

Removing/installing final drive

Special tools: [998 5972](#) , [999 5561](#) , [999 5652](#) , [999 5659](#) , [999 5660](#)

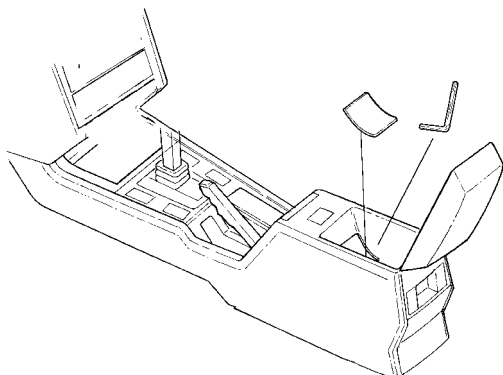
Removing

Note! Position the rear lifting arms on the arrows on the sills. This is so the support arm mountings are not blocked.

Adjusting parking brake

Slacken off parking brake adjustment as much as possible

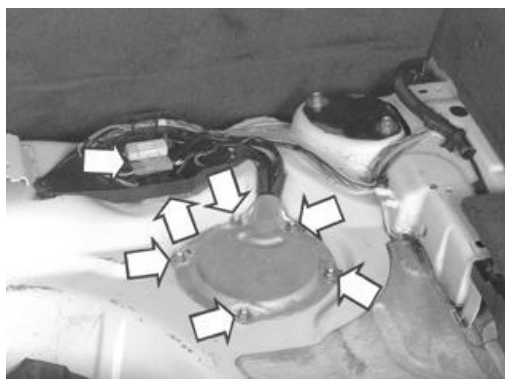
Use Torx TX 50 tool.



Removing floor hatch

Remove front floor hatch screws (both sides).
Pull back hatch to release it from its front mounting.

Remove cover.



Disconnecting connectors

Disconnect ABS sensors and fuel gauge sensor connectors

Remove connector holders and the front cover.
Remove rear cover. Pull cables through hole.

Removing circlip and boot



Remove fuel filler pipe boot circlip.

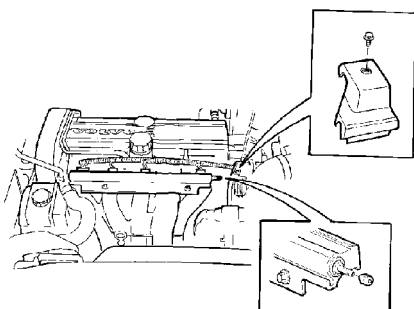
Remove boot. Reinstall fuel filler cap



Removing rear wheels

Remove rear wheels

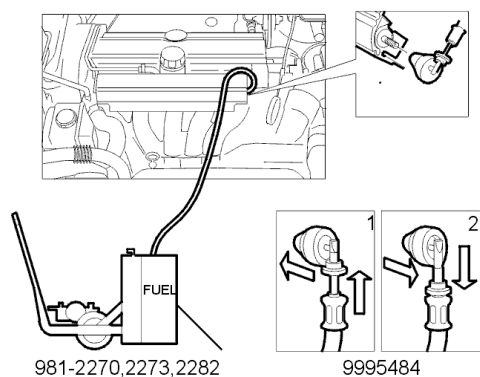
Undo rear right-hand side of fender liner and splash guard



Draining fuel line

Remove:

- throttle pulley cover
- cap from valve on fuel rail.



Connecting fuel draining unit

Connect fuel draining unit adapter 999 5484 to fuel draining unit 981 2270, 981 2273 and 981 2282

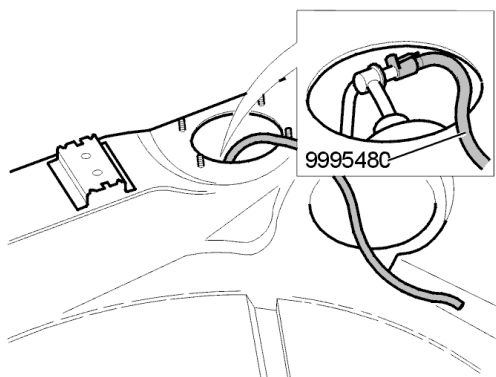
Connect adapter to fuel rail valve in locked position (Figure 1, valve closed).

Start fuel draining unit.

Unlock adapter (Figure 2 valve open).

Raise the car.

