

SECTION O.

LUBRICATION/MAINTENANCE.

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O.1. - GENERAL.

The Voucher Service commences with a FREE 'After Sales Service' which is carried out at 800 km. (500 miles). Further Vouchers are inclined in the Service Voucher Book to cover Lubrication and Maintenance at intervals of every 8,000 km. (5,000 miles). NOTE: A fold out illustration will be found at the end of this Section which shows the main lubrication items in the Services.

O.2. - PERIODIC SERVICES.

FREE AFTER SALES SERVICE - 800 Kilometres (500 miles)

1. LUBRICATION

Drain engine without flushing and refill with new oil. Drain transmission and refill with new oil. Lubricate lower steering swivels. Lubricate drive shafts. Lubricate throttle linkage and controls. Top up carburettor damper reservoirs (Stromberg).

2. ENGINE.

Check valve clearances and adjust if necessary. Check carburettor slow running adjustment. Check vertical movement of carburettors on manifold. Check torque loading of cylinder head bolts. Top up coolant level in cooling system header tank if necessary. Make visual inspection of all Water pipe connections including heater pipes. Check alternator belt tension and adjust if necessary. Check water pump drive belt. Check timing chain tensioner adjustment. Check security of carburettor ram pipes (Dellorto) securing nuts. Check security of complete exhaust system, engine mountings, distributor and alternator mounting bolts.

3. IGNITION.

Check and adjust if necessary, distributor contact breaker points, sparking plug points and static ignition timing.

4. BRAKES

Check brakes, system and operation including handbrake. Check foot pedal and adjust if necessary. Check brake fluid reservoir level and top up if necessary. Check security and conditions of all brake hydraulic pipes, vacuum hoses and unions. Check and tighten if necessary front wheel discs and caliper mountings. Check security of rear wheel brake backplates.

5. CLUTCH

Check operation of clutch and adjust clearances if necessary.

6. STEERING AND SUSPENSION.

Check that all steering connections including column clamps are secure. Check wishbone and damper connections on front and rear suspension units to specified torque loadings. Check front suspension upper and lower fulcrum pins and lower trunion bolts to specified torque loadings. Check steering unit mountings for tightness. Check front wheel alignment.

7. ELECTRICAL.

Check operation and function of all electrical equipment, including voltage regulator output. Check security of battery terminals. Check electrolyte level of battery and top up if required.

8. WHEELS AND TYRES.

Check all wheel nuts for tightness. Check all tyre pressures, including spare.

9. BODY.

Check body condition generally including door adjustment, front and rear baggage compartment locks and all body attachment points. Check seat sliding mechanisms. Check operation of windscreen wiper and washers.

10. GENERAL.

Check condition of engine mountings and bolt to specified torque loadings. Check drive shafts, universal joints for security. Check fuel pipes, chassis, grommets, fuel tank drain plugs for security. Check chassis cross-beam and diagonal brace locating bolts to specified torque loading. Ensure steering wheel and upholstery are free from grease. Check security of alternator mounting bolts.

'A' Service - every 8,000 kilometres (5,000 miles) or 3 months (whichever is the sooner).

1. LUBRICATION

Drain engine and refill with new oil. Fit new engine oil filter. Check transmission oil level and top up if necessary. Lubricate drive shaft universal joints. Lubricate lower steering swivels. Lubricate steering unit pinion. Lubricate all doors, front and rear baggage compartment locks, catches and hinges. Top up carburettor damper reservoirs (Stromberg).

2. ENGINE.

Check carburettor slow running adjustment. Check vertical movement of carburettors on manifold. Check timing chain tensioner adjustment. Clean petrol pump filter. Check alternator drive belt for condition and adjust if necessary.

Make visual inspection of all water pipes including heater pipes. Top up coolant level in cooling system header tank if necessary. Clean air cleaner body and element.

3. IGNITION.

Check distributor settings and adjust if necessary. Lubricate cam and weights. Clean and adjust sparking plug points.

4. BRAKES.

Check brakes system and operation, including handbrake. Check foot pedal travel. Check front wheel disc pads and if down to a thickness of 1.6 mm. (1/16 in.) replace pads. Check brake fluid reservoir and top up if necessary. Check security and condition of all brake hydraulic pipes, vacuum pipes hoses and unions. Renew brake servo unit air filter.

