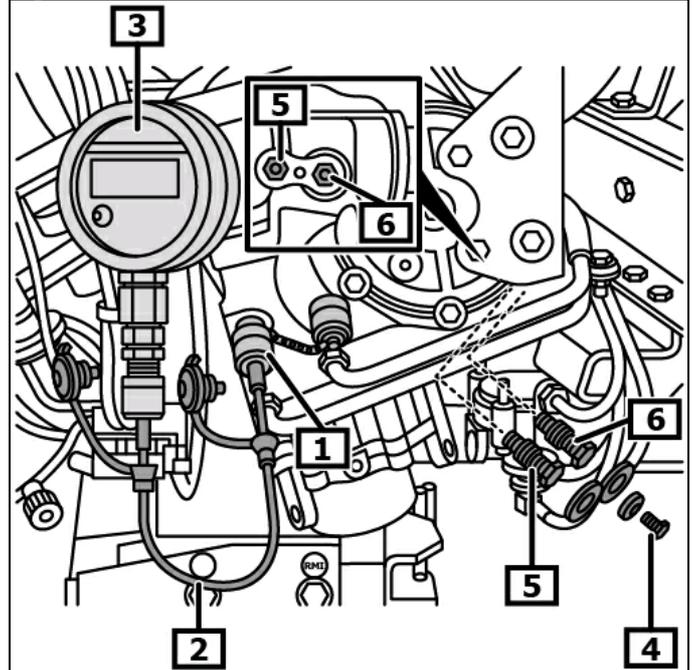
Hose (2) OE (400 589 01 91 00)

Pressure gauge (3) OE (000 589 06 21 00)

(see figure 7)

Tilt back driver's cab.

Figure 7



1 connection

2 Hose

3 Pressure gauge

4 Screw

5 Adjusting screw

6 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 40 - 60 bar.

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

Set final limiting pressure

Unscrew screw(s). **(4)**

Screw in adjusting screw(s) up to the stop. **(5)(6)**

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. **(5)**

Unscrew setscrew by a total of max. 2.5 turns.

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. **(6)**

Unscrew setscrew by a total of max. 2.5 turns.

Tighten screw(s). **(4)**

Switch off engine.

(see figure 7)

Tilt driver's cab.

Remove special tools. **(1) - (3)**

Screw in closing screw.

(see figure 7)

Check power steering oil level and correct if required.

Tilt back driver's cab.

Carry out a test drive.

Check the steering system for leaks.