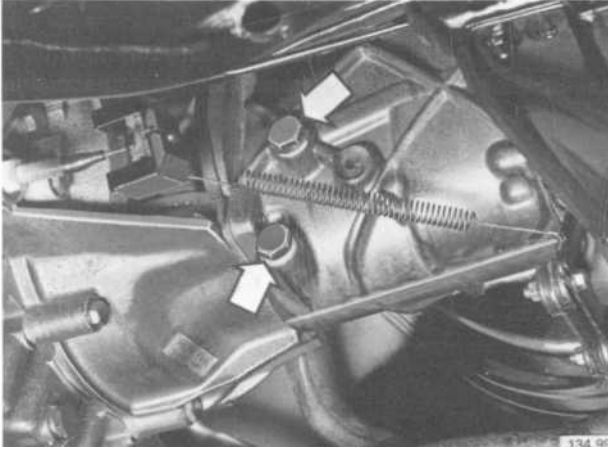


B1 - Engine/gearbox

check for leakage (from underneath)

All



Check that there is no leakage from the engine or gearbox. If there is leakage from the gearbox, the oil level should be checked and the gearbox topped up if necessary.

Oil quality (manual gearbox):

200, 700, 940/960

M 45146147: ATF-oil, type F or G.

M 90: Volvo P/N 11 61 423-7

400 (gearbox/final drive):

Volvo P/N 33 43 922-5.

850 (gearbox/final drive):

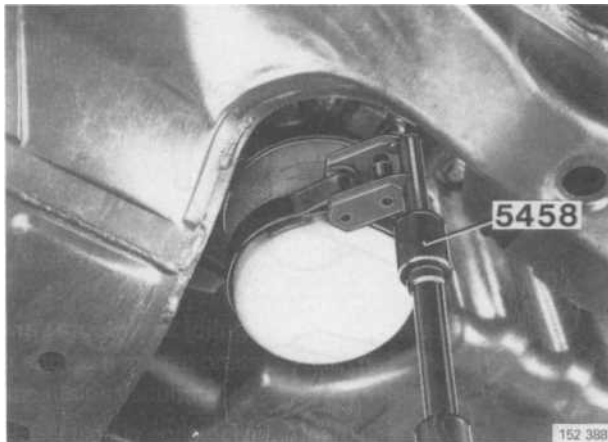
Volvo synthetic gearbox oil 11 61 423-7

Note! Always use new gaskets!

Note! On automatic gearboxes, oil level inspection and topping up if necessary are carried out later in the programme - D5 Automatic gearbox - top up oil.

B2 - Drain engine oil and replace oil filter

All



Drain engine oil

Remove the drain plug. Remove the drain plug.

Replace the washer.

Refit the drain plug and tighten.

Tightening torque

400: 22 N m

740/940: 65 N m

960: 40 N m

800: 35 N m

Replace the oil filter

Remove the filter with the filter removal tool 999 2903 (850: Use tool 999 5458 for removal of the oil filter).

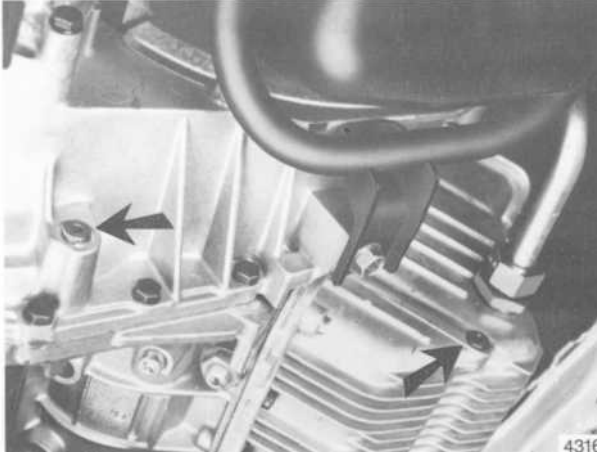
Insert the new filter and hand-tighten.
(see the instructions on the filter).

B3 - Automatic gearbox

drain the oil

(Topping-up; see D5)

200, 400, 700/940/960



AW 50-42 (850) and AW 30-43 (960): Oil change every 75,000 km only for cars in taxi traffic and cars which spend a large proportion of their operational life towing trailers/caravans.

400: Remove the drain plug in the oil sump. On the ZF, also the plug in the differential housing.

