SECTION Q

LUBRICATION

RECOMMENDED LUBRICANTS

Section No. Q.1  Engine
Section No. Q.2  Gearbox
Section No. Q.3  Rear axle
Section No. Q.4  Steering
Section No. Q.5  Grease points
Section No. Q.6  Distributor
# RECOMMENDED LUBRICANTS

<table>
<thead>
<tr>
<th>BP</th>
<th>CASTROL</th>
<th>DUCKHAM'S</th>
<th>ESSE</th>
<th>FILTRATE</th>
<th>MOBIL</th>
<th>SHELL</th>
<th>STERNOL</th>
</tr>
</thead>
</table>
| **ENGINE AND GEARBOX**
All conditions down to 5°C (41°F.)

|-------------------------------------------------|------------|--------|-----------------------------------------------------|------------------|---------------------------------|--------------------------------------|---------------------|

All conditions between 5°C (41°F.) and —12°C (10°F.)

<table>
<thead>
<tr>
<th>Energol SAE 20W-</th>
<th>Castrolite or Castrol XL.</th>
<th>Q20/50 or Q5500</th>
<th>Esso Motor Oil 20, 30W/30 or Esso Extra Motor Oil 10W/30</th>
<th>Filtrate Zero or Filtrate10W/30</th>
<th>Mobiloil Arcticoil LS/10L Special 10W/30 or Mobiloil Special 10W/40</th>
<th>Shell Super Motor Oil Shell X-100 20W. Shell X-100 Multigrade 10W/30 or 20W/40 or 20W/20</th>
<th>Sterol WW 20 or WW Multigrade 10W/40 or 20W/50</th>
</tr>
</thead>
</table>

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 or Mobiloil Special 10W/30 Super 10W/40 | Shell Super Motor Oil Shell X-100 10W or Shell X-100 Multigrade 10W/30 | Sterol WW 10 or WW Multigrade 10W/40 |
|-------------------------------------------------|------------|--------|-----------------------------------------------------|------------------|---------------------------------|--------------------------------------|---------------------|

**REAR AXLE AND STEERING GEAR**
All conditions down to —12°C (10°F.)

<table>
<thead>
<tr>
<th>BP Gear Oil SAE 90 EP.</th>
<th>Castrol Hypoy</th>
<th>Duckham's Hypoid 90</th>
<th>Esso Gear Oil GP 90/140 or GP 90</th>
<th>Filtrate EP Gear 90</th>
<th>Mobilube GX 90</th>
<th>Spirax 90 EP</th>
<th>Ambrolean EP 90</th>
</tr>
</thead>
</table>

All conditions below —12°C (10°F.)

|-----------------------|---------------------|---------------------|------------------|------------------|----------------|---------------|-----------------|

**GREASE POINTS (EXCEPT FRONT HUB BEARINGS)**

<table>
<thead>
<tr>
<th>Energol L2</th>
<th>Castrollease L2</th>
<th>Duckham's Hypoid Grease</th>
<th>Esso Multi-purpose Grease H</th>
<th>Filtrate Super Lithium Grease</th>
<th>Mobilgrease MP</th>
<th>Shell Retinax A</th>
<th>Ambroline LHT</th>
</tr>
</thead>
</table>

**FRONT HUB BEARINGS**

|------------|-----------------|------------------------|------------------------|------------------------|---|---------------|-----------------|

**OIL CAN AND CARBURETTER**

<table>
<thead>
<tr>
<th>Visco-Static or Super Visco-Static 10W/40</th>
<th>Castrolite</th>
<th>Q5500</th>
<th>Esso Extra Motor Oil 10W/30</th>
<th>Filtrate 10W/30 Multigrade</th>
<th>Mobiloil Special 10W/30 or Mobiloil Special 10W/40</th>
<th>Shell Super Motor Oil</th>
<th>Sterol WW Multigrade 10W/40</th>
</tr>
</thead>
</table>

**UPPER CYLINDER LUBRICANT**

<table>
<thead>
<tr>
<th>BP Upper Cylinder Lubricant</th>
<th>Castrolite</th>
<th>Duckham's Adhesive Lubricant</th>
<th>Esso Upper Cylinder Lubricant</th>
<th>Filtrate Petroleum</th>
<th>Mobil Upper Lubricant</th>
<th>Shell Upper Cylinder Lubricant</th>
<th>Sterol Magikoyl</th>
</tr>
</thead>
</table>

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365
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.

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.
CARBURETTER DAMPERS (D)

Unscrew the top from each suction chamber, pour in a small quantity of oil to bring the oil level to within ¼ 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.

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.6. The gearbox combined filler plug and dipstick.

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

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 shackles 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...
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.

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.