



LUBRICATION

AND

MAINTENANCE





SECTION D.

LUBRICATION AND MAINTENANCE.

INDEX TO

SUB-SECTIONS.

	<u>SUB-SECTION</u>
LUBRICATION General - Summer and Winter Lubricants - S.A.E. Numbers - Recommended Lubricants.	ED.1
PERIODIC LUBRICATION AND MAINTENANCE Daily - Weekly - Monthly.	ED.2
PERIODIC LUBRICATION AND MAINTENANCE Every 5,000 miles - Every 10,000 miles - Every 20,000 miles.	ED.3
CENTRALISED CHASSIS LUBRICATION SYSTEM General - The Pump Unit - The Oil Pipe Line - The Drip Plugs - Maintenance-Service.	ED.4



SECTION D

INDEX TO ILLUSTRATIONS.

<u>TITLE.</u>	<u>FIG. NO.</u>
Air Cleaner	24
By-Pass Oil Filter	18
Carburettor Air Valve Damper	11
Carburettor Strainer	29
Chassis Oil Pump Unit	33
Checking Inlet Valve Rocker Clearances	23
Checking Spark Plug Gap	16
Crankcase Dipstick	1
Crankcase Drain	17
Diagram - Chassis Lubrication System	32
Distributor Greaser	7
Door Hinge	25
Dynamo	20
Electrolyte Level	8
Foot Pedal - Chassis Oil Pump	3
Front Brake Adjuster	9
Fuel/Oil Gauge	2
Fuel Pump Strainer	28
Gearbox Dipstick	12
Gearbox Drain	26
Interior of Distributor	15
Radiator Coolant Level	5
Rear Axle Plugs	13
Rear Brake Adjuster	10
Rear Fuel Strainer	27
Rear Shock Damper	21
Reservoir and Pump	4
Sliding Joint	22
Starter Motor	19
Steering Box	14
Tyre Gauge	6



LUBRICATION.

GENERAL.

It should be realised that efficient lubrication is an essential requirement of all mechanical equipment. Neglect of careful attention to lubrication requirements cannot but result, sooner or later, in failure of the parts.

Provision has been made for the lubrication of all surfaces where friction is a factor. The place for the lubricant is there, together with the means for its reaching the surfaces to be lubricated.

SUMMER AND WINTER LUBRICANTS.

Bentley Motors (1931) Ltd., do not recommend changing the viscosity of the oil for seasonal use.

Bentley Motors (1931) Ltd., recommend a first quality oil of viscosity SAE.20 for the engine, and viscosity SAE.30 for the gearbox, all the year round.

SAE NUMBERS.

In order to designate the viscosity or body of oil more definitely than was possible with the terms "light", "medium" or "heavy" oil, the series of viscosity numbers adopted by the Society of Automotive Engineers is now generally recognised.

The SAE Specification Numbers classify the oils according to their body or thickness only; they do not cover any other properties. The Oil Company supplying the oil is responsible for the quality of its product.

LUBRICANTS RECOMMENDED.

Any of the following oils are suitable:-

				<u>"A"</u> <u>Engine</u>	<u>"B"</u> <u>Gearbox.</u>
Price's Motorine	...	...	...	E	M
Wakefield's Castrol	...	...	...	Castrolite	XL
Vacuum Mobiloil	...	...	...	Arctic	A
Shell	...	...	...	Single	Double
Duckham's Adcooidised	...	...	...	NP.X	NP. XX
Essolube	...	...	...	20	30
Silvertown Speedolene	...	...	...	20	T
Sternol	...	...	...	WW.20	WW. 30

In the instructions which follow, reference is made to Oil "A" or "B" as above, i.e. viscosity 20 or 30.



Rear Axle.

Wakefield's Special Castrol Hi-Press S/C. If circumstances make this unobtainable, any one of the following may be used. Do NOT mix these oils; drain and refill.

Price's	...	...	...	...	Motorine Hypoid.
Wakefield's	...	...	...	...	Castrol Hypocy.
Vacuum	...	...	...	...	Mobilube G.X.
Shell	...	...	...	...	Spirax E.P.90.
Duckhams	...	...	...	...	Adcol Hypoid 90.
Essolube	...	...	...	...	Essoleum Expee, Compound 90.
Silvertown	...	...	...	...	Speedolene Hypoid 90.
Sternol	...	...	...	...	Hypoid 90.

Carburettor Air Valve Damper.

Viscosity 10 oil, any of the following are suitable:-

Price's	...	...	...	...	Motorine U.C.L.
Wakefield's	...	...	...	...	Wakefield Oilit.
Shell	...	...	...	...	Donax A.1.
Vacuum	...	...	...	...	Mobil Handy Oil.
Essolube	...	...	...	...	Esso Shock Absorber Oil Light.

Steering Box - Chassis Oil Pump - Starter Motor Gears.

Viscosity 30 oil, as under "B" above.

Hydraulic Shock Dampers.

Viscosity 20 oil, as under "A" above.

Propeller Shaft - Contact Breaker Cam.

Vacuum Mobilgrease No.2.

Distributor Grease Cup.

High Melting Point Grease.

Hydraulic Brake Fluid.

Lockheed Brake Fluid - Orange.



PERIODIC LUBRICATION AND MAINTENANCE.

D A I L Y .

ENGINE OIL.

Inspect the crankcase oil level by means of the dipstick - or electric gauge - and top up as necessary with oil "A" (see Sub-Section ED.1).