Drain the oil.

Refit the drain plugs.

Always use new gaskets.

Tightening torque: ZF 15 Nm
CVT 30 Nm

AW 70/71/72, ZF 4 HP 22: Remove the drain plug and drain the oil. Refit the drain plug.



Warning!

The oil may be very hot if the car has been driven recently.

Refit and tighten the plugs. Tightening torque 15 Nm.

Always use new gaskets.

B4 - Clutch

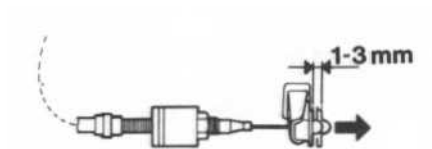
check/adjust

240

Check/adjust the clutch play

Press the fork rearwards.

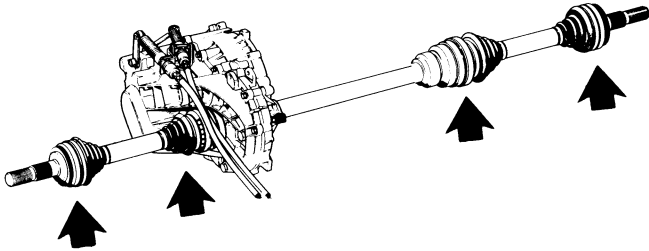
Play 1-3 mm. Adjust at the release fork.



B5 - Driveshafts

check play/wear

400, 800

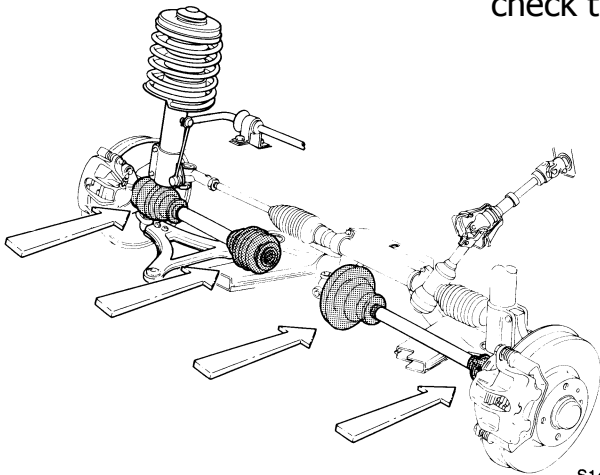


Check that there is no abnormal wear in the CV joints.

B6 - Driveshafts

check the rubber bellows

400, 800



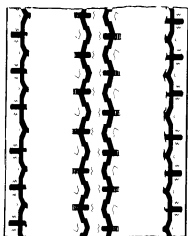
S146 810

Check that the rubber bellows seal completely and that they are undamaged.

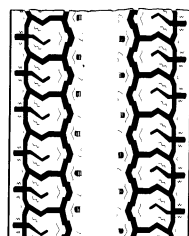
B7 - Tyres

check

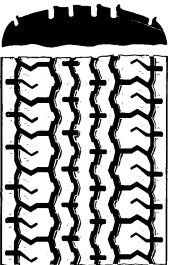
All



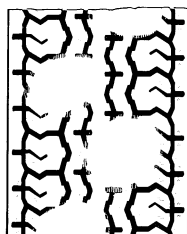
1



2



3



4

Check:

- tread depth
- wear pattern (indication of imbalance, faulty camber, toe-in or wrong inflation pressure)
- that the type of tyre is the same on both wheels (Radial-cross-ply)

For studded tyres, check that all the tyres are studded.

1. Tyre inflation pressure too low
2. Tyre inflation pressure too high
3. Wrong toe-in
4. Imbalance

B8 - Brake linings check

(Always check both the front and rear brake linings!)

Front brake linings

240, 400



Use a mirror

Minimum lining thickness:

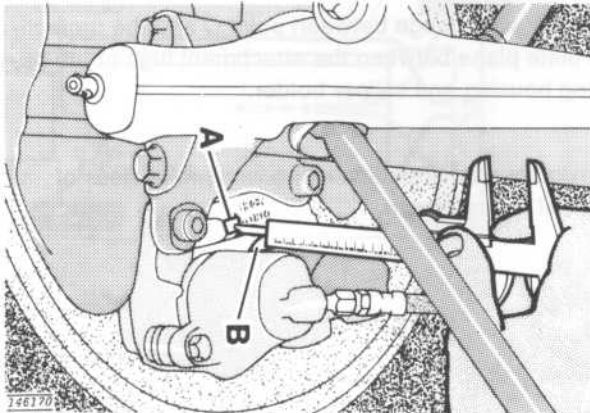
240	3 mm
400	2 mm

If the lining thickness is close to these values, the workshop should recommend that they are replaced soon.

