SERVICE MANUAL

P 120

Part 12

LUBRICATION

Service Department

AKTIEBOLAGET

VOLVO

GÖTEBORG SWEDEN

Contents

INSTRUCTIONS FOR OIL CHANGING

Engine

The engine oil should be changed after every 5,000 km (3,000 miles) during the summer and in the case of cars which are mainly used for long-distance driving. During the winter the oil should be changed after every 2,500 km (1,500 miles) particularly on cars mainly used for driving short distances. On new cars the oil should also be changed after the first 1,000 km (600 miles).

The oil should be drained off immediately after the car has been driven and while the engine is still warm. There is a plug for oil drainage, see Fig. 1. When all the oil has run out, check the washer and screw the plug tightly into position again. Oil is added through the rocker arm casing after the filler cap has been removed.

The engine oil to be used must be of a grade corresponding to the specifications laid down in "Service MS". In the case of cars fitted with B 16 A engines which are run under favourable conditions at normal speed and with normal loading, oil of the "Service MM" type can, however, be used. The viscosity of the oil used is chosen from the table below.

Air temperature

below 0° C (32° F)	SAE 10W
0—30° C (32°—90° F)	SAE 20
over 30° C (90° F)	SAE 30

or SAE 10 W—30 multigrade oil all the year round.

The oil capacity of the B 16 engine when changing oil is 2.75 litres (4 7/8 Imp. pints = 5 3/4 US pints) and for the B 18 engine 3.25 litres (6 Imp. pints = 7 1/4 US pints). The oil capacity including the lubricating oil filter for the B 16 engine is 3.5 litres (6 1/4 Imp. pints = 7 1/2 US pints) and for the B 18 engine 3.75 litres (7 Imp. pints = 8 US pints).

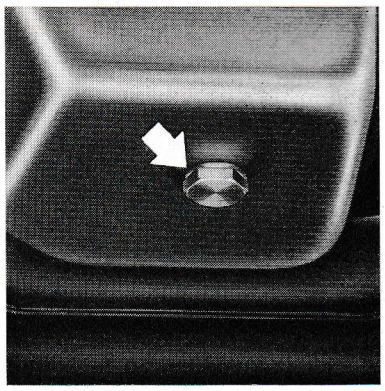

Fig. 1. Drain plug on oil sump.

Carburetters

Each time the oil is changed on cars fitted with twin carburetters, the oil level in the carburetters damping cylinder must be checked. This is done by removing the nut and damping plunger, see Fig. 2. There should be so much oil there that the centre spindle but not the part above it is full when the plunger is fitted. If there is not sufficient oil, top up with SAE 20 engine oil (not multigrade oil).

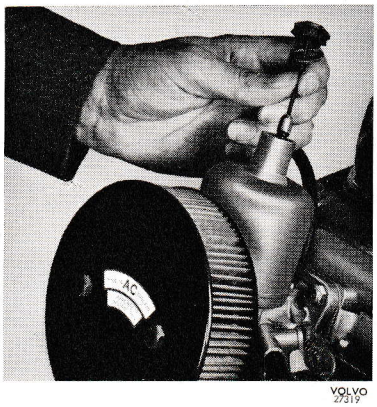

Fig. 2. Checking the oil level.

Gearbox (without overdrive)

The oil should be changed after every 20,000 km (12,500 miles). In the case of a new or reconditioned gearbox, the oil should be changed and the gearbox should be flushed after the first 5,000 km (3,000 miles).

The oil should be drained off immediately after the car has been driven and while the oil is still warm. When draining off the oil, remove the plugs marked 1 and 2 in Fig. 3.

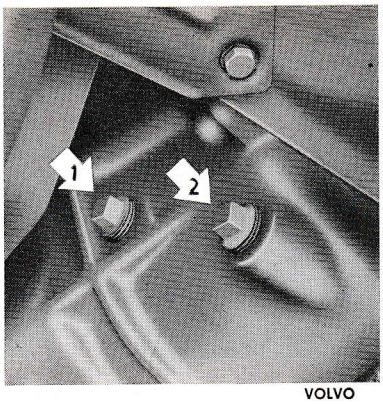

Fig. 3. Gearbox.

1. Filler plug 2. Drain plug

It is advisable to use flushing oil now and again, for example in connection with every other oil change. This flushing oil is added through the filler hole (2, Fig. 3) after the drain plug has been screwed back into position. The engine should then be allowed to run for a minute or so with one of the gears engaged and both the rear wheels jacked up. The engine should then be stopped, the rear wheels lowered and the flushing oil drained out.

Fill up with new oil after the drain plug has been screwed tightly back into position. The oil should be up to the filler hole (1). Screw the filler plug back tightly into position. Use standard transmission oil SAE 90 for the gearbox. The amount of oil required when changing oil is as follows:

H 6 gearbox approx. 0.5 litre (1 Imp. pint = 1 ¼ US pints),

M 4 gearbox approx. 0.9 litre (1 ¾ Imp. pints = 2 US pints),

M 30 and M 40 gearboxes 0.75 litre (1 ¼ Imp. pints = 1 ½ US pints).

In the case of air temperatures continuously below —20° C (—5° F), oil with a viscosity of SAE 80 should be used.

Gearbox with overdrive

The oil should be changed after every 20,000 km (12,500 miles). In the case of a new or reconditioned gearbox, the oil should also be changed after the first 5,000 km (3,000 miles).

The old oil should be drained off immediately after the car has been driven and while the oil is still warm. The plugs marked 1 and 2 in Fig. 3 are opened as well as the drain plug (Fig. 4), and the oil strainer, see page 6, is also cleaned.