5. CLUTCH.

Check operation of clutch and adjust if necessary.

6. STEERING AND SUSPENSION.

Check steering assembly for general condition. Check both front and rear wheels alignment and adjust if necessary. Check front suspension upper and lower fulcrum pins and lower trunion bolts to specified torque loadings. Check wishbone and damper connections on front and rear suspension units to specified torque loadings. Check rear hub retention.

7. ELECTRICAL.

Check electrolyte level of battery. Clean battery parts and terminals and smear with silicone grease, ensuring tightness of terminals on replacement. Check operation of all circuits, including cooling fan motor operation. Check headlamp focus, resetting if necessary. Check windscreen wiper operation and arc.

8. WHEELS AND TYRES.

Check all wheel nuts for tightness. Check all tyre pressures including spare. Dynamically balance wheel and tyre assemblies.

9. BODY.

Check body condition generally including door adjustment front and rear baggage compartment locks and all body attachments points. Check seat slide mechanisms for ease of functioning. Check door windows for ease of operation. Check heater system and operation. Check there is water in windscreen washer container.

10. GENERAL.

Check conditions of engine mountings and bolts to specified torque loadings. Check security of alternator mounting bolts. Check chassis cross-beam and diagonal brace locating bolts to specified torque loadings. Check torque loadings of fixings securing brake disc and calipers, rear brake backplates, steering unit mountings, drive shaft universal joints, all exhaust system mountings and ignition distributor mounting.

'B' Service - every 16,000 kilometres (10,000 miles) or 6 months (whichever is sooner)

1. LUBRICATION.

Drain engine and refill with new oil. Fit new engine oil filter. Check transmission oil level and top up if necessary. Lubricate drive shaft universal joints. Lubricate lower steering swivels. Lubricate steering unit pinion. Lubricate all doors, front and rear baggage compartment locks, catches and hinges. Lubricate throttle linkage and controls. Top up carburetter damper reservoirs (Stromberg.)

2. ENGINE.

Check carburetter slow running adjustment. Check vertical movement of carburetters on manifold. Check timing chain tensioner adjustment. Clean petrol pump filter. Check alternator drive belt for condition and adjust if necessary. Make visual inspection of all water pipes including heater pipes. Top up coolant level in cooling system header tank if necessary. Clean air cleaner body and fit new element. Check valve clearances and adjust if necessary. Check torque loading of cylinder head bolts. Check security of carburetter ram pipes (Dellorto) securing nuts. Check water pump drive belt. Check condition of all engine ancillaries.

3. IGNITION.

Check distributor settings and adjust if necessary. Lubricate cam and weights. Clean and adjust sparking plug points, renewing plugs if their condition demands this.

4. BRAKES.

Check brakes system and operation, including handbrake. Check foot pedal travel. Check front brake disc pads and if down to 1.6 mm. (1/16 in.) replace pads. Check condition of rear brake linings. Check brake fluid reservoir and top up if necessary. Check security and condition of all brake hydraulic pipes, vacuum pipes, hoses and unions. Renew brake servo unit air filter. Check for wear on master cylinder linkage and pedal bearings.

5. Check operation of clutch and adjust if necessary. Check for wear on clutch linkage and pedal bearings.

6. STEERING AND SUSPENSION.

Check steering assembly for general condition. Check both front and rear wheels alignment and adjust if necessary. Check front suspension upper and lower fulcrum pins and lower trunnion bolts to specified torque loadings. Check wishbone and damper connections on front and rear suspension units to specified torque loadings. Check rear hub bearings. Check front hubs lubrication and repack with grease. Check condition of front and rear wheel bearings, hubs and seals. Check security of steering unit mountings. Check all steering and suspension moving parts for wear.

7. ELECTRICAL.

Check electrolyte level of battery. Check battery posts and terminals and smear with silicone grease, ensuring tightness of terminals on replacement. Check operation of all circuits, including cooling fan motor operation. Check headlamp focus, resetting if necessary. Check windscreen wiper operation and arc.

8. WHEELS AND TYRES.

Check all wheel nuts for tightness. Check all tyre pressures, including spare. Dynamically balance wheels and tyre assemblies.