Draining fuel system



Drain fuel system

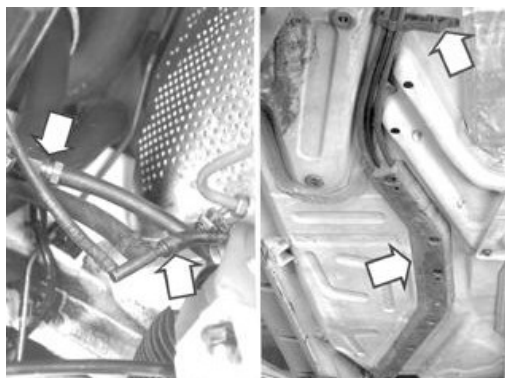
Remove fuel filter valve cap.

Connect venting hose [999 5480](#) to valve upstream of fuel filter.

System takes approximately 2 minutes to drain.

Reinstall components in reverse order

Caution! Remember to reinstall valve caps.



Disconnecting fuel lines

Disconnect front fuel line connectors. Remove fuel line protective cover

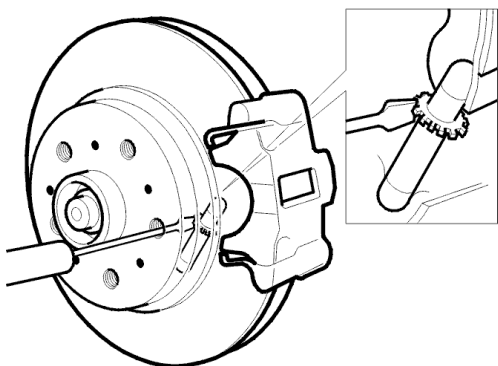
Note the position of fuel lines in the protective cover.

Tie fuel lines to the rear of the fuel tank to avoid crushing them.



Removing exhaust pipe

Remove tail pipe and mufflers



Adjusting parking brake

Slacken off parking brake adjuster.

Slacken off brake shoe adjustment as much as possible.

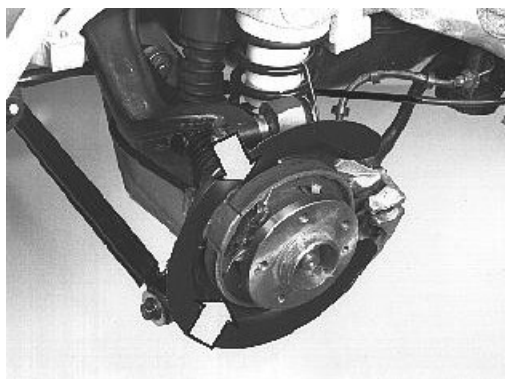
Turn the brake disc so that one of the wheel stud holes is opposite the brake shoe adjustment gear wheel.

Turn the gear wheel as far as it will go. Use a screwdriver.

Removing brake calipers and brake discs



Remove both brake calipers and brake discs
Hang brake caliper in the spring with a hook.
Mark position of brake disc in relation to locating pin.
Remove brake disc.



Removing brake shoes

Remove:

- parking brake shoes
- parking brake cable mountings on jacking point, control arm and wheel bearing housing.

Note! Note routing of brake cable.

Carefully fold back cables away from rear suspension.



Removing support arm mountings

Remove support arm mountings from car body

Block the brake pedal with a pedal jack.
Depress the pedal approximately 2 cm. Block it in this position.

Bring a mobile jack into contact with the support arm mounting

Remove jacking point and support arm mounting screws on both sides

Remove hoist

Disconnect front brake pipe from three-way junction on the left jacking point.

Tie jacking points to support arm brackets. Use a tie strap

Removing propeller shaft

Mark propeller shaft in relation to the flange

Note! Carefully note the length and position of screws on the propeller shaft CV joint. See also [Specifications](#) (Standard screw for front and rear propeller shaft CV joints and balancing screw for rear joint).