To take a reading the car should be on level ground, and the engine should be stopped long enough to allow all the excess oil to drain back into the sump. Remove the dipstick and wipe the oil from the gauge, then re-insert the gauge to its full depth and take the reading. It is not necessary for the oil level to be always at the "MAX" mark, but it should never be allowed to fall below the "MIN" mark (See Fig.1).



FIG.1. DIPSTICK

When using the electric gauge, the foregoing remarks on the car and engine equally apply. Depress the appropriate switch (A, Fig.2) on the instrument panel, and the approximate quantity of oil in the engine sump will be registered on the fuel gauge. A red line B on the gauge indicates "MINIMUM", and the oil should not be allowed to fall below this mark.

CHASSIS LUBRICATION.

The foot-operated pump should be used according to the mileage travelled.

Depress pedal (A, Fig.3) once when the car is being started for the first time each day, and then subsequently once every 100 miles. The pump should be used more frequently if the car is being used during bad weather.

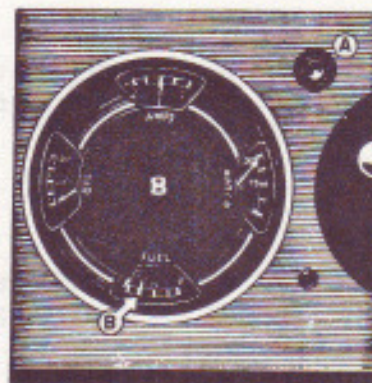


FIG.2. FUEL/OIL GAUGE.

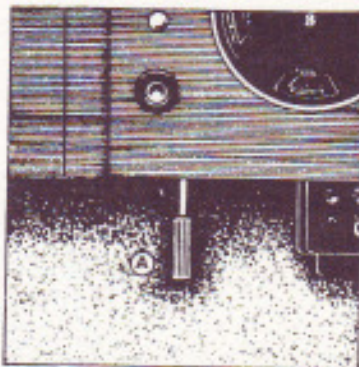


FIG. 3. FOOT PEDAL.

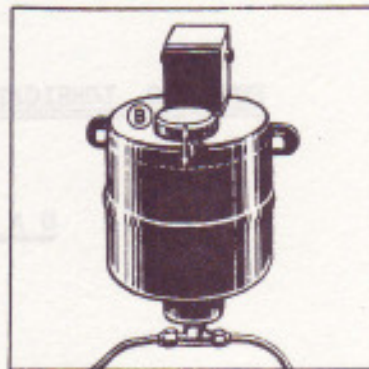


FIG 4. RESERVOIR AND PUMP.

Replenish the oil reservoir as necessary, by removing the cap (B, Fig.4), and pouring in the recommended oil (see Sub-Section ED.1). Leave one inch between the oil level and the top of the filler orifice.

A full description of the chassis lubrication system is given in Sub-Section ED.4.

W E E K L Y .

RADIATOR COOLANT.

Remove the radiator filler cap (A, Fig.5) - when the engine is not running - and inspect the level of the coolant, if necessary, top up with the correct anti-freeze mixture to maintain the level at about one inch (1") below the bottom of the filling orifice.

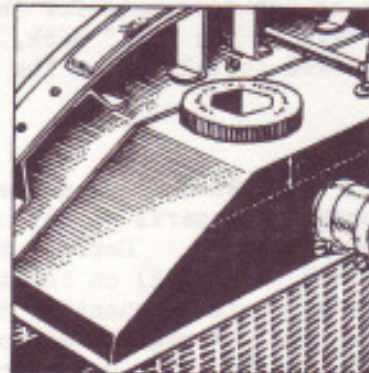


FIG.5. RADIATOR COOLANT LEVEL.

Do not overfill, at this level the coolant will stabilise itself, to overfill merely wastes coolant.

TYRES.

It is recommended that tyres in ordinary use, be checked for correct pressure once each week.

Cars operated at high speeds or in more than ordinarily severe service should be inspected at more frequent intervals.

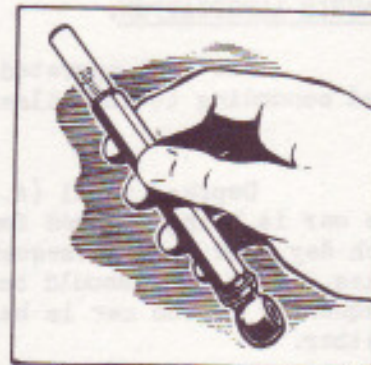


FIG 6. TYRE GAUGE.



The pressures should be:-

FRONT	-	25 lbs./sq.in.)	} Cold.
REAR	-	30 lbs./sq.in.)	

DISTRIBUTOR GREASE CUP

The grease cup (A. Fig.7) on the ignition distributor should be screwed down one turn at weekly intervals.

When empty, refill with the correct grease (See Sub-Section BD.1).

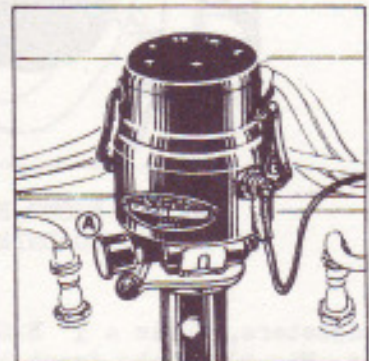


FIG. 7. DISTRIBUTOR GREASER.

MONTHLY.

BATTERY.

A regular monthly inspection should be made to see that the level of the acid solution has not fallen so as to expose the tops of the separators and/or plates.

