

SECTION Q

LUBRICATION

RECOMMENDED LUBRICANTS

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LUBRICATION

Q

RECOMMENDED LUBRICANTS

BP	CASTROL	DUCKHAM'S	ESSO	FILTRATE	MOBIL	SHELL	STERNOL
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ENGINE AND GEARBOX

All conditions down to 5°C. (41°F.)

Energol SAE 40 or Super Visco-Static 20W/50.	Castrol XL	Q20/50	Esso Motor Oil 40/50. Esso Motor Oil 40. Esso Extra Motor Oil 20/40.	Filtrate Heavy Filtrate 20W/50.	Mobiloil AF Mobiloil Special 20W/40.	Shell Super Motor Oil Shell X-100 40. Shell X-100 Multigrade 20W/40 or 20W/50.	Sternol WW 40 or WW Multi-grade 20W/50
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All conditions between 5°C. (41°F.) and -12°C. (10°F.)

Energol SAE 20W. Super Visco-Static 10W/40 or Visco Static.	Castrolite or Castrol XL.	Q20/50 or Q5500	Esso Motor Oil 20, 20W/30 or Esso Extra Motor Oil 10W/30	Filtrate Zero or Filtrate 10W/30	Mobiloil Arctic or Mobiloil Special 10W/30 Mobiloil Special 10W/40	Shell Super Motor Oil Shell X-100 20W. Shell X-100 Multigrade 10W/30 or 20W/40 or 20W/50	Sternol WW 20 or WW Multi-grade 10W/40 or 20W/50
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All conditions below -12°C. (10°F.)

Energol SAE 10W or Super Visco-Static 10W/40 or Visco-Static	Castrol Z or Castrolite	Q5500	Esso Motor Oil 10W Esso Extra Motor Oil 10W/30	Filtrate Sub-Zero 10W or Filtrate 10W/30	Mobiloil Special 10W/30 Mobiloil 10W or Mobiloil Super 10W/40	Shell Super Motor Oil or Shell X-100 10W or Shell X-100 Multigrade 10W/30	Sternol WW 10 or WW Multi-grade 10W/40
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REAR AXLE AND STEERING GEAR

All conditions down to -12°C. (10°F.)

BP Gear Oil SAE 90 EP	Castrol Hypoy	Duckham's Hypoid 90	Esso Gear Oil GP 90/140 or GP 90	Filtrate EP Gear 90	Mobilube GX 90	Spirax 90 EP	Ambroline EP 90
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All conditions below -12°C. (10°F.)

BP Gear Oil SAE 80 EP	Castrol Hypoy Light	Duckham's Hypoid 80	Esso Gear Oil GP 80	Filtrate EP Gear 80	Mobilube GX 80	Spirax 80 EP	Ambroline EP 80
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GREASE POINTS (EXCEPT FRONT HUB BEARINGS)

Energol L2	Castrol LM	Duckham's LB 10 Grease	Esso Multi-purpose Grease H	Filtrate Super Lithium Grease	Mobilgrease MP	Shell Retinax A	Ambroline LHT
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FRONT HUB BEARINGS

Energol B2	Castrol BNS Grease	Duckham's DB 500 Grease	Esso Bearing Grease B2	Filtrate Bentonite Grease	—	Shell Retinax DX	Ambroline HTB Grease
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OIL CAN AND CARBURETTOR

Visco-Static or Super Visco-Static 10W/40	Castrolite	Q5500	Esso Extra Motor Oil 10W/30	Filtrate 10W/30 Multigrade	Mobiloil Special 10W/30 or Mobiloil Super 10W/40	Shell Super Motor Oil	Sternol WW Multigrade 10W/40
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UPPER CYLINDER LUBRICANT

BP Upper Cylinder Lubricant	Castrollo	Duckham's Adcoild Liquid	Esso Upper Cylinder Lubricant	Filtrate Petroyle	Mobil Upperlube	Shell Upper Cylinder Lubricant	Sternol Magikoyl
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LUBRICATION

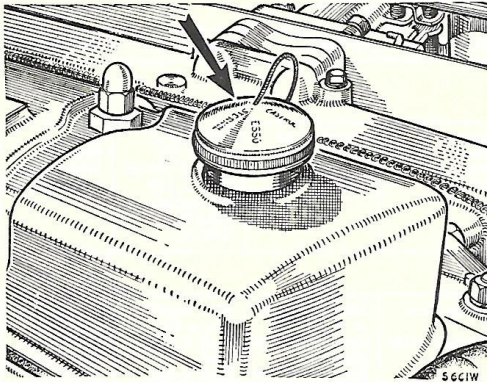


Fig. Q.1.
The engine oil filler cap.