Check that there is no leakage at the brake caliper or connections.

If there is any uncertainty about lining thickness, the wheels must be removed.

700



Place an extended slide gauge between points A and B. The distance should not exceed 35 mm with brake discs of normal wear.

Check that there is no leakage at the brake caliper or connections.

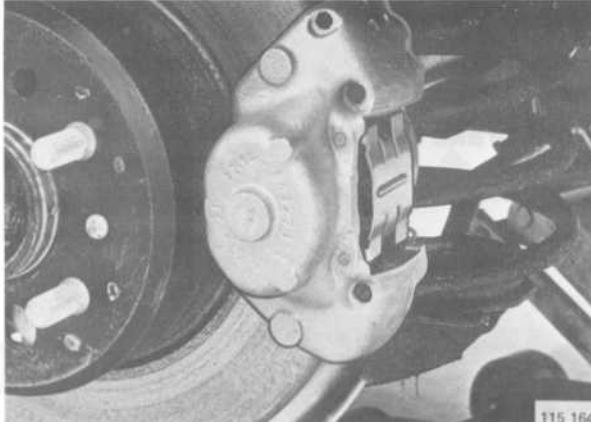
800



Place an extended slide gauge between A and B. The distance should not exceed 35 mm with brake discs of normal wear.

Check that there is no leakage at the brake caliper or connections.

Rear brake linings



400

With rear disc brakes

Minimum lining thickness: 2 mm

If lining thickness is close to this value, the owner should be advised to replace the linings soon.

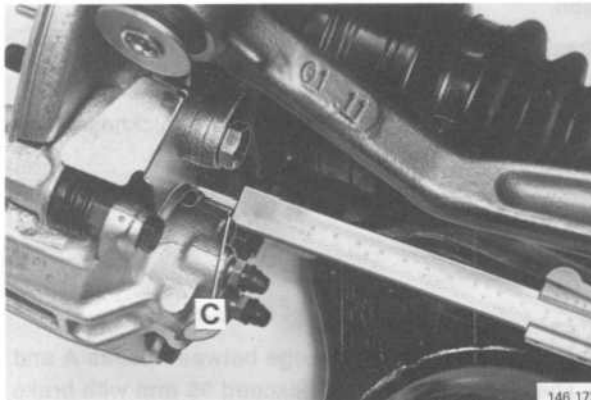
Check that there is no leakage at the brake caliper or connections.

240, 740, 940, 850

Min. lining thickness: 2 mm

If lining thickness is close to this value, the owner should be advised to replace the linings soon.

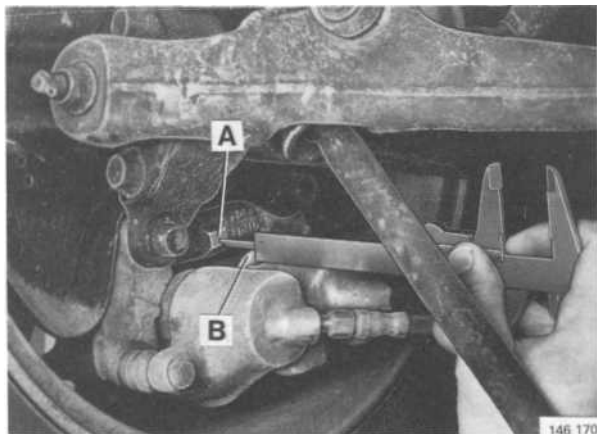
Check that there is no leakage at the brake caliper or connections.



760/780, 960

Place a slide gauge between point C and the protective plate plane between the attachment lugs of the bearing housing and caliper holder.

Maximum permitted dimension with brake discs of normal wear: 25 mm.