Remove propeller shaft screws. Use counterhold 999 5561. Push shaft to one side

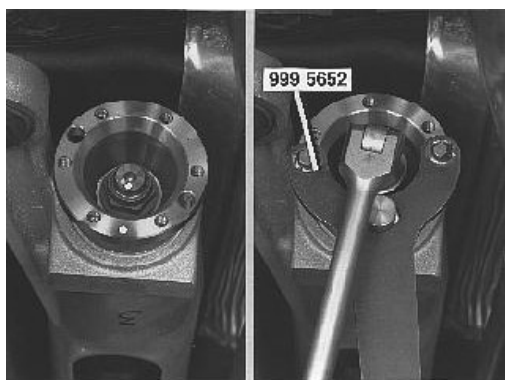


Lowering torque tube

Position mobile jack 998 5972 against torque tube

Remove screw and lower torque tube with mobile jack

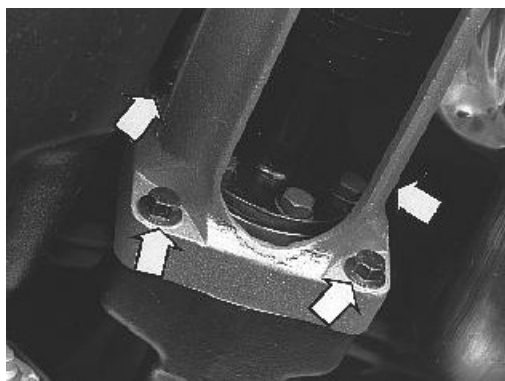
Note! If only replacing final drive housing bushings, continue with [Installing lifting table](#) .



Marking

Mark flange in relation to the end of the viscous coupling shaft.

Remove flange. Use counterhold 999 5652

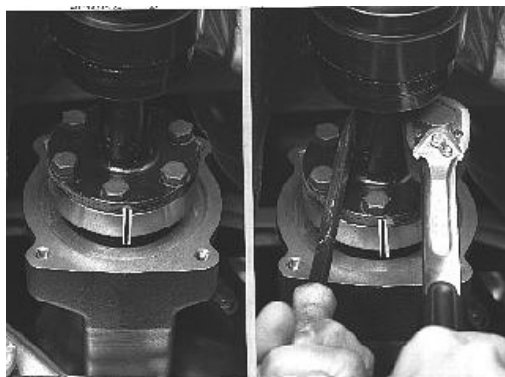


Removing torque tube

Remove:

- four torque tube screws in final drive
- torque tube.

Removing viscous coupling



Mark up viscous coupling flange in relation to final drive

Remove viscous coupling from final drive

Note! Washer at the front of the viscous coupling shaft.

Removing rear suspension assembly

Installing lifting table



Locate lifting table with fixture under fuel tank and control arms. See illustration

Caution! Tie front of final drive to lifting table. This stops the rear suspension tipping backward when it is lowered.

Removing fuel tank securing strap screws



Remove fuel tank securing strap screws on both sides



Removing rear axle member screws

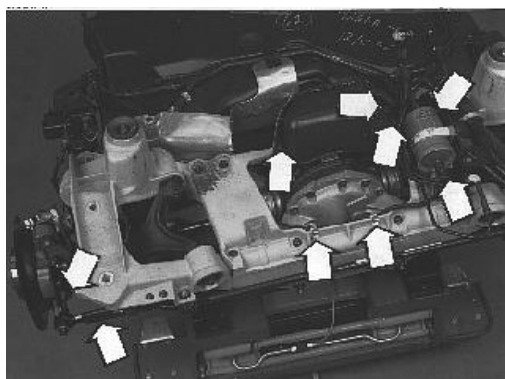
Remove screws holding rear axle member to car body on both sides.



Lowering rear suspension with fuel tank

Carefully lower rear suspension with fuel tank. Check that the fuel filler pipe goes free of the fender liner.

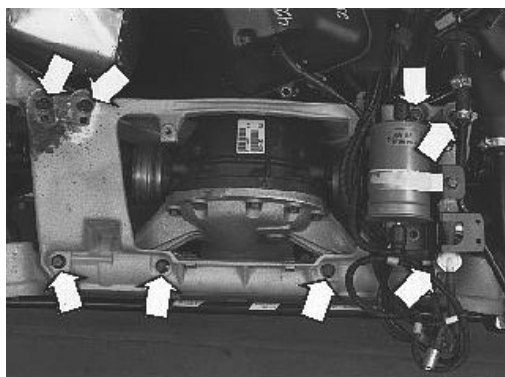
Note! Check that fuel line between fuel gauge sender unit and ejector pump does not catch in bodywork when lowering the rear suspension.



Removing final drive from member

Remove:

- expansion tank screws
- fuel filter bracket
- ABS sensor in wheel bearing housing, both sides. Do not disconnect connector.
- cable clips on track rod
- cables from clips on rear axle member.