Top up with new oil when the drain plugs have been screwed tightly back into position. Fill up with oil slowly so that the oil has time to run over into the overdrive. The oil level should be up to the filler hole (1, Fig. 3). Screw the filler plug tightly into position.

Engine oil with a viscosity of SAE 30 should be used all the year round in a gearbox fitted with overdrive. The oil capacity when changing oil is approximately 1.8 litres (3 ¼ Imp. pints = 4 US pints).

Rear axle

The oil should be changed after every 20,000 km (12,500 miles). It is recommended that the oil is changed immediately after the car has been driven and while the oil is still warm. Drainage is carried out by removing the plug (2, Fig. 5) and also removing the filler plug (1). If there is no drain plug fitted on the rear axle, the oil must be sucked out or the cover must be removed to allow the oil to run out. Great cleanliness must be observed to prevent dirt from getting into the final drive. Check that the cover gasket is in good condition, otherwise replace it.

As in the case of the gearbox, it is recommended now and then, for example in connection with every other oil change, that flushing oil be used. This is added through the filler hole after the drain plug has been screwed into position. The engine is then allowed to run for a minute or so with one of the gears engaged and both the rear wheels jacked up. The car is then lowered again and the flushing oil is drained off.

Normally SAE 90 hypoid oil is used in the rear axle. At air temperatures continuously below —20° C (—5° F), SAE 80 oil should be used. The oil capacity when changing oil is about 1.3 litres (2 ¼ Imp. pints = 2 ¾ US pints).

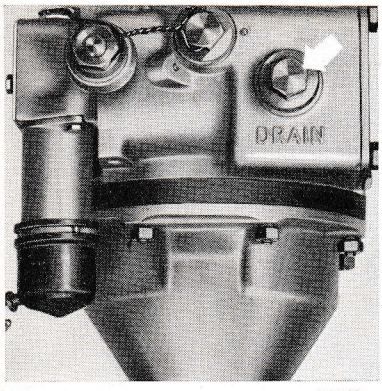

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Fig. 4. Drain plug on overdrive.

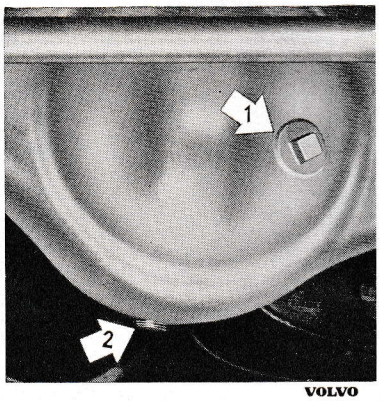

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Fig. 5. Rear axle (ENV), early production.

1. Filler plug 2. Drain plug

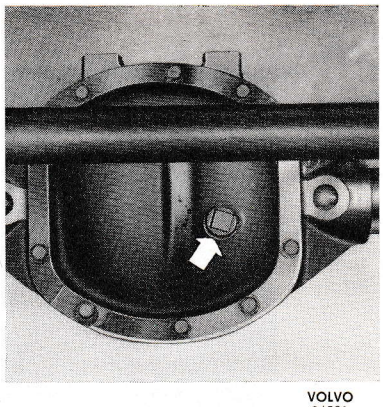

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Fig. 6. Rear axle (Spicer), late production.

Steering system

It is not usually necessary to change the oil in the steering system except when reconditioning is being carried out. Should the oil be changed for some reason in the steering box when fitted, the old oil can be sucked up by using a suitable device, for example, an oil spray, which should be inserted through the filler hole, or the steering box can also be removed and emptied. The oil used in the steering box is normally SAE 90 hypoid oil all the year round. In the case of air temperatures continuously below —20° C (—5° F), the oil used should have a viscosity of SAE 80.

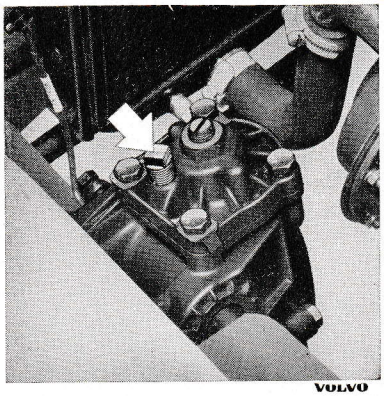

Fig. 7. Steering box filler plug.

INSTRUCTIONS FOR LUBRICATING AND CLEANING

Distributor

The distributor must be lubricated regularly otherwise the result will be wear, ignition trouble and increased fuel consumption. The distributor shaft is lubricated by filling the lubricators. The ignition timing mechanism is lubricated by pouring two or three drops of light engine oil (SAE 10) on the wick in the distributor shaft. The circumference of the cam is greased when necessary by using a very thin layer of vaseline. The points mentioned above should be greased after every 10,000 km (6,000 miles). The other moving parts of the distributor should be greased in connection with reconditioning.

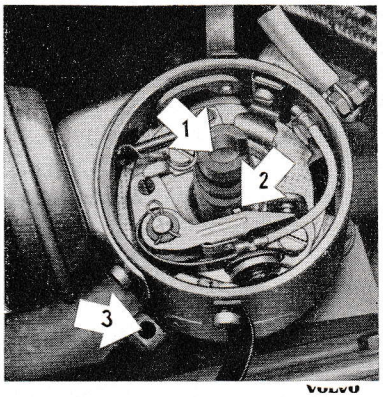

Fig. 8. Distributor.