All

For replacement of brake linings:

Check the brake disc thickness

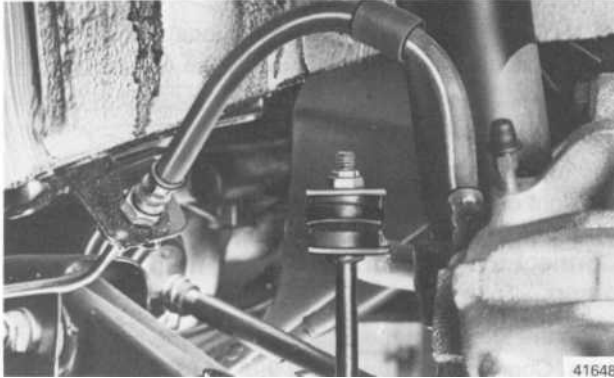
Measure the brake disc thickness. The value is not to be less than the minimum specified in the table.

Min. thickness A-B (mm)	200, 700, 940/1960	400	800
Front, solid disc	11.0	10.35	-
Front, ventilated disc	20.0	19.3	23.0
Rear	8.4	7.5	8.4

B9 - Brake hoses

check leakage/damage

All



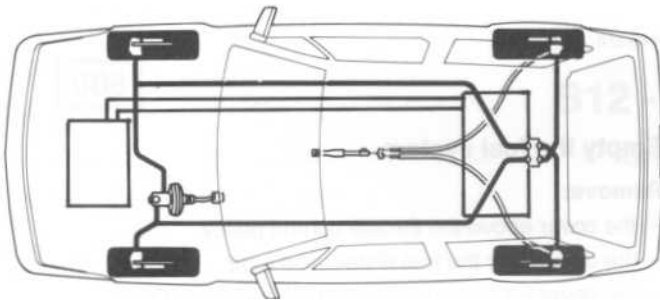
Check that the brake hoses

- do not leak
- are firmly attached at their anchorage points
- are not chafed
- are not in contact with sharp corners or other surfaces which can cause chafing or wear
- that there is no abnormal leakage from the shock absorbers

B10 - Brake and fuel lines

check leakage/damage

All



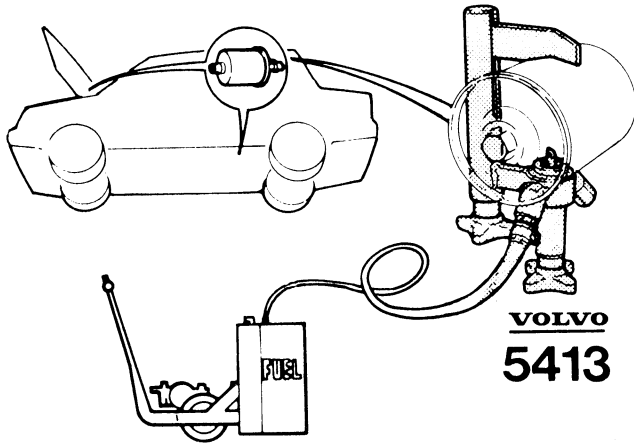
Check

- for leakage
- that all the brake and fuel lines are correctly clamped and are undamaged
- that the pipes are not in contact with any sharp edges
- the handbrake wires and attachments

B11 - Fuel filter replace

240, 400, 700, 940/960

Petrol engines



240, 700, 940/960: The fuel filter is located on a bracket beside the fuel pump under the car. Note! On the 240 with the B 230 E engine, it is located in the engine compartment.

400 injection engines: The fuel filter is located to the right of the fuel tank.

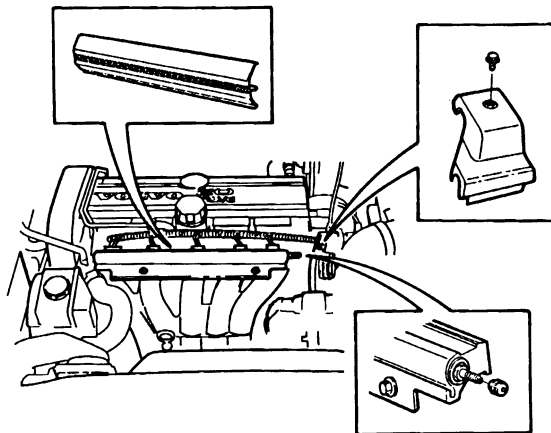
Connect the puncturing tool and fluid suction pump

Undo the filter from the bracket. Clean the connections. Connect puncturing tool 999 5413. Connect the hose from the puncturing tool to the fuel suction unit (981 2270, 2273 and 2282). This method is described in detail in service bulletin 2-23-713.

Drain the fuel.