Removing upper member

Remove screws to upper section of member

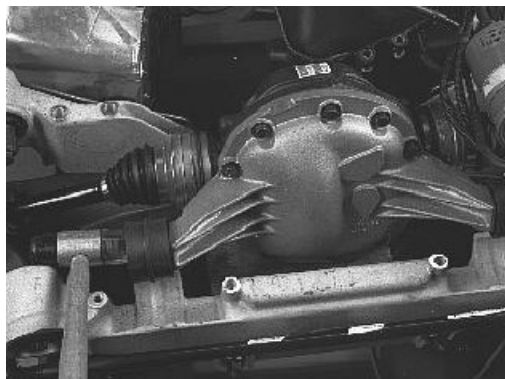
Remove upper section



Replacing final drive bushings

Remove bushings from final drive

Note! If only removing final drive bushings: Tap bushings off the lugs. Use a heavy screwdriver.

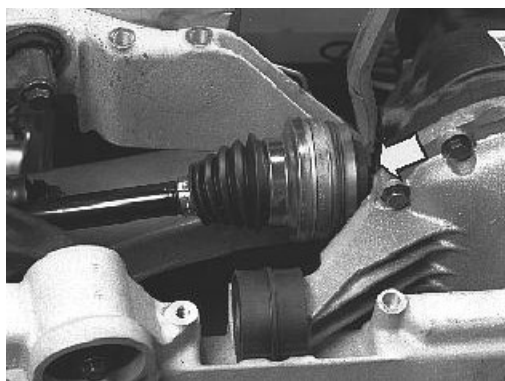


Installing bushings

Install final drive bushings

Tap in bushings. Use a rubber mallet.

If only replacing bushings: Continue with [Installing upper section of rear axle member](#).

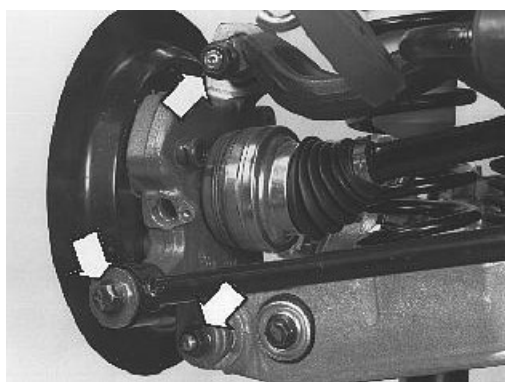


Removing final drive from rear axle member

Removing drive shafts

Pull drive shafts out of final drive to release circlip

Use a gimmy bar.



Removing screws and nuts on both sides

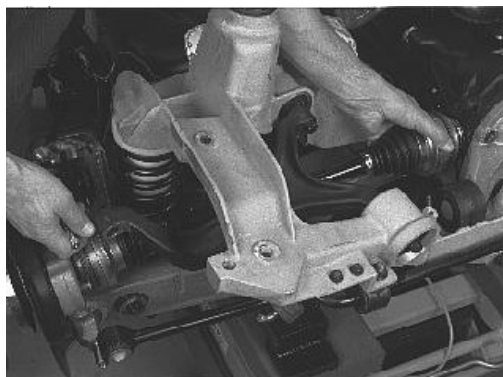
Remove the following on both sides:

- track rod screw. Unhook track rod from locating pin
- upper control arm mounting nut
- lower control arm nut and screw. Tap out screw with a drift.

Tap out bushing lug from upper control arm. Use a copper mallet.

Removing drive shaft and wheel bearing housing

Remove drive shaft and wheel bearing housing from rear suspension on both sides.



Removing final drive

Lift final drive out of rear axle member



Installing drive shafts and wheel bearing housing

Position final drive in rear axle member

Reinstall on both sides:

- drive shafts to final drive. Take care not to damage seals
- wheel bearing housings to upper and lower control arms. Install new locknuts loosely

Note! Tap out lower control arms screws completely.

Hook on track rods loosely and install screws loosely.

Press CV joint housing into final drive so that the snap ring engages in its groove

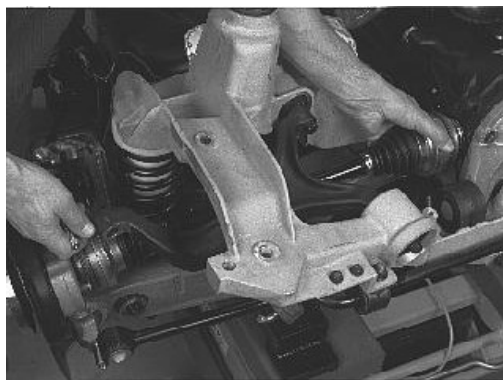
Check by carefully pulling CV joint.