In this case, the battery should be "topped up", by removing the vent plug in the centre of each cell lid and adding distilled water to each cell, until the level of the solution is approximately $\frac{1}{8}$ " above the tops of the separators.

It is recommended that this inspection is carried out at more frequent intervals if the car is covering big mileages and also normal use during hot weather.

BRAKES.

Check the brake adjustment.

A separate adjustment is provided on each brake carrier plate to compensate for wear of the brake shoe linings, and is the only adjustment provided on the whole system.

No adjustment should be attempted at any other point, for instance, such as altering the lengths of brake rods.

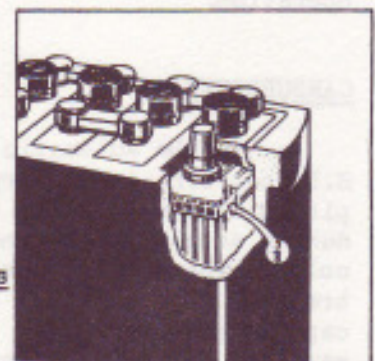


FIG. 8. ELECTROLYTE LEVEL.

The method of adjustment is the same for both front and rear brakes with the exception that a hand wheel (B, Fig.10) is provided on the rear brake

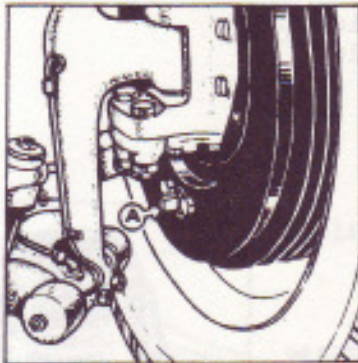


FIG. 9. FRONT BRAKE ADJUSTER.

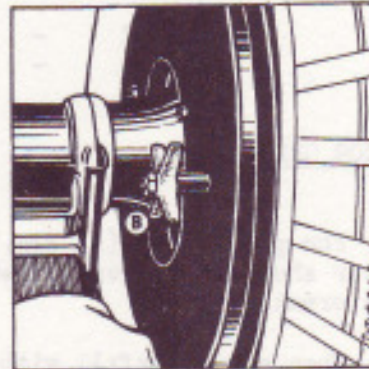


FIG. 10. REAR BRAKE ADJUSTER.

adjusters, while a $\frac{1}{4}$ " B.S.F. open-ended spanner must be used on the squared end (A, Fig.9) of the front brake adjusters.

To adjust the brakes, rotate the adjusters in a clockwise direction until considerable resistance is felt. This resistance must be equal for all four brakes, and should the last "click" on any one adjuster require noticeably greater force to obtain, the adjuster should be turned back to the previous "click". This will give the correct brake adjustment.

It is not necessary to jack up the car to adjust the brakes, as the adjusters are so designed to give the correct shoe clearances automatically.

If, after long service, the brake linings require renewal, this will be apparent by the adjusters coming to the end of their travel, and will have a solid feel quite distinct from the resistance felt when the brake shoes are correctly adjusted.

Adjustment of the rear brakes takes up both the pedal and hand brake clearance in the same operation.

CARBURETTER.

The automatic air valve is of the conventional S.U. pattern, and incorporates a hydraulic suction piston damper to delay the rise of the air valve piston during acceleration, and when starting the engine from cold. The damper consists of a small cylindrical brass plunger attached by a thin steel rod to the oil cap nut (See Fig.11). Inside the plunger is a one-way ball valve which seats in an upward direction. The plunger is a free fit in the hollow guide rod of the automatic air valve piston, the chamber being filled with a thin oil.

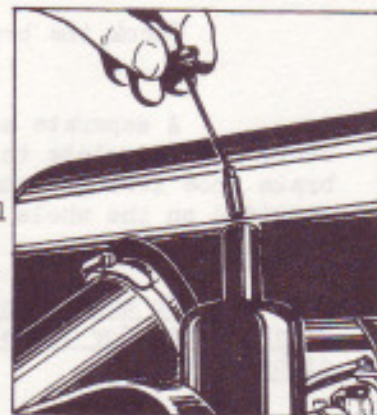


FIG. 11. CARBURETTER AIR VALVE DAMPER.



It is recommended that this oil reservoir should be regularly inspected at monthly intervals by unscrewing the oil cap nut and withdrawing the plunger, great care being taken to avoid damage to the plunger rod by bending, the oil should be topped up, if required, with the recommended oil, (See Sub-Section ED.1) so as to maintain the level of the oil to the top of the guide rod only.

INSPECTING OIL LEVEL



The oil level of the reservoir should be inspected at intervals of 11 months. It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

The oil level in the reservoir should be checked at intervals of 11 months. It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

FIG. 11. OIL LEVEL CHECKING



The oil level in the reservoir should be checked at intervals of 11 months. It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

Remove the filter plug (Fig. 12). It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

FIG. 12. OIL LEVEL CHECKING

The oil level in the reservoir should be checked at intervals of 11 months. It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

The oil level in the reservoir should be checked at intervals of 11 months. It is necessary to check the oil level at the top of the guide rod only. The oil level should be maintained at the top of the guide rod only.

RECOMMENDED OIL

Remove the cover and lift off the cover. Apply oil to the cover. The oil level should be maintained at the top of the guide rod only.



PERIODIC LUBRICATION AND MAINTENANCE.

EVERY 5,000 MILES.

GEARBOX.

The oil level of the gearbox should be inspected by means of the dipstick. If necessary, replenish with the correct oil (See Sub-Section ED.1), to level of mark on the dipstick (A, Fig.12).