1. Lubricating wick for ignition setting mechanism
2. Circumference of cam
3. Lubricator for distributor shaft

Lubricating oil filter

The insert in the engine lubricating filter or the complete filter should normally be changed after every 10,000 km (6,000 miles). In the case of a new or reconditioned engine, replacement must however be carried out for the first time after 5,000 km (3,000 miles). The work is carried out as follows.

B 16 engine

1. Clean tshe lubricating oil filter housing and the surrounding parts of the engine to prevent dirt from getting into the lubricating system when the filter is removed.
2. Loosen the centre bolt (3, Fig. 9) on the housing. Collect up the oil that runs out.
3. Remove the lubricating oil filter. Remove the old insert and wash the housing with white spirit.

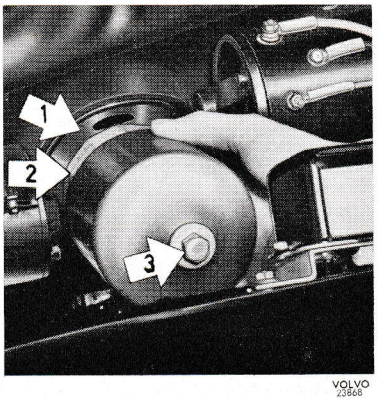

Fig. 9. Replacing the lubricating oil filter element (B 16).

1. Intermediate plate
2. Filter cartridge
3. Centre bolt

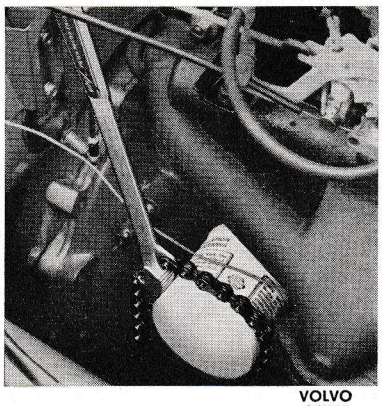

Fig. 10. Removing the oil filter (B 18).

4. Fit a new gasket, filter insert and filter housing. The intermediate plate (1) should be located so that the hole marked "UP" is at the highest point. Make sure that the housing is correctly located on its guide in the bracket. Tighten the bolt (3) to a torque of 2 kgm (15 lb. ft.).
5. If the element is replaced without the oil being changed in the engine at the same time, top up afterwards with about 0.75 litre (1 ¼ Imp. pints = 1 ½ US pints) of oil. Check for leakage later when the engine has been started.

B 18 engine

1. Clean the lubricating oil filter and the surrounding parts of the engine to prevent dirt from getting into the lubricating system when the filter is removed.
2. Remove the old filter with the help of the tool as shown in Fig. 10. Scrap the filter.
3. Smear oil onto the new filter rubber gasket and make sure that the contact surface for the oil filter is free from dirt. The coating of oil enables the gasket to slide better against the sealing surface. Screw on the filter by hand until it just touches the block.
4. Tighten the oil filter a further half turn by hand. No tool should be used when fitting. Start the engine and check that there is no leakage. Top up with oil if necessary. It is normally necessary to add about 0.5 litre (1 Imp. pint = 1 ¼ US pint) of oil.

Air cleaner

The air cleaner on P 1200 cars can be of various designs. From the point of view of servicing there are three main types, namely, an air cleaner with wire filter, an air cleaner with paper filter and an air cleaner of the oil-bath type. As far as servicing procedure and intervals are concerned, see under the heading concerned below.

Air cleaner with wire filter

The air cleaner filter should be cleaned after every 5,000 km (3,000 miles).

The air cleaner as shown in Fig. 11 does not need to be disassembled when cleaning. Instead loosen the nut for the cover and remove the cover. Then remove the filter element (Fig. 11) and clean it in petrol. After the filter has dried, it should be soaked with engine oil which is allowed to run off before the filter is refitted.

The air cleaner shown in Fig. 12 cannot be disassembled and should therefore be removed complete and cleaned in petrol. After cleaning, the air cleaner should be soaked in engine oil which should be allowed to run off before the cleaner is refitted on the engine. Make sure when fitting that the ventilation holes in the cleaner index with the corresponding holes in the gasket and carburetter.

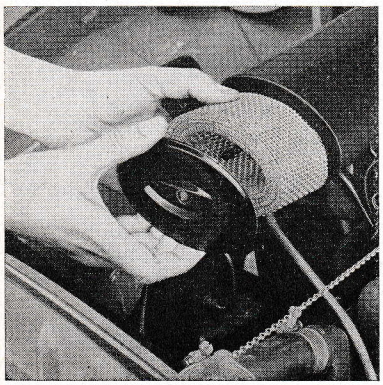

Fig. 11. Removing the filter element (B 16 A).

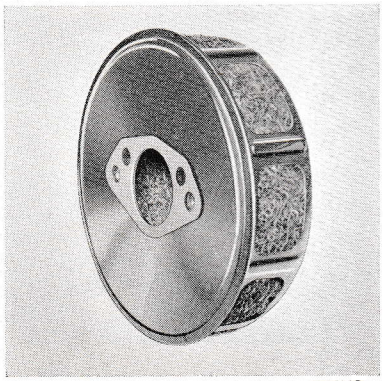

Fig. 12. Air cleaner (B 16 B, early production).

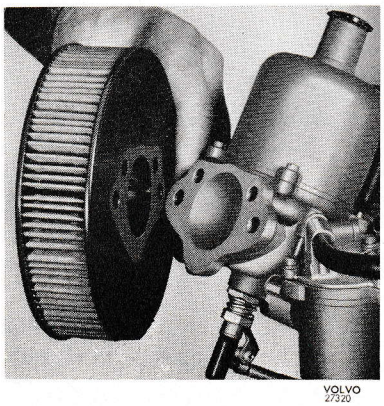

Fig. 13. Replacing the air cleaner (B 16 B, B 18 D).