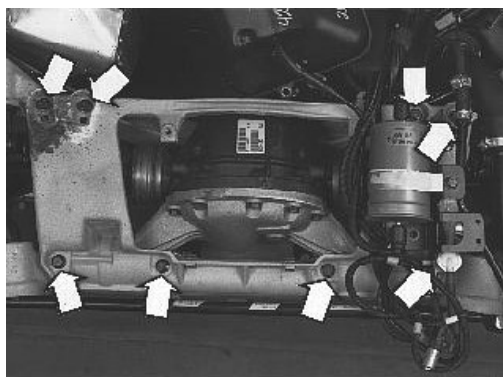
Installing rear suspension assembly

Installing upper section of rear axle member

Install upper section of rear axle member

Tighten alternately until the upper section is in contact with the lower section of the rear axle member. Tighten to 50 Nm.





Installing rear axle components

Install the following on rear axle member:

- expansion tank. Torque to 25 Nm.
- fuel filter bracket. Torque to 25 Nm.

Lubricate sensor holes with wheel bearing grease, 1161241-3. Clean ABS sensor with a soft brush. Install in stub axle. Torque to 10 Nm.

Install ABS wiring in clips on rear axle member and cable holders on track rod.

Note! The cable holder should be angled 45° forward and upwards in the car to prevent the cables rubbing against the member.

Lifting rear suspension with fuel tank

Lift up rear suspension with fuel tank

Ensure that the fuel filler pipe goes free of the fender liner. Ensure that the fuel line is free of the bodywork and that the fuel gauge sensor cable does not catch on the fuel tank securing strap brackets.

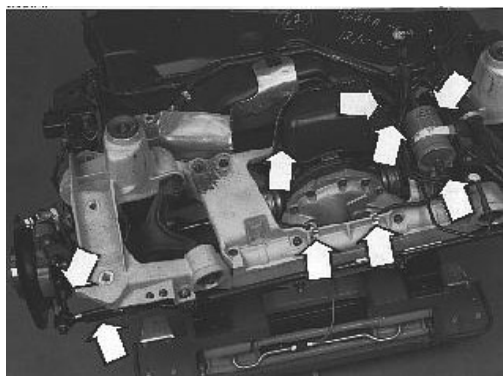
Take fuel tank unit and fuel pump (FP) cables up through the bodywork (hatch)

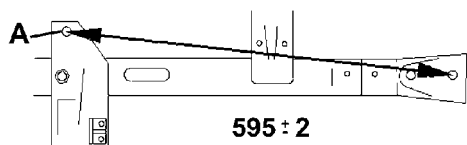
Caution! Tie front of final drive to lifting table. This stops the rear suspension tipping backward when it is raised.

Note! Check that fuel line between fuel gauge sender unit and ejector pump does not catch in bodywork when raising the rear suspension.

Installing rear axle member mounting screws

Apply a few drops of locking fluid to the screws. Install all rear axle member mounting screws





Note! Measure the distance between rear axle guide hole $\varnothing$ 16.5 mm (A) outside the rear mounting screws, and holes $\varnothing$ 16 mm furthest back in the side members, before securing the rear axle to the bodywork. The distance between the holes should be 595 ± 2 mm.

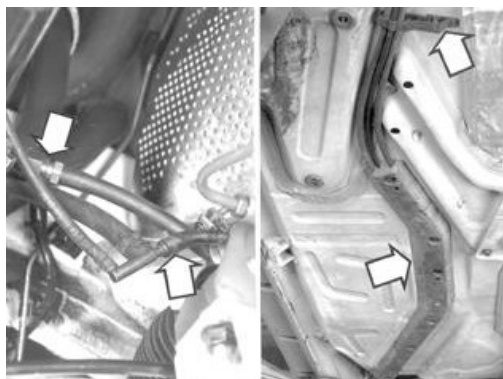
Tighten outer screws to 80 Nm and middle screws to 50 Nm.



Tightening fuel tank securing strap mountings

Tighten fuel tank securing strap mountings on both sides

Remove lifting table



Installing fuel and EVAP lines

Install fuel and EVAP lines

Install fuel lines in protective cover according to [Disconnecting fuel lines](#).