Section Q.1

ENGINE (A)

Check the oil level in the engine and refill if necessary to the 'MAX' mark on the dipstick and never let it fall below the 'MIN' mark. The oil filler cap is on the forward end of the rocker cover and is released by turning it anti-clockwise.

ENGINE OIL CHANGE (A)

The sump should be drained and refilled with the appropriate grade of lubricant. The sump plug should be removed after a journey when the oil is still warm and fluid.

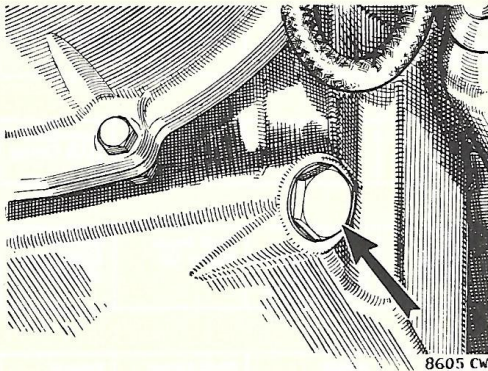


Fig. Q.2.
The engine sump drain plug.

Q.2

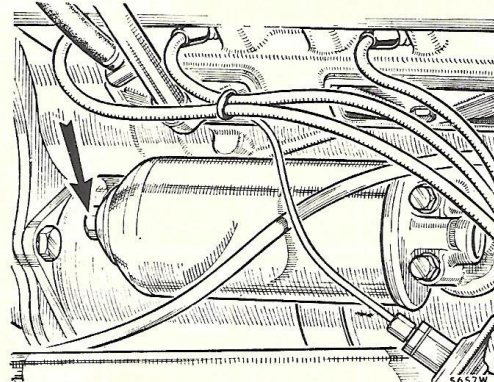


Fig. Q.3.
The engine oil filter with its centre-securing bolt.

ENGINE OIL FILTER

Fit a new engine oil filter element.

The oil filter is of the full-flow renewable element type and the bowl must be removed and washed in petrol (gasoline). The filter is released by unscrewing the central bolt securing the filter to the filter head. Place a suitable container under the assembly to catch the oil that will be released when the seal between the bowl and the cylinder block is broken.

When refitting ensure that the seating washer for the filter body is correctly positioned, clean and serviceable. Ensure that the washers below the element inside the bowl are fitted correctly. The small felt washer must be positioned between the element pressure plate and the metal washer above the pressure spring. It is essential for efficient oil filtration that the felt washer should be in good condition and be a snug fit on the centre-securing bolt.

Run the engine and make certain that there are no oil leaks.

DYNAMO BEARING (D)

Apply a few drops of oil to the commutator end dynamo bearing via the oil hole provided in the bearing housing.

Do not over-oil.

AIR CLEANERS (A)

Remove, clean in petrol (gasoline), drain and moisten the air cleaners with oil. In exceptionally dusty conditions this attention may be required at more frequent intervals.

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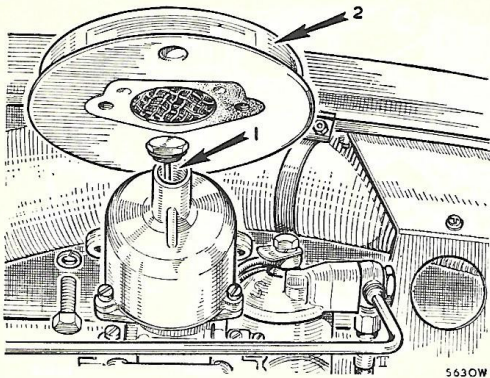


Fig. Q.4. A carburettor damper reservoir (1) and an air cleaner (2)

CARBURETTER DAMPERS (D)

Unscrew the top from each suction chamber, pour in a small quantity of oil to bring the oil level to within $\frac{1}{2}$ in. (13 mm.) of the top of the hollow piston rod, and replace the cap. In no circumstances should a heavy-bodied lubricant be used. Failure to lubricate the piston dampers will cause the pistons to flutter and reduce acceleration.

WATER PUMP (C)

Remove the water pump lubrication plug on the water pump casing and add a small quantity of grease. The greasing of the pump must be done very sparingly, otherwise grease will run past the bearings on to the face of the carbon sealing ring impairing its efficiency.

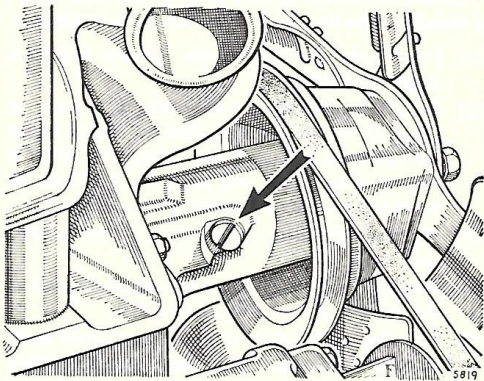


Fig. Q.5. The water pump plug.