REAR AXLE.

The oil level in the rear axle should be inspected, preferably when the casing is warm, by removing the level plug (A, Fig.13). If necessary, top up with the correct oil to level of hole.

If the correct oil is unobtainable, do not add a different oil. Drain off, by removing plug B, and refill with an alternative oil as directed in Sub-Section ED.1.

STEERING BOX AND COLUMN.

Remove the filler plug (A, Fig.14), preferably while the box is warm, and inspect the oil level. If necessary, oil of the correct grade should be poured in until it is on the point of overflowing from the plug orifice.

For correct oil see Sub-Section ED.1.

With the steering wheel in its normal central position, a hole will be found in its boss, adjacent to the upper arm, into which the nozzle of the oil can should be inserted to reach an oil hole provided in the control carrier. This operation should be included at the same time.

IGNITION DISTRIBUTOR.

Remove the cover and lift off the rotor. Apply one or two drops of oil "A" to the rocker arm pivot pins (P, Fig.15), also a few drops to the felt

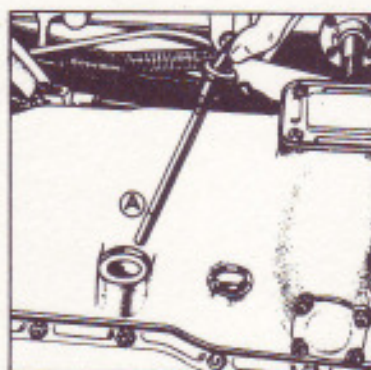


FIG.12. GEARBOX DIPSTICK.

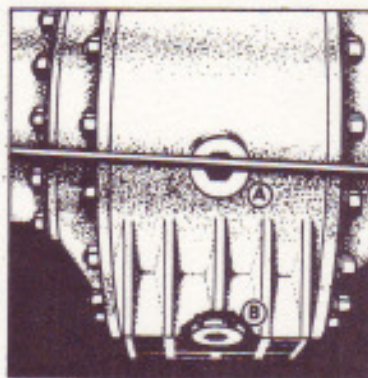


FIG.13. REAR AXLE PLUGS.

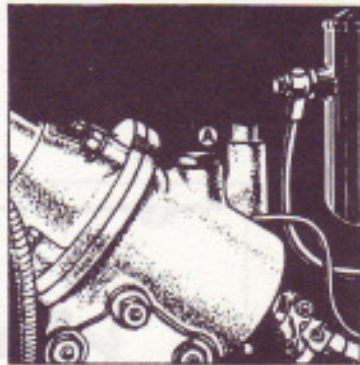


FIG. 14. STEERING BOX.

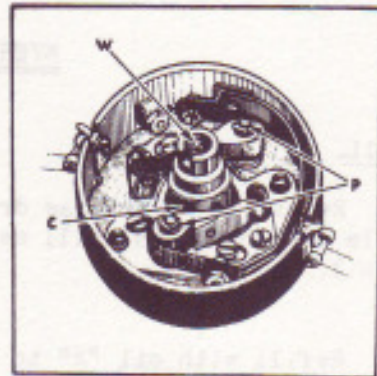


FIG. 15. INTERIOR OF DISTRIBUTOR.

wick (W), to lubricate the automatic timing control.

At the same time a smear of Mobiloil Grease No.2 should be applied to the cam (C).

CONTROL MECHANISM.

Apply a few drops of oil "A" to all control points and bearings, especially to the accelerator and clutch pedal mechanism.

Brake connections and joints and pins of brake rods, should be oiled liberally with oil "A", or sprayed with penetrating oil.

BONNET FASTENERS AND LOCKS.

Carefully lubricate with oil "A", bonnet fasteners and locks.

SPARKING PLUGS.

Remove and inspect the sparking plugs. If necessary, the plugs should be serviced on a plug cleaning and testing machine.

Set gaps to .025" (.635 m/m).

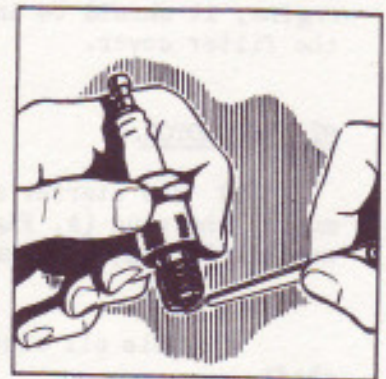


FIG. 16. CHECKING PLUG GAP.



EVERY 10,000 MILES.

ENGINE OIL.

Remove the crankcase drain plug, (A, Fig. 17), while the engine is still warm, and drain off all the oil.

Refill with oil "A" to the correct level through the oil filler located on the inlet rocker cover.

It should be appreciated that it takes a little time for the oil to drain through to the sump, especially if the oil is cold.

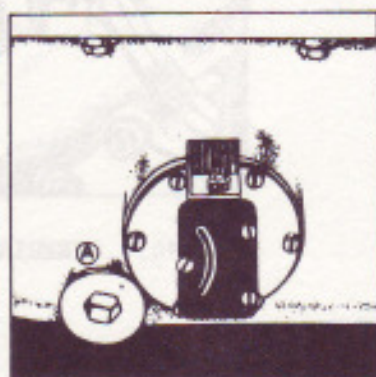


FIG. 17. CRANKCASE DRAIN.

BY-PASS OIL FILTER.

The element of the special filter provided on the right hand side of the engine should be removed and discarded.