Insert a new fuel filter.

The direction of flow is marked with an arrow on the fuel filter.



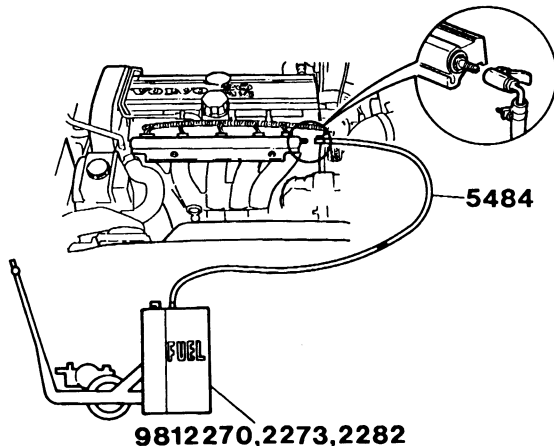
800

Empty the fuel system

Remove:

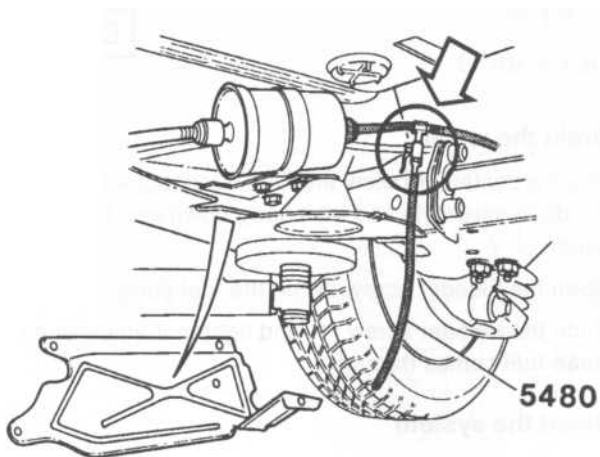
- the cover above the throttle control pulley
- the cover over the fuel distribution pipe
- the cover for the valve on the fuel distribution pipe.

Connect tool 999 5484 hose/nipple to the fuel suction unit 981 2270, 2273 and 2282. Start the suction pump.



Connect the nipple from the suction pump to the valve on the distribution pipe.

Raise the car.



Remove:

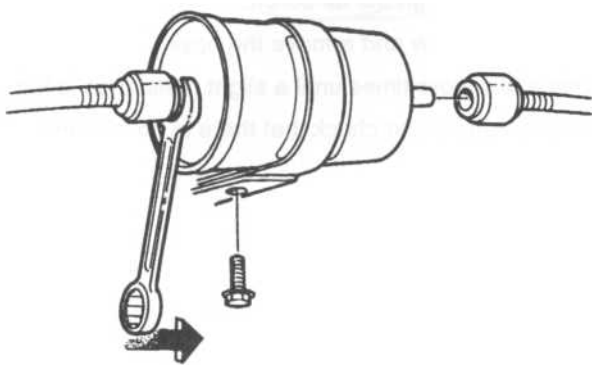
- the cover above the fuel filter (previous version)
 - the cover for the valve beside the fuel filter
- Connect tool 999 5480 nipple to the valve ahead of the fuel filter.

Drainage of the system takes about 2 minutes.

Reinstall the equipment in the reverse order.

Important!

Do not forget to refit the covers above the valves.



Replace the fuel filter

Undo the quick-release couplings from the fuel filter with the help of a 17 mm wrench by pushing the sleeve

Undo the screw which retains the clamp around the filter.

Replace the filter.

Refit in reverse order.

B12 - Fuel filter

drain water

D 24



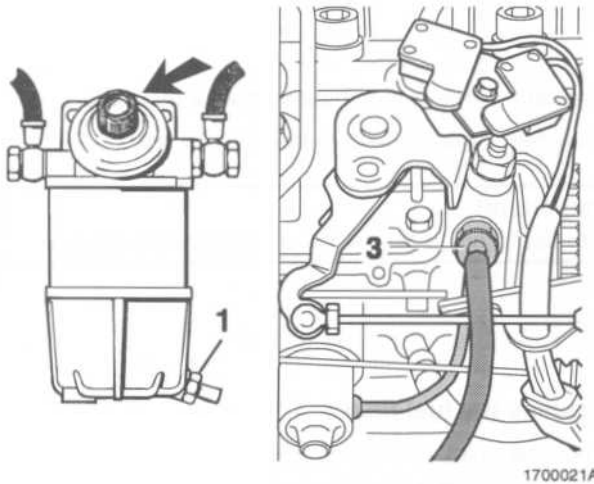
Drain water

Undo the bleeder screw (1) a few turns.