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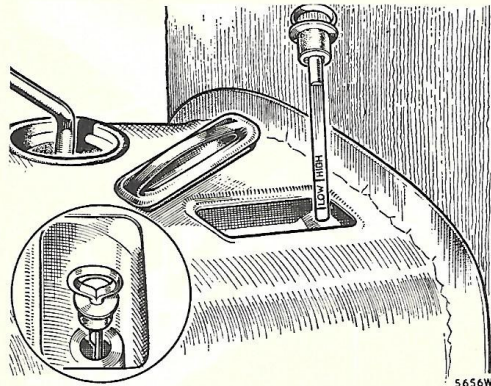


Fig. Q.6. The gearbox combined filler plug and dipstick.

Section Q.2

GEARBOX (A)

GEARBOX AND OVERDRIVE (where applicable)

Check the oil level and top up if necessary. For access lift the floor covering and take out the inspection panel in the top right-hand side of the gearbox cover when the filler plug will be accessible.

On the later central gear change gearboxes, the combined dipstick and filler plug is located under an access panel on the left-hand side of the gearbox cover in front of the gear lever.

Remove the combined dipstick and filler plug, and fill to the correct level with oil.

The capacity of the gearbox and overdrive unit, which are connected by oilways is given in 'General Data'.

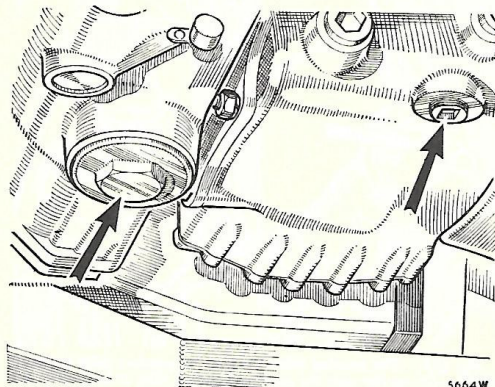


Fig. Q.7. The overdrive and gearbox drain plugs.

Q.3

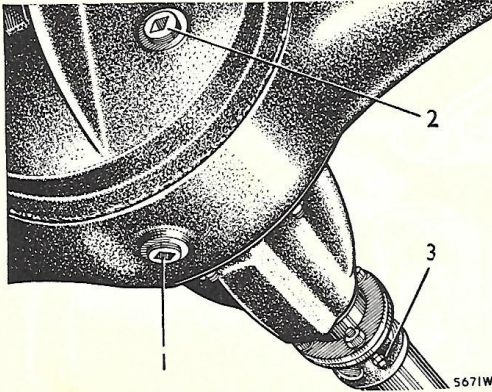


Fig. Q.8. The rear axle drain plug (1), filler plug (2) and the propeller shaft rear universal joint lubrication point (3).

Section Q.3

REAR AXLE (B)

The combined filler and level plug situated on the rear of the axle casing is reached from underneath the car. Use a special key to remove the plug and replenish up the filler plug hole if necessary with oil. Wipe away excess oil from the casing.

NOTE.—It is essential that only hypoid oil is used in the rear axle.

Section Q.4

STEERING (B)

STEERING GEARBOX (B)

Check the oil level, and top up if necessary with oil

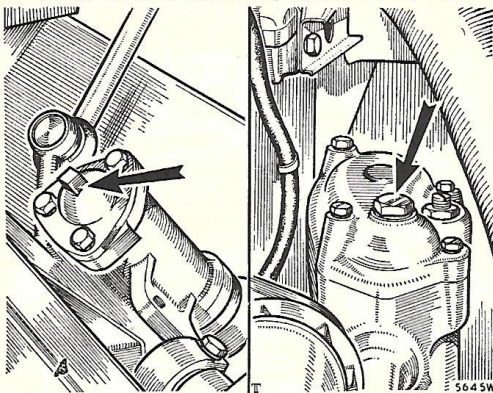


Fig. Q.9. The steering idler and steering gearbox filler plugs.
NOTE.—On earlier cars the steering gearbox filler is located on the side of the unit and access to it is gained from under the wheelarch.

Q.4

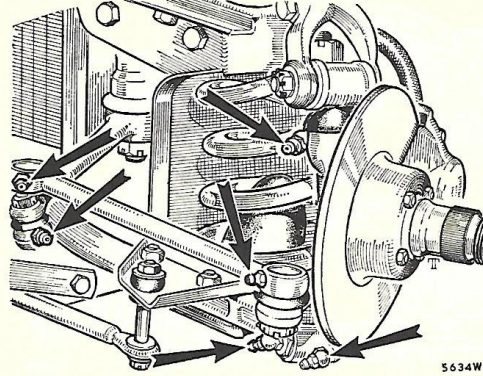


Fig. Q.10 The steering and front suspension lubrication points.