To do this, unscrew the yoke retaining screw (A, Fig. 18), remove the yoke (B), and cover (C) and lift out the filter. It is not practicable to clean the filter element, and no attempt should be made to do so.

After fitting a new element, care must be taken to ensure that the cork washer under the cover (C) is in position, and that the yoke screw (A) is well tightened. On next running the engine, it should be inspected for oil leaks around the filter cover.



FIG. 18. BY-PASS OIL FILTER.

STARTER MOTOR.

(1) The starter motor reduction gear is arranged in a casing behind the motor, the plug (A, Fig. 19) in the side of the gear casing, should be removed and oil "B" injected until it reaches the mouth of the plug orifice.

This oil also lubricates the driving end bearing of the armature shaft.

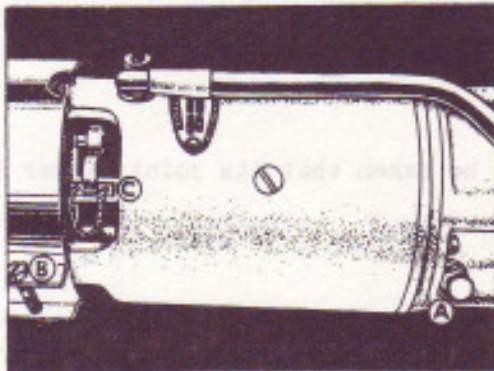


FIG. 19. STARTER MOTOR.

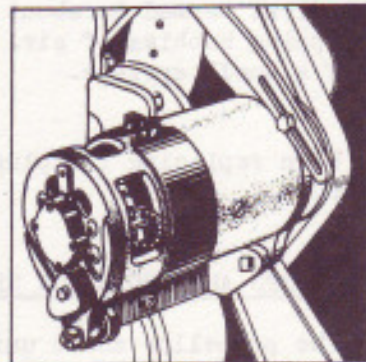


FIG. 20. DYNAMO.

(2) Inspect the brushes for wear; to do this, slack off the cover clamping screw (B, Fig.19) and slide the cover to expose brushes. Clean out carbon dust, and should the brushes (C) need renewing, make sure they bed correctly on the commutator.

DYNAMO.

Inspect the brushes for wear, to do this, slack off the cover clamping screw and slide cover to expose the brushes. (See Fig.20.)

If renewal is necessary, remove the dynamo from the engine, clean out carbon dust and fit new brushes, making sure that they are bedding correctly.

Re-fit the dynamo.

HYDRAULIC SHOCK DAMPERS.

Inspect the oil level and add more oil if necessary.

To do this, remove the filler plug in the casing (A, Fig.21). It is of vital importance that only perfectly clean oil of the correct grade should be used, and the following precautions must be observed.

Before attempting to remove the plug, both the plug and the shock damper casing adjacent to it, must be cleaned very carefully with a brush dipped in paraffin, in order to avoid the possibility of dirt entering the hole when the plug is removed.

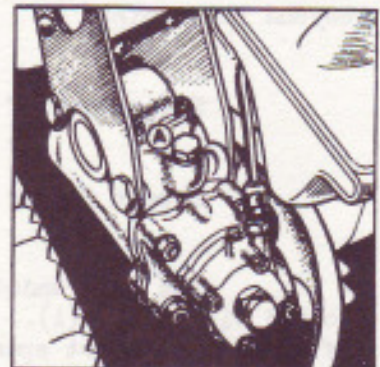


FIG. 21. REAR SHOCK DAMPER.

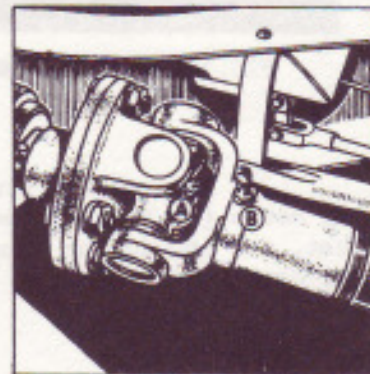


Only a recommended oil must be used, and before inserting this, it must be strained through a fine gauze. Straining is greatly facilitated if the oil be first warmed to about 75°C. The oil should be injected slowly to avoid entrapping bubbles of air. It will be found most convenient to add oil by means of a small syringe.

When replacing the plug, care must be taken that its joint washer is in position.

UNIVERSAL JOINTS AND PROPELLOR SHAFT.

The propellor shaft universal joints are fitted with needle roller bearings, and each joint is provided with a grease-gun lubricator (A, Fig. 22), located at the centre of the cross-piece



The sliding joint is also fitted with a grease-gun lubricator (B, Fig. 22), this, and the three universal joint lubricators should be lubricated with the correct grease by means of the grease-gun.

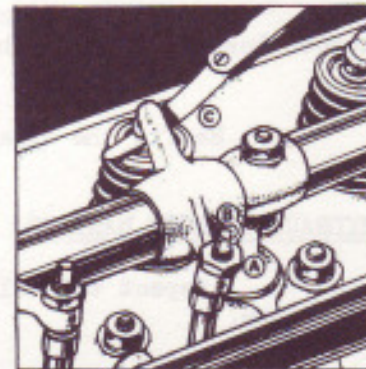
INLET VALVE ROCKER CLEARANCES.

Check the inlet valve rocker clearances and reset if necessary, with the engine cold.

FIG. 22. SLIDING JOINT.

To do this, remove the three rocker cover retaining nuts and lift off the cover.

