

CITROËN

Instruction Book

for

Light Fifteen Model
Front Wheel Drive



CITROËN CARS LTD.,
TRADING ESTATE
SLOUGH-BUCKS
ENGLAND

TELEGRAMS:-
CITROWORKS, SLOUGH

TELEPHONE:-
SLOUGH 23611

CITROEN INSTRUCTION BOOK

MAY 1952 EDITION

ADDITIVE & CORRECTIVE SUPPLEMENT

With the additional details given below, this instruction book applies to both Light Fifteen and Big Fifteen models.

| | LIGHT FIFTEEN | | BIG FIFTEEN | |
|----------------------------|---------------|-----------|-------------|-----------|
| | French | English | French | English |
| Tyre pressures (165 x 400) | | | | |
| Front | 1.2 Kg. | 17 lbs. | 1.3 Kg | 18 lbs. |
| Rear | 1.4 Kg | 20 lbs. | 1.5 Kg | 22 lbs. |
| Petrol tank capacity | 50 litres | 11 galls. | 50 litres | 11 galls. |
| Water cooling system | 7½ litres | 13½ pints | 8 litres | 14 pints |

Running In: After the first 500 miles the engine sump should be drained, when warm, and refilled with the correct grade of oil.

Oil Bath Air Cleaners: The efficiency of all air cleaners depends on the way they are looked after, according to the conditions under which they operate. As a general rule, 2,500 miles can be taken as a safe guide to the proper cleaning period. In overseas territories where dust is prevalent and in other extremely dusty conditions, cleaning should be carried out every 1,000 miles.

To clean the filter, first remove it from the engine by disconnecting the rubber connection and unscrewing the air cleaner from the stud on the bracket.

Unscrew the centre screw and remove the top cover (or silencer unit if fitted) and lift out the filter element; wash the filter by swishing it up and down in a bowl of paraffin and allow it to drain thoroughly. Empty oil from the cleaner oil sump and scrape out any accumulated deposit. Fill the oil sump to the indicated level with engine oil (SAE 20). It is not necessary to re-oil the filter, as this becomes re-oiled when the engine is running. Refit the top cover (or silencer unit if fitted) and tighten the centre screw. Screw air cleaner assembly on the stud on the bracket and refit the rubber connection.

CITROËN
INSTRUCTION BOOK
for
LIGHT FIFTEEN
FRONT WHEEL DRIVE MODEL

This book is up-to-date at the time of publication. Modifications may be made from time to time and individual cars may therefore differ in some respects from the information given herein.

Our Service department will gladly give any information relating to such modifications on request.

One copy of this book is issued free of charge for each car, further copies are