The correct level is flush with the bottom of the filler hole.

Ensure that no dirt enters the steering gearbox when removing or replacing the filler plug.

STEERING IDLER (B)

Remove the square-headed plug from the top of the steering idler and replenish if necessary with oil to just below the screw thread.

NOTE.—Steering idler lubrication is extremely important as, if neglected, severe loading will be imposed on the steering gearbox.

Section Q.5

GREASE POINTS (C)

Grease nipples are situated at the points listed below and should receive three or four strokes of the grease gun.

- (1) Front suspension lower outer fulcrum pins (one nipple each side).
- (2) Swivel pins (two nipples each side). It is better to grease the swivel axle pins when the weight of the car has been taken off the suspension with a jack or sling. This will allow the lubricant to penetrate around the bushes more effectively.
- (3) Steering ball joint connections (three nipples each side).
- (4) Rear spring shackle pins (one nipple located at the rear end of each spring shackle).
- (5) Propeller shaft universal joints (one nipple each) and the sliding yoke (one nipple) at the gearbox end. The sliding yoke and the front universal

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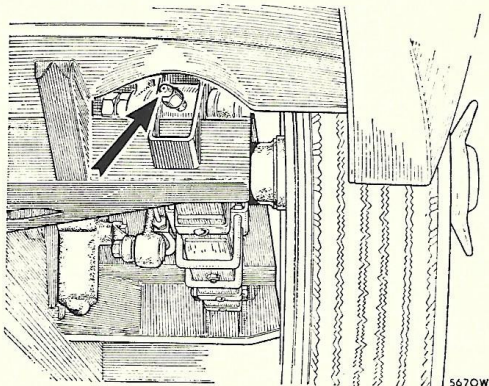


Fig. Q.11. The rear spring rear shackle lubrication point.

joint are best attended to from within the car after the short section at the rear of the gearbox cover has been removed. On later cars with gearbox covers of fibreglass material, a rubber inspection panel on the left-hand side of the rear of the cover may be removed for access to the front universal joint.

The rear joint may be lubricated from below or through the hinged panel behind the seats (2-seater models). Move the car to bring the nipples to the required position.

- (6) Handbrake cable (one nipple) and the balance lever (one nipple). These are accessible from underneath the car at the rear axle.

Section Q.6

DISTRIBUTOR (C and D)

Remove the distributor cap and lubricate the following points:

Cam Bearing (D)

Lubricate the distributor camshaft bearing by withdrawing the rotor arm from the top of the distributor spindle and carefully adding a few drops of oil round the screw exposed to view. Take care to refit the rotor arm correctly by pushing it on to the shaft and turning until the key is properly located.

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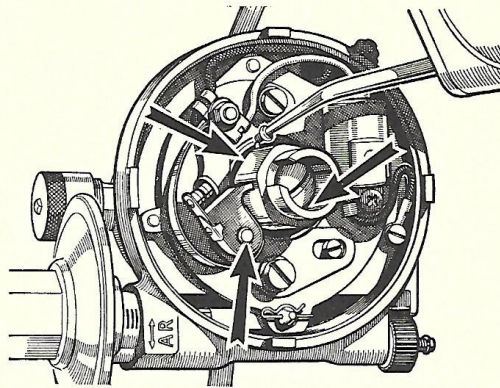


Fig. Q.12. The distributor oiling points. The arrows indicate the automatic timing control, the cam bearing and the contact breaker pivot oiling points.

Cam (C)

Lightly smear the cam with a very small amount of grease or, if this is not available, clean engine oil may be used.

Automatic Timing Control (D)

Carefully add a few drops of oil through the hole in the contact breaker base-plate through which the cam passes. Do not allow the oil to get on or near the contacts. Do not over-oil.

Contact Breaker Pivot (D)

Add a spot of oil to the moving contact pivot pin.

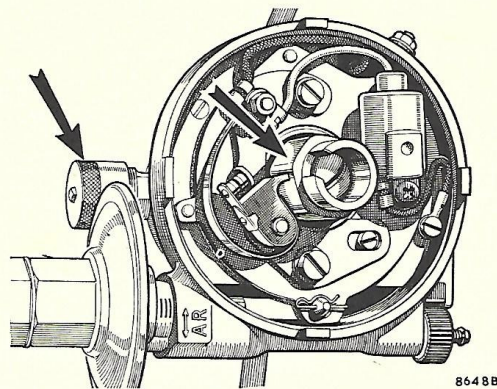


Fig. Q.13. The distributor greasing points. The arrows indicate the drive shaft greaser and the cam.

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