9. BODY.

Check body condition generally including door adjustment front and rear baggage compartment locks and all body attachment points. Check seat slide mechanisms for ease of functioning. Check heater system and operation. Check there is water in windscreen washer container.

10. GENERAL.

Check condition of engine mountings and bolts to specified torque loadings. Check security of alternator mounting bolt. Check chassis cross-beam and diagonal brace locating bolts to specified torque loadings. Check torque loadings of fixings securing front brake disc and calipers, rear brake backplates, steering unit mountings drive shafts universal joints, all exhaust system mountings and ignition distributor mounting. Check condition of gearshift linkage joints.

O.3. - AIR HORNS LUBRICATION.

Where air horns are fitted the compressor should be lubricated, through the oil hole provided, initially on installation and subsequently at monthly intervals.

O.4. - RECOMMENDED LUBRICANTS.

(The products shown are not listed in order of preference)

<u>Engine (above 0°C)</u>	<u>Esso</u> Uniflo	<u>B.P.</u> Super Viscoststic 20w/50	<u>Castrol</u> Castrol GTX	<u>Mobil</u> Mobiloil Super 10w/50	<u>Shell</u> Shell Super 100
<u>Engine (below 0°C)</u>	Uniflo	Super Viscoststic	Castolite	Mobiloil Super 10W/50	Shell Super 10w/30
<u>Transmission</u>	Esso Gear Oil GX 80	B.P. Gear Oil GX 80	Castol Hypoy Light	Mobilube GX 80	Shell Spirax 80 EP
<u>Front Hubs</u>	Esso Multi - Purpose Grease	B.P. Energrease L.2.	Castrol Grease LM.	Mobil Grease MP	Shell Retinax 'A'
<u>Steering Swivels</u>	Esso Gear Oil GP90/140	B .P. Gear Oil SAE 90EP	Castrol Hypoy	Mobilube GX.90	Shell Spirax 90 EP
<u>Steering Unit</u>	Esso Multi - Purpose Grease	B.P. Energrease L.2.	Castrol Grease LM.	Mobil Grease MP.	Shell Retinax 'A'

Pivots and Linkages Engine Oil

Hinges Locks Catches Engine oil or silicone grease.

Brake master cylinder reservoir Castrol Girling Brake Green to specification SAE 70 J.1703B

O.5. - EXHAUST EMISSION ENGINES.

The following additional servicing must be carried out on all cars equipped with the above engine.

1. AT FIRST 1,600 KILOMETRES (1,000 miles)

a. ENGINE:

Check and adjust if necessary, engine idling speed.

b. IGNITION:

Check ignition timing and adjust if necessary.

2. EVERY 20,000 KILOMETRES (12,000 miles)

a. ENGINE:

Carry out carburetter 'YELLOW' service (see Section 'L'). Renew adaptor flange 'O' rings. Check for induction leaks and renew all gaskets that are disturbed. Clean crankcase breather.

b. IGNITION:

Check ignition timing and adjust if necessary. Fit new sparking plugs.

3. EVERY 40,000 KILOMETRES (24,000 miles)

a. ENGINE:

Carry out carburetter 'RED' service (see Section 'L'). Renew adaptor flange 'O' rings. Renew all induction system gaskets. Visually inspect secondary throttle spindle seals. Check for induction leaks. Clean crankcase breather.

b. IGNITION:

Check timing and adjust if necessary. Fit new sparking plugs. Fit new distributor contact breaking points.

O.6. - APPROVED ANTI-FREEZE SOLUTIONS

Lotus Cars Limited approve anti-freeze solutions, for use in the engine cooling system, based on inhibited ethylene glycol provided it conforms to British Standard Specifications 'BSS.3151'.

<u>Solution Strength</u>	<u>Against Frost Damage</u>	<u>Safe Pump Circulation</u>
25%	-26° C. (-15° F)	-12°C. (10°.)
30%	-33° C. (-28°F)	-16°C. (3° F)
35%	-39° C. (-38°F)	-20°C. (-4°F)
40%	-41° C. (-42°F)	-23°C. (-10°F)
50%	-47° C. (-53°F)	-36°C. (-32°F)