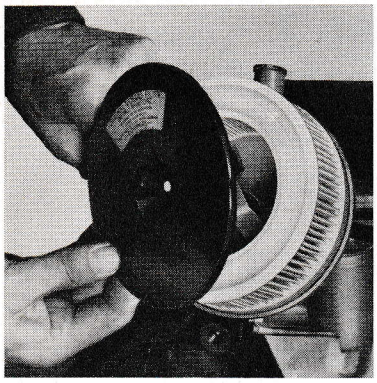

Fig. 14. Replacing the filter insert (B 18 D, right-hand drive).

Fig. 15. Replacing the filter insert (B 18 A).

Fig. 16. Disassembling the air cleaner (B 18 B, B 18 D).

Air cleaner with paper filter

The paper filter should be replaced after every 20,000 km (12,500 miles). If the car is mainly driven on dusty roads or in districts with particularly contaminated air, the filter should be changed more often, approx. every 10,000 km (6,000 miles). No cleaning of any sort may be attempted between these replacements. It is absolutely forbidden to moisten or oil the paper filter.

On the model shown in Fig. 13, the housing and the filter are in the form of one unit and the complete air cleaner is replaced. This is done by removing the attaching screws. When fitting the new cleaners, check that the gaskets are turned the right way, see Fig. 13. If the gaskets are turned the wrong way, the ventilation holes for the vacuum plungers are blocked and the carburetters cannot function corectly.

In the case of P 1200 cars with right-hand drive fitted with B 18 D engines, the air cleaners have replaceable inserts. When replacing, remove the wing nut and lift off the cover as shown in Fig. 14. Make sure that the contact surface for the cleaner element is clean. Be careful to ensure that no dirt gets into the air intake or onto the inside of the insert. When replacing the insert in this type of air cleaner loosen the wing nut and the upper hose clamp as shown in Fig. 15. Remove the upper section and replace the insert after the inside of the cleaner has been cleaned with a moist cloth. When fitting make sure that the gaskets are in good condition.

Air cleaner of the oil-bath type

This type of air cleaner should normally be removed and cleaned after every 10,000 km (6,000 miles). If the car is mainly run on dusty roads or in districts with particularly contaminated air, cleaning should be carried out more ofttetn.

When cleaning the air cleaner as shown in Fig. 16, the clamps are turned upwards and the lower part is removed. The old oil is drained out and then the insert and housing are cleaned in petrol or white spirit, and then blown dry with compressed air. After the lower part has been fitted, oil of the same type as that being used in the engine is added until the red level ring is just covered. The insert is then fitted and the upper part clamped into position.

On the air cleaner shown in Fig. 17, the upper hose clamp is looosened and then the wing nut is removed so that the upper section can be lifted off. Lift up the inner container and empty out the old oil. Wash the container and insert and clean the other parts. Fit the container in the lower section and add oil up to the level mark. Only add oil to the loose container and not to the lower section. Use the same sort of oil as used in the engine. Finally, fit the upper section.

Fig. 17. Disassembling the air cleaner (B 18 A, B 16 A).

Cleaning the oil filler cap

If the crankcase breather is to function properly, the filter in the oil filler cap should be removed and cleaned after every 10,000 km (6,000 miles). The cap is removed, the three screws loosened (Fig. 18) and the top lifted off. The filter is cleaned in petrol, dried and then oiled with light oil. Before the cap is refitted, check and, if necessary, replace the gasket.

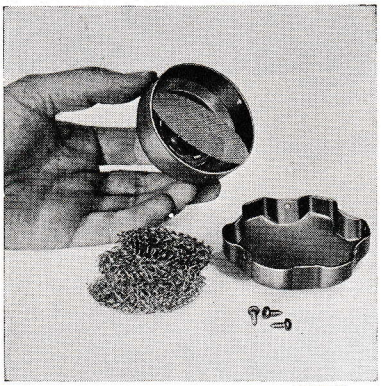

Fig. 18. Oil filler cap.

Cleaning the overdrive oil strainer

The oil strainer should be cleaned in connection with every oil change. After the oil has been drained off through the plug (Fig. 4), cleaning is carried out in the following way:

1. Remove the cover (2, Fig. 19) and remove the oil strainer (1).
2. Clean the oil strainer in petrol or white spirit. Blow dry with compressed air.
3. Check that the gasket (3) is in good condition and lay it in position. Fit the oil strainer, a new gasket (4) and the cover.

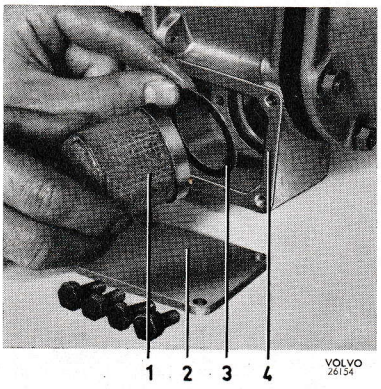

Fig. 19. The overdrive oil strainer.

1. Oil strainer
2. Cover
3. Gasket for oil strainer
4. Gasket for cover

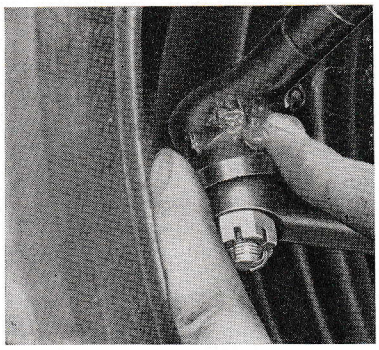

Fig. 20. Greasing the ball joint, early production.