Installing viscous coupling

Installing viscous coupling

Note! If the final drive has been replaced or reconditioned and the pinion flange has been removed, measure according to [Measuring flange and viscous coupling](#). [Balancing viscous coupling](#). If it has not been replaced or reconditioned, continue with Install viscous

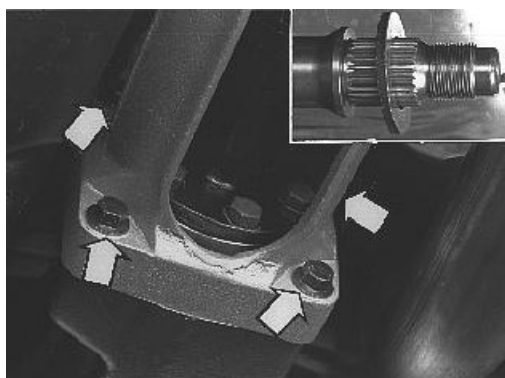


coupling as marked.

Install viscous coupling as marked. Ensure that the mating surfaces are absolutely clean.

Use new screws.

Lightly tighten screws crosswise. Tighten crosswise to 50 Nm.



Installing torque tube

Install torque tube. Lightly tighten the four screws crosswise, then tighten to 50 Nm

Note! Check that: The mating faces on the final drive housing and torque tube are clean and that the washer is in place on the viscous coupling shaft



Installing viscous coupling flange

Install viscous coupling flange as marked

Use counterhold [999 5652](#) and new nut. Torque to 180 Nm.

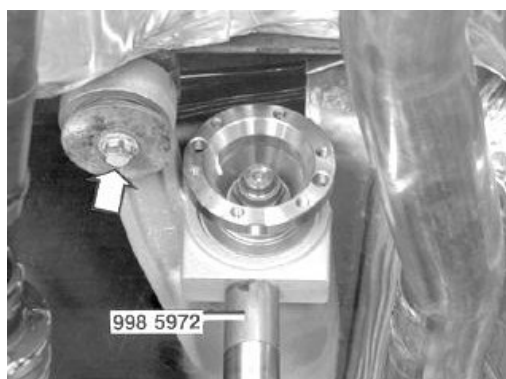
Installing torque tube

Installing torque tube

Press torque tube up against car body.

Use mobile jack [998 5972](#).

Install screw and washer. Torque to 80 Nm.



Installing propeller shaft

Install propeller shaft to flange

Note! Install propeller shaft as marked. Use new screws of the same length. Reinstall screws in the same positions.

Check that viscous coupling and propeller shaft flange mating surfaces are clean.

Tighten screws crosswise to 8 Nm. Then tighten crosswise to 30 Nm. Use counterhold [999 5561](#).

Start tightening with the same screw both times.



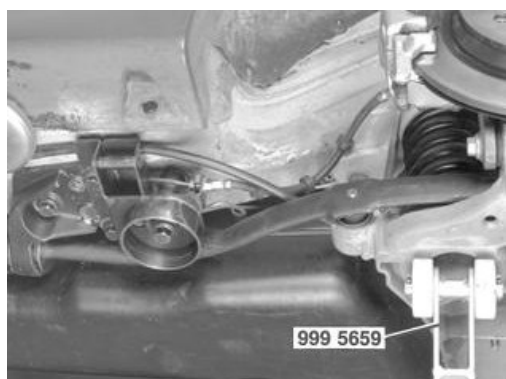
Installing support arm mountings and jacking points

Install front support arm mountings and jacking points to car body

Press up control arms into position

See [Use of tensioner 999 5659](#) and [Normal position](#).

Connect front brake pipe to three-way junction on left-hand side.



Install support arm brackets and jacking points with new screws

Tighten the three support arm brackets screws to 65 Nm + 60°.

Tighten the screw through the jacking point to 105 Nm + 90°.

Remove pedal jack from brake pedal.

Tightening wheel bearing housing nuts and screws

Tighten nuts and screws on both sides to:

- wheel bearing housing - upper control arm to



115 Nm

- wheel bearing housing - lower control arm to 80 Nm
- track rod screw to 80 Nm.

Installing exhaust pipe

Install:

- tail pipe
- mufflers.

Note! Check for clearance to heat deflector plates.