Rotate the camshaft until the tappet is on the base of the cam, i.e. not in the cam contour, this is best done by turning the crankshaft by hand until the valve has opened and closed, and then cranking round half a revolution beyond this point.



The method of adjusting is:-

FIG. 23. CHECKING INLET VALVE ROCKER CLEARANCE.

Insert feeler as shown at C (Fig. 23).

The ball ended contact screw (B), is screwed into the rocker and locked with a nut (A). On releasing the nut the screw can be turned by means of the inlet tappet spanner.



The correct clearance for the inlet rocker is .006" (.152 m/m) with the engine cold.

As each contact screw is adjusted, its locknut should be securely tightened up.

AIR CLEANER.

The air which is taken into the carburetter, to mix with the fuel, is thoroughly cleaned in passing through the combined air cleaner and silencer.

Cleaning of the air is accomplished by a pad of steel-wool through which the air passes, depositing all particles of dust, dirt and grit.

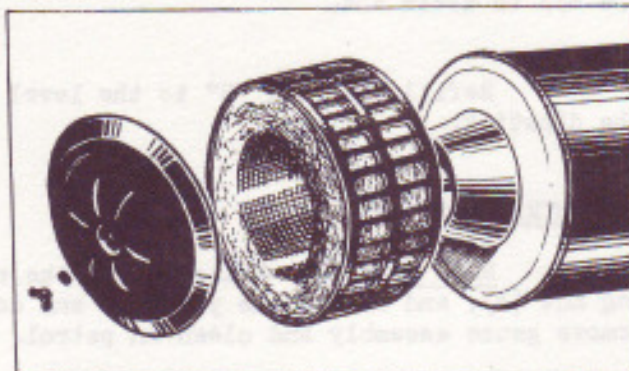


FIG. 24. AIR CLEANER.

Under ordinary conditions of driving, this element should be removed and cleaned every 10,000 miles, but if the car is being operated under particularly dusty conditions, the cleaning should be carried out at 5,000 mile intervals or less, depending upon the dust concentration.

To clean the element, remove the end cover by unscrewing the centre wing nut. Remove the element and carefully wash in petrol or paraffin, afterwards oil with oil "A".

Drain off any excess oil and refit.

DOORS.

Carefully oil with oil "A", all lock bolts and hinges.

To oil hinge, remove cover plate and oil slides, as illustrated in Fig. 25.

Wipe off any excess oil.

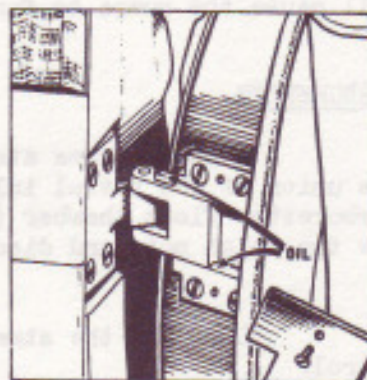


FIG. 25. DOOR HINGE.



EVERY 20,000 MILES.

GEARBOX.

Remove the drain plug, using the special spanner, while the box is still warm, and allow all the oil to drain out.

Refill with oil "B" to the level mark on the dipstick.

FUEL STRAINERS.

REAR STRAINER - Slacken off the retaining nut (A), and remove the yoke (B) and cover (C); remove gauze assembly and clean in petrol.

Clean out the filter bowl and replace, taking care that the cork washer for the cover, is sound and properly in position, and that the nut (A) is tightly screwed up.

FUEL PUMPS.

Unscrew the plugs in the base of the fuel pumps, and remove the gauze strainers, as illustrated in Fig.28.

Carefully clean with petrol and replace, making sure that the joint washers are in position on the plugs, and that the latter are securely tightened, as any air leak here will cause the pumps to function incorrectly.

CARBURETTER.

A small gauze strainer is fitted at the union of the petrol inlet pipe to each carburetter float chamber (A, Fig.29). Unscrew the two union nuts and disconnect the pipes.

Lift out the strainers and clean in petrol.

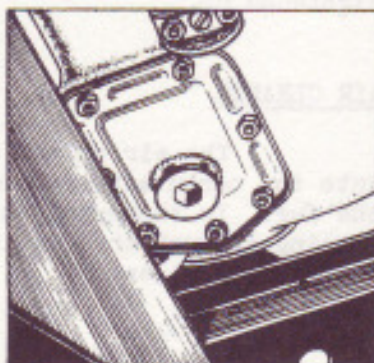


FIG. 26. GEARBOX DRAIN.

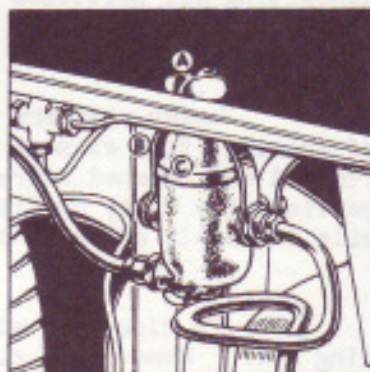


FIG. 27. REAR FUEL STRAINER.

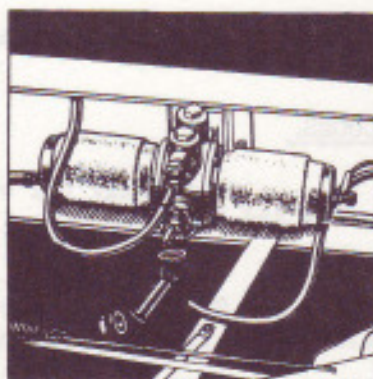


FIG. 28. FUEL PUMP STRAINER.