Greasing plastic-lined ball joints

The ball joints for the tie rod and the steering rods are plastic-lined so they require no maintenance greasing and are thus not fitted with nipples. The rubber seals, on the other hand, should be full of grease. On early production cars where there are no lock rings on the rubber seals, these seals should be folded back and filled with chassis grease, see Fig. 20, when being fitted and also once a year. On late production cars where the rubber seals are fitted with a lock ring at the top, the seals only require filling with grease when being replaced. About once a year the rubber seals should be inspected and replaced if damaged.

Greasing the handbrake cable

The handbrake cable and outer sheath (later production) should be greased a couple of times a year. The forward and rear attachments for the protective sheath are loosened and this is moved backwards and forwards while graphite grease is applied to the cable, see Fig. 21.

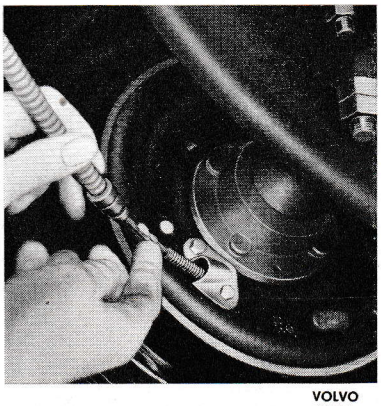

Fig. 21. Greasing the handbrake cable.

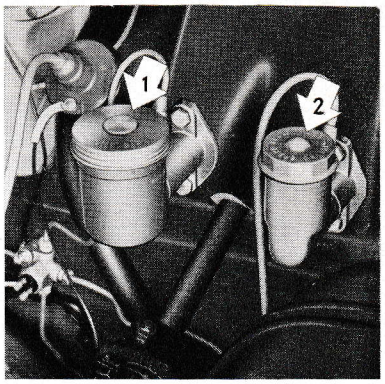

Fig. 22. Fluid containers (early prod.).

1. Brake fluid container
2. Clutch fluid container

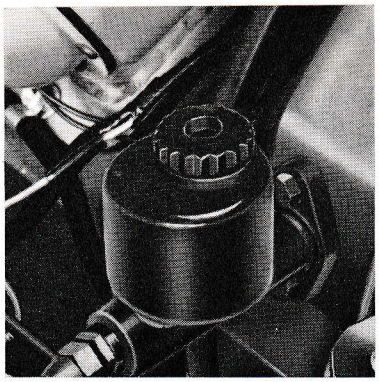

Fig. 23. Brake fluid container, late production.

Checking the brake fluid level

After every 5,000 km (3,000 miles) check that the fluid level in both the containers (1 and 2, Fig. 22) is up to a point 15—20 mm (⅝—¾″) below the filler edge.

Top up if necessary with first-class brake fluid which satisfies the conditions laid down in SAE 70 R3. Avoid spilling brake fluid on the surface finish since it has a damaging effect.

Lubricating the wheel bearings

The wheel bearings should be removed after every 40,000 km (25,000 miles) or at least every other year for cleaning and greasing. Removal is carried out in accordance with the instructions in the Service Manual, Parts 6 and 5 respectively.

After the bearings and seal rings have been removed, the hub and grease cap should be thoroughly cleaned.

Make sure that all the old grease inside the hub is removed. Compressed air can be used for rough cleaning of the bearings. The bearing components are then washed in white spirit or a similar solvent and then allowed to dry. Drying should not be done with compressed air since the air often contains moisture and particles of dust. Accessible bearing components should be dried off with linen or cotton cloth (not cotton waste). A new bearing in an unbroken packing should not be cleaned.

Inspect all parts carefully after cleaning. If there are any signs of damage, rust or blueing on the bearing races or rollers, replace the bearing. If the outer or inner races are loose in their recesses, test with a new race. If the looseness does not disappear, the hub or axle in question must be replaced. Replace seal rings if they are worn or damaged.

Use only a top quality multi-purpose grease with a lithium base for the lubrication of wheel bearings. Do not mix up different makes of grease. A greasing machine should be used for the effective grease-packing of the wheel bearings. Follow the instructions supplied by the manufacturers. If no greasing machine is available, pack the bearings by hand with as much grease as there is room for between the roller cage and the inner race. Also apply grease to the outside of the rollers and cages. The space between the outer and inner bearings in the front wheel hub should be filled with grease as shown in Fig. 24.

Assembly is carried out in accordance with the instructions in Part 6 and Part 5 resepctively.

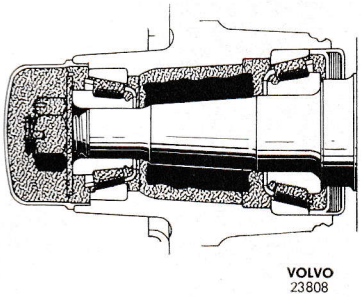

Fig. 24. Front wheel bearing.

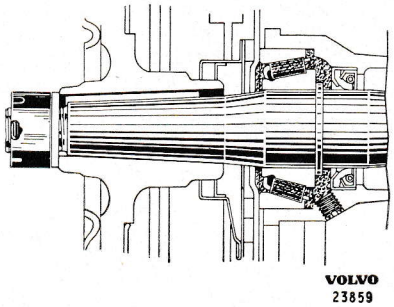

Fig. 25. Rear wheel bearing.

Lubricating the body

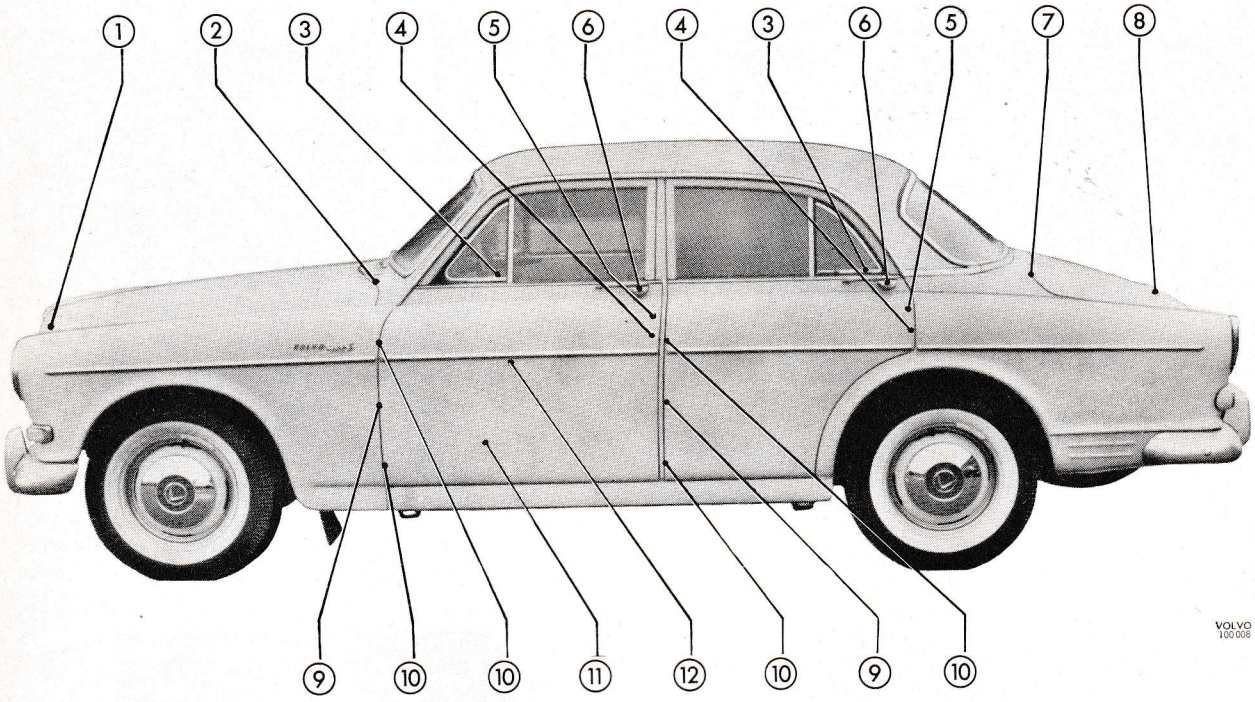

Fig. 26. Lubricating points on the body.

To avoid squeaking in the doors and locks, the body should be greased after every 10,000 km (6,000 miles). During the winter the locks should also be lubricated with some form of anti-freeze preparation which prevents the locks from freezing.

No.	*Lubricating point*	*Lubricant*
1	Bonnet catch	Paraffin wax
2	Bonnet hinges	Oil
3	Ventilator catch and hinges	Oil
4	Door catch	Paraffin wax
5	Door lock	Silicon oil
6	Door handle lock buttons	Paraffin wax
	Key holes	Silicon oil
7	Luggage compartment hinges	Oil
8	Luggage compartment lock	Oil
9	Door checks	Paraffin wax
10	Door hinges	Oil
11	Driving seat slide rails and catches	Paraffin wax and oil
12	Window lifts	Oil and grease
	Locks (accessible after door upholstery panels have been removed)	Silicon grease

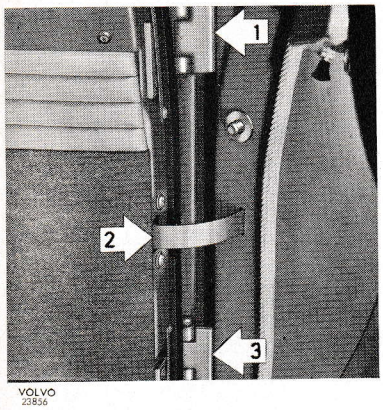

Fig. 27. Hinge.

1. Hinge (light oil)
2. Door check (paraffin wax)
3. Hinge (light oil)

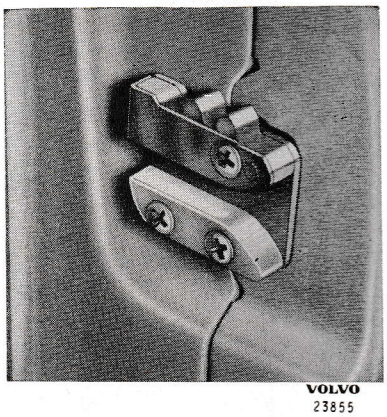

Fig. 28. Striker plate.

Apply paraffin wax

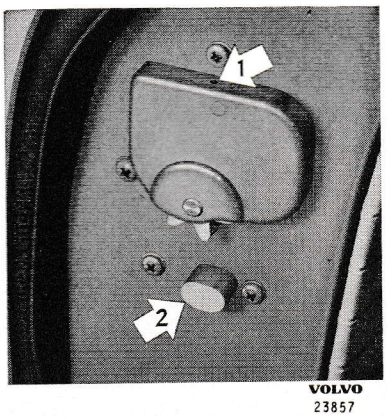

Fig. 29. Door catch.