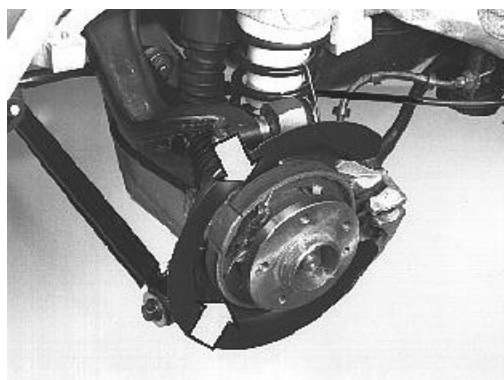
Installing brake components

Install on both sides:

- parking brake cable on jacking point, control arm and wheel bearing housing
- brake shoes.

Note! The parking brake adjuster should be screwed as far as it will go and the arrow on the cable gear should point forward.

Note! The parking brake cable should be routed over the brake hose.



Installing brake discs and brake calipers

Install on both sides:

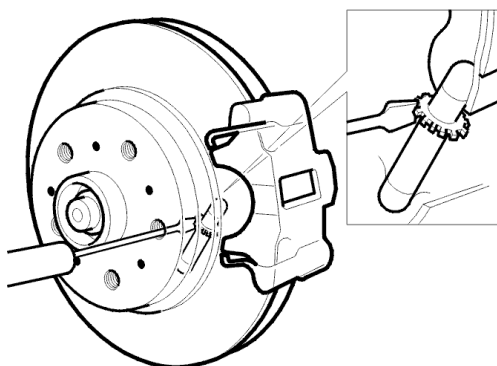
- brake discs. See [Removing brake calipers and brake discs](#) .

Note! Ensure that the mating surfaces are absolutely clean.

- brake caliper. Use new screws. Torque to 60 Nm.



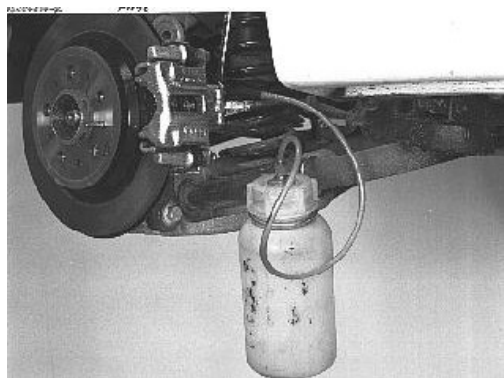
Checking parking brake



Check that the parking brake is not engaged.

Turn the brake disc so that one of the wheel stud holes is opposite the brake shoe adjustment gear wheel.

Adjust until brake disc cannot be turned. Then undo adjuster approximately 6 notches. Use a screwdriver.



Bleed brakes

Bleed rear brakes

Note! Check brake fluid reservoir level.

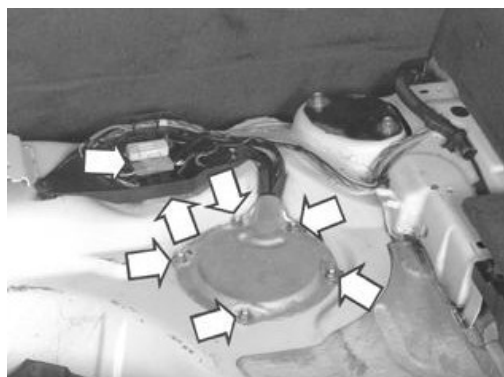
Use genuine Volvo brake fluid marked DOT4+ according to [Bleeding brakes](#) (Section 5, Brakes incl. ABS and TRACS, 850 1992-).

Install wheels according to [Tightening the wheel studs](#).



Installing fuel filler pipe

Install fuel filler pipe to car body with rubber boot and circlip



Installing fuel gauge sender unit hatches and connections

Install:

- front and rear hatch in car body and connector holders. Ensure that the rubber seal around the wiring is in place when the rear hatch is installed
- fuel gauge sender unit, fuel pump (FP) and ABS system connectors.

Aligning floor hatch mountings



Align front edge of floor hatch. Install screws in rear edge. Align hatch with rear floor hatch. Tighten screws.

Adjusting parking brake

Adjust parking brake

Lower the car onto all four wheels. Adjust so that the lever can be moved to maximum 7–8 notches (the first two notches should be free). Use Torx TX 50 tool. Braking effect should be obtained on the 4th– 6th notches. Reinstall the cover in the center console locker.