Take care when refitting, that the gauze is fitted with the open end outwards and that the aluminium joint washers on either side of the pipe union are in position.

FUEL TANK.

Flush out any accumulated water and sediment from the fuel tank by releasing - there is no need to wholly remove - the drain plug at the bottom of the main tank.

Make sure that the plug is securely re-tightened.

REAR AXLE.

Remove the drain and filler plugs (A and B, Fig.13), while the axle is warm and allow all the oil to drain out.

Replace drain plug (B) and refill with fresh oil, which has previously been warmed, to the level of the filler hole. Replace filler plug (A).

None but the recommended oil should be used (see Sub-Section ED.1).

CHASSIS LUBRICATION SYSTEM.

Remove and discard the felt strainer pad, in the base of the chassis oil pump, and replace with new pad.

A description of the chassis oil pump and lubrication system is given in sub-section ED.4

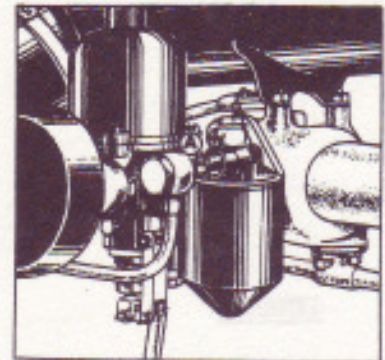


FIG. 29. CARBURETTER STRAINER.



T H E
CENTRALISED CHASSIS LUBRICATION
SYSTEM.

GENERAL.

A Luvax Bi-jur foot-operated pump and combined oil reservoir, is located on the front of the dashboard, and supplies oil under pressure for chassis lubrication.

A diagram of the complete system is given in Fig. 32, the piping being coloured in red. Red discs indicate the positions of the drip plugs, and the rating of each is given in parenthesis against the description of the part lubricated.

THE PUMP UNIT.

The construction of the pump unit is shown in Fig. 33.

The pedal is mounted on a fulcrum pin, and when depressed raises the piston in the cylinder and at the same time compresses the return spring.

As the piston rises, oil is drawn through a ball valve, in the centre of the piston, to the underside.

The pressure being removed from the pedal, the return spring forces the piston downwards. The pressure on the oil below the piston closes the ball valve, thus preventing a return flow through the piston, the oil consequently being forced downwards through the filter and out of the pump outlet.

The spring is so rated that the pressure is practically constant throughout the stroke, and the time period during which the piston descends depends on the viscosity of the oil. The period of discharge therefore will be a little longer at low temperatures, the average time taken being 5 minutes.

When the piston reaches the end of its stroke, it effectively closes the hole in the filter-retaining plate so that the oil cannot leak away while the pump is not being operated.

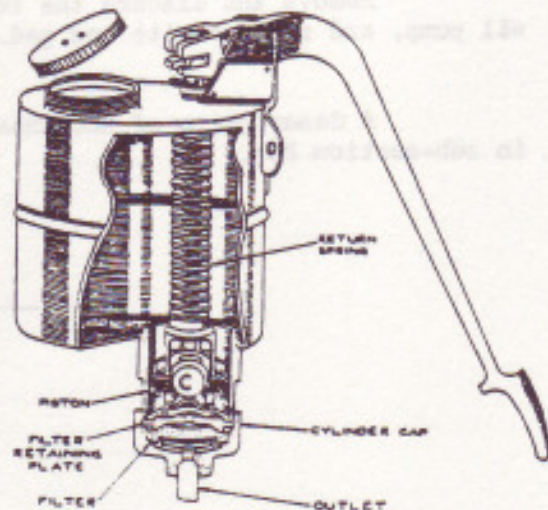


FIG. 33. THE PUMP UNIT.

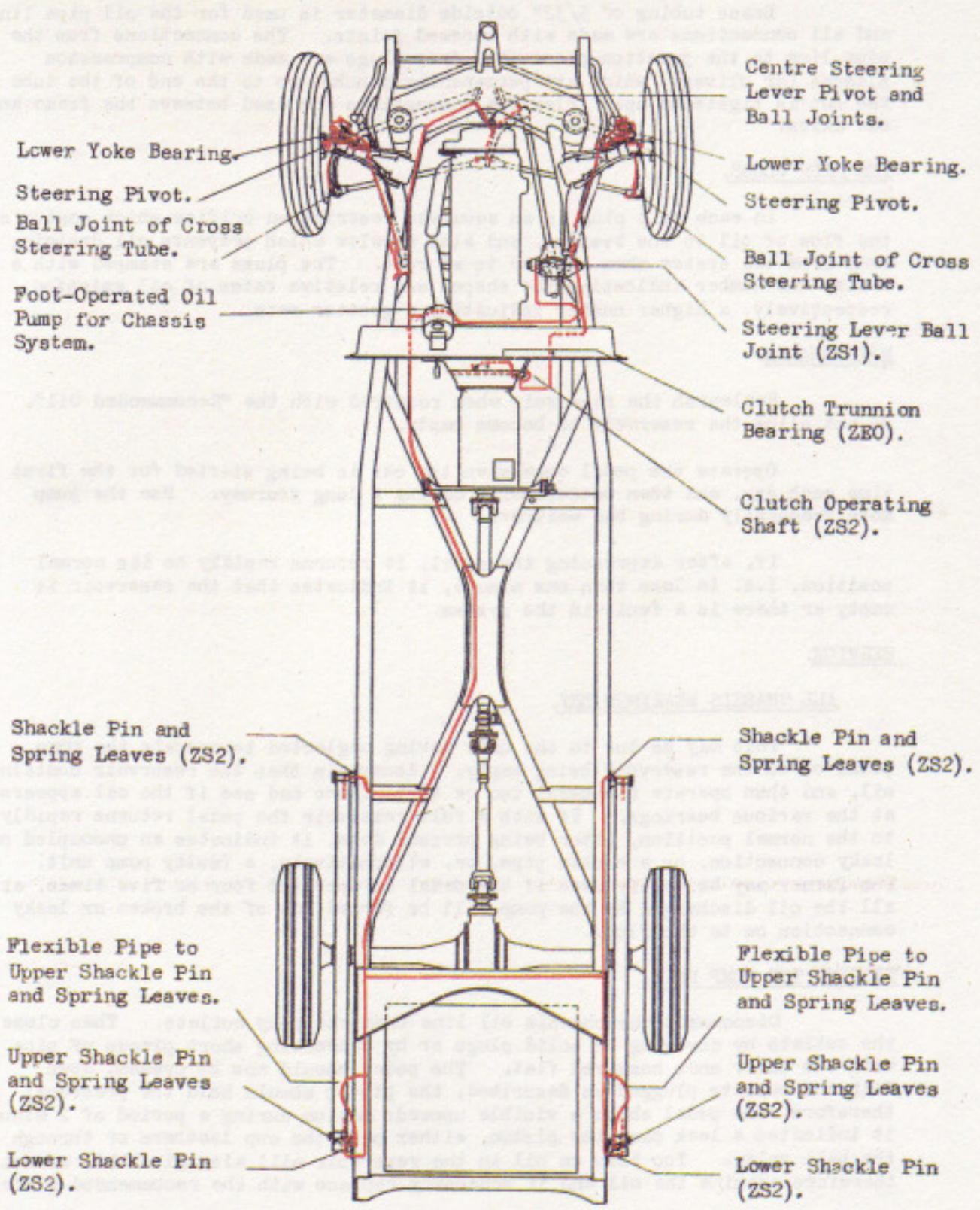


FIG. 32. DIAGRAM OF CHASSIS LUBRICATION SYSTEM.



THE OIL PIPE LINE.

Brass tubing of 5/32" outside diameter is used for the oil pipe line, and all connections are made with screwed joints. The connections from the pipe line to the junction-pieces and drip plugs are made with compression sleeves (or olives), which are permanently pinched on to the end of the tube as the nut is tightened up. Flexible connections are used between the frame and the axles.

THE DRIP PLUGS.

In each drip plug is an accurate restriction orifice which controls the flow of oil to the bearing, and also a valve which prevents oil draining away from the system when the car is at rest. The plugs are stamped with a letter and number indicating the shapes and relative rates of oil emission respectively, a higher number indicating a greater rate.

MAINTENANCE.

Replenish the reservoir when required with the "Recommended Oil". Do not allow the reservoir to become empty.

Operate the pedal once when the car is being started for the first time each day, and then occasionally during a long journey. Use the pump more frequently during bad weather.

If, after depressing the pedal, it returns rapidly to its normal position, i.e. in less than one minute, it indicates that the reservoir is empty or there is a fault in the system.

SERVICE.

ALL CHASSIS BEARINGS DRY.

This may be due to the user having neglected to operate the pump pedal or to the reservoir being empty. Ascertain that the reservoir contains oil, and then operate the pedal two or three times and see if the oil appears at the various bearings. If with a full reservoir the pedal returns rapidly to the normal position, after being pressed down, it indicates an uncoupled or leaky connection, or a broken pipe, or, alternatively, a faulty pump unit. The former may be easily seen if the pedal is operated four or five times, as all the oil discharged by the pump will be forced out of the broken or leaky connection on to the floor.

TESTING THE PUMP UNIT.

Disconnect the chassis oil line from the pump outlets. Then close the outlets by screwing in solid plugs or by connecting short pieces of pipe with the outer ends hammered flat. The pedal should now be pressed down. With the outlets plugged as described, the piston should hold the pressure; if, therefore, the pedal shows a visible upwards motion during a period of 2 minutes, it indicates a leak past the piston, either past the cup leathers or through the ball valve. Too thin an oil in the reservoir will also give this effect, therefore examine the oil and if necessary replace with the recommended grade.



If the oil is found to be correct, then the fault lies in the pump and a new one should be fitted.

If, with the pump unit correctly coupled up to the pipe lines, the pump lever fails to return to its normal position after being pressed down, it is probable that the filter has become clogged, caused by the use of dirty or improper oil. In such case proceed as follows: Disconnect the chassis oil line at the pump outlets. Unscrew the cylinder cap on the underside of the reservoir, but take care to have a tin handy to catch the oil which will run out. Note the position in the cylinder cap of the filter retaining plate, with its gaskets, before dismantling. Then lift these out, exposing the felt filter disc, discard this disc and replace with a new one. There will be found beneath the felt disc in the cap a wire gauze disc, this should be left in position with the ridges against the cap. When reassembling, replace the filter retaining plate and gaskets, with the hollow side of the plate facing the felt disc. Be sure that both the gaskets are in the correct position.

After reconnecting the system, it should be primed until oil is exuding from each bearing.

THE DRIP PLUGS.

The drip plugs never require cleaning, and being non-adjustable and non-demountable, no attempt must be made to take them apart. If one is suspected of being defective, it must be replaced with a new one of the same rating.