1. Lubricating hole (silicon oil)
2. Latch (paraffin wax)

Special illustrations for lubricating chart greasing points

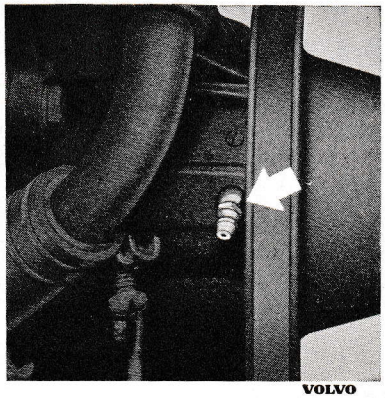

Fig. 30. Cooling water pump grease nipple (B 16).

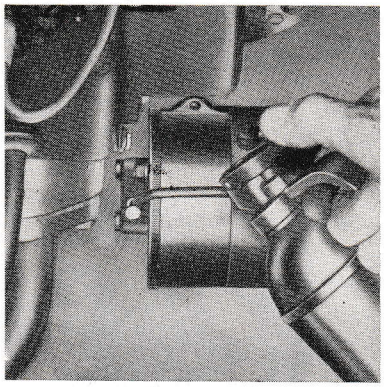

Fig. 31. Dynamo (B 16 A, B 18 A).

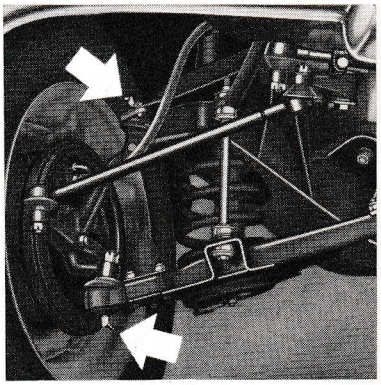

Fig. 32. Upper and lower ball joints.

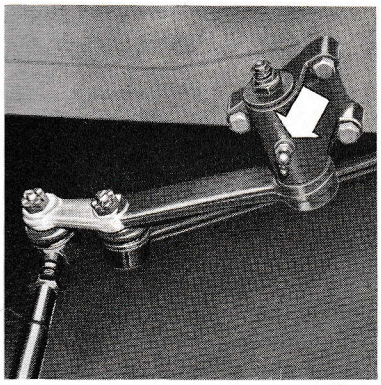

Fig. 33. Idler arm, late production.

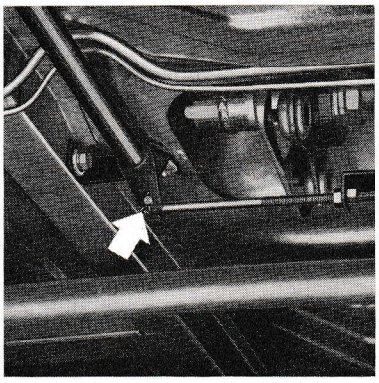

Fig. 34. Handbrake link.

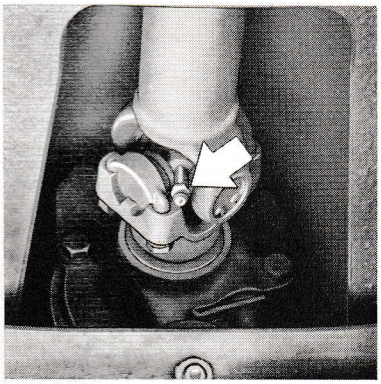

Fig. 35. Forward propeller shaft universal joint.

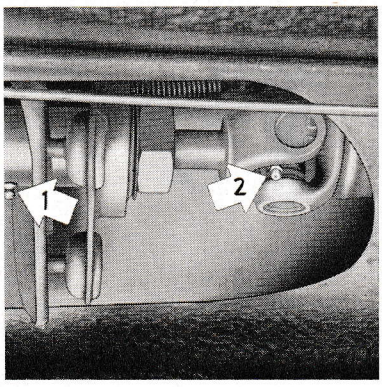

Fig. 36. Central universal joint.

2. Universal joint
1. Spline shaft

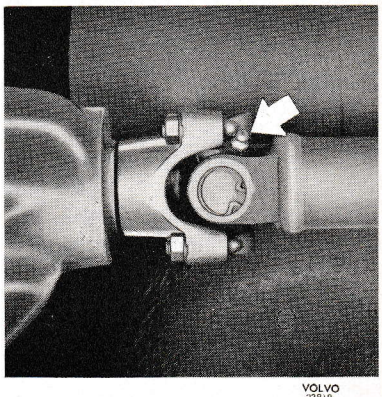

Fig. 37. Rear universal joint.

SPECIFICATIONS

B 16 engine

Lubricating oil, type	Engine oil	
„ „ grade, B 16 A	Service MM or MS	
„ „ other models	Service MS	
„ „ viscosity below 0° C (32° F)	SAE 10 W	or multigrade oil
„ „ „ 0°—30° C (32°—90° F)	SAE 20	SAE 10 W—30
„ „ „ over 30° C (90° F)	SAE 30	
Oil capacity when changing oil, without lubricating oil filter	approx. 2.75 litres (4 7/8 Imp. pints = 5 3/4 US pints)	
Oil capacity when changing oil, with lubricating oil filter	approx. 3.5 litres (6 1/4 Imp. pints = 7 1/2 US pints)	