Undo the drain screw (2). Tighten the screw when clean fuel comes through.

Tighten the bleeder screw.

D 19 T



Drain the water

Place a container below the filter. Connect a hose to the drain screw (1) and let it hang down into the container.

Open the bleeder screw (3) on the fuel pump.

Undo the bleeder screw (1) and tighten it again when clean fuel comes through.

Bleed the system

Move the hose to the air screw (3) on the fuel pump.

Use the filter's manual pump to pump fuel until clean fuel comes through the air screw.

Shut the air screw and remove the hose.

Pump a few more times until a slight resistance is felt.

Start the engine and check that there is no leakage.

B13 - Fuel filter

replace

D 24



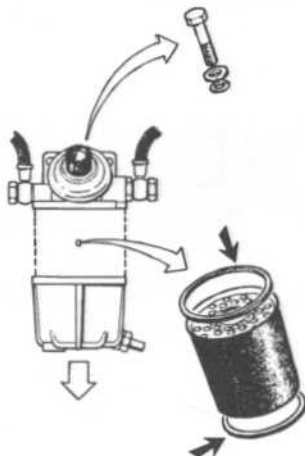
Replace the fuel filter

Use tool 2903

For fitting: Apply diesel oil to the rubber seal. Tighten by hand until the seal is properly in place. Tighten additionally one 1/4 turn.

Start the engine and check for leakage.

D 19 T



Replace the fuel filter

Drain the fuel as per B 12.

Tighten the drain plug and remove the hose.

Undo the centre screw and remove the filter housing and its insert. Remove the insert. Clean the components.

Lubricate the O-rings with diesel oil (Note! always use new O-rings).
Fit all the O-rings.

Place the new insert in the filter housing and tighten the housing with the help of the centre screw.

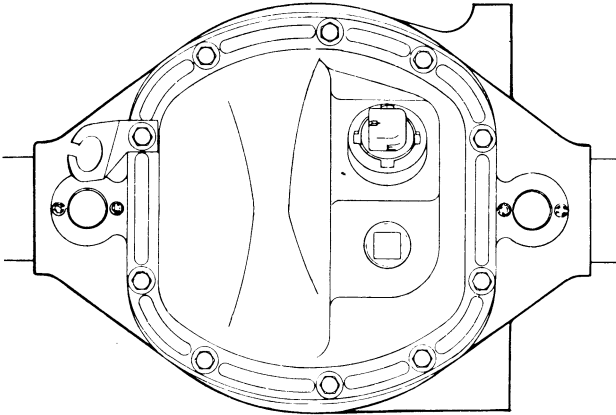
Torque: 10 Nm.

Bleed the system as per B 12.

B14 - Final drive

Check for leakage - oil level

240, 700, 940/960



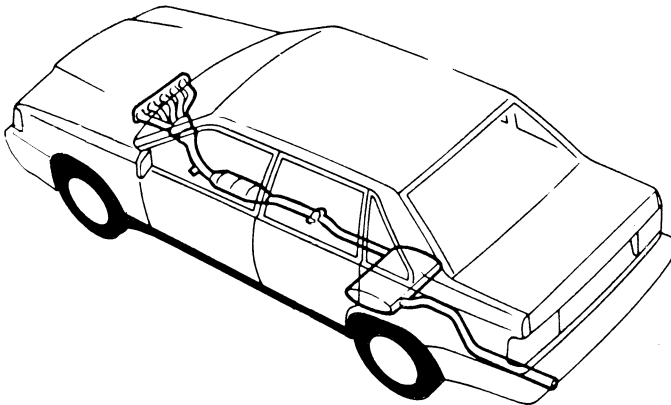
Check that there is no leakage from the final drive. If there is any leakage, the oil level must be checked and the final drive topped up if necessary.

Top up with oil quality API-GL-5 (MIL-L-2105 B or C), rec.: Volvo's final drive oil, P/N 11 61 329-6 (0.5 litres).

Note! Fit a new seal.

B15 - Exhaust system check

All



Check from underneath

- Leakage
- Attachment
- Condition