B 18 engine

Lubricating oil, type	Engine oil	
„ „ grade	Service MS	
„ „ viscosity below 0° C (32° F)	SAE 10 W	or multigrade oil
„ „ „ 0°—30° C (32°—90° F)	SAE 20	SAE 10 W—30
„ „ „ over 30° C (90° F)	SAE 30	
Oil capacity when changing oil, without lubricating oil filter	approx. 3.25 litres (6 Imp. pints = 7 1/4 US pints)	
Oil capacity when changing oil, with lubricating oil filter	approx. 3.75 litres (7 Imp. pints = 8 US pints)	

Gearbox (without overdrive)

Lubricant, type	Gearbox oil
„ viscosity, normal	SAE 90
„ „ with air temperatures continuously below —20° C (—5° F)	SAE 80
Oil capacity when changing oil H6	approx. 0.5 litre (1 Imp. pint = 1 1/4 US pint)
M4	approx. 0.9 litre (1 1/2 Imp. pints = 2 US pints)
M30, M40	approx. 0.75 litre (1 1/4 Imp. pints = 1 1/2 US pints)

Gearbox with overdrive

Lubricant, type	Engine oil
„ viscosity	SAE 30
Oil capacity when changing oil	approx. 1.8 litres (3 1/4 Imp. pints = 4 US pints)

Rear axle

Lubricant, type	Hypoid oil
„ viscosity, normal	SAE 90
„ „ with air temperatures continuously below —20° C (—5° F)	SAE 80
Oil capacity when changing oil	approx. 1.3 litres (2 1/4 Imp. pints = 2 3/4 US pints)

Steering box

Lubricant, type	Hypoid oil
„ viscosity, normal	SAE 90
„ „ with air temperatures continuously below —20° C (—5° F)	SAE 80
Oil capacity	approx. 0.25 litre (1/2 Imp. pint = 5/8 US pint)

INSTRUCTIONS FOR LUBRICATING CHART

Symbols

Engine oil:

Grade, B 16 A engine	"Service MM" or "MS"
„ other models	"Service MS"
Viscosity, below 0° C (32° F)	SAE 10 W
„ 0—30° C (32—90° F)	SAE 20
„ over 30° C (90° F)	SAE 30
or in all cases multigrade oil	SAE 10 W—30

Hypoid oil:

Viscosity, normal	SAE 90
„ with air temperatures continuously below —20° C (—5° F)	SAE 80

Chassis lubricant

Lubricant, see respective note

Light engine oil

Brake fluid

Oil capacites when changing oil

B 16 engine without lubricating oil filter	approx. 2.75 litres (4⅞ Imp. pints = 5¾ US pints)
„ „ with lubricating oil filter	approx. 3.5 litres (6¼ Imp. pints = 7½ US pints)
B 18 engine without lubricating oil filter	approx. 3.25 litres (6 Imp. pints = 7 US pints)
„ „ with lubricatring oil filter	approx. 3.75 litres (7 Imp. pints = 8 US pints)
Gearbox, without overdrive, H6	approx. 0.5 litre (1 Imp. pint = 1¼ US pint)
„ „ „ M4	approx. 0.9 litre (1½ Imp. pints = 2 US pints)
„ „ „ M30, M40	approx. 0.75 litre (1¼ Imp. pints = 1½ US pints)
„ with overdrive	approx. 1.8 litres (3¼ Imp. pints = 4 US pints)
Rear axle	approx. 1.3 litres (2¼ Imp. pints = 2¾ US pints)
Steering box	approx. 0.25 litre (½ Imp. pint = ⅝ US pint)

Other lubricating points

In addition to the points indicated in the lubricating chart, the chassis should be greased about once a year at all the joints for the throttle linkage, handbrake, pedal linkages and other points.

Notes

Note 1 Check once a year that the ball joint rubber seals are in good condition. When new seals are fitted they should be filled with grease. Early production rubber seals which do not have lock rings must also be folded back once a year and filled with chassis grease, see Fig. 20.

Note 2 After every 40,000 km (25,000 miles) or at least every other year, the front wheel bearings should be disassembled and thoroughly cleaned before being packed with a top quality multi-purpose grease with a lithium base, see page 7.

Note 3 Check that the oil is up to the level plug, see page 3.

Note 4 Check that the fluid is up to the level markings, see page 7.

Note 5 The distributor is lubricated in accordance with the instructions on page 3.

Note 6 Check every 5,000 km (3,000 miles) that the oil level is up to the filler plug. The oil should be changed after every 20,000 km (12,500 miles), see page 1 and page 2.
N.B. Different grades of oil in the gearbox depending on whether an overdrive is fitted or not.

Note 7 The handbrake cable is greased with graphite grease a couple of times a year, see page 6.

Note 8 After every 40,000 km (25,000 miles) or at least every other year, the rear wheel bearings should be disassembled and cleaned before being packed with a top quality multi-purpose grease with a lithium base, see page 7.

Note 9 The lubricator on the dynamo when fitted (B 16 A and B 18 A engines) should be filled with light engine oil. The lubricator is opened by turning the outer cap. Use an ordinary oil can, see Fig. 31.

Note 10 Each time the engine oil is changed, the oil level in the carburetter damping cylinders should be checked on cars fitted with twin carburetters, see page 1.

Note 11 On B 16 engines, the cooling water pump should be greased sparingly with heat-resistant grease. On B 18 engines, the pump should only be greased in connection with reconditioning.

Note 12 Check the oil level when tanking. Change the oil after every 5,000 km (3,000 miles) as well as spring and autumn when changing over to oil of another viscosity, see page 1.

Note 13 Lubricate the pull rod at the cotter pin (Fig. 34).

Note 14 Check after every 5,000 km (3,000 miles) that the oil is up to the filler plug. The oil should be changed after every 20,000 km (12,500 miles), see Fig. 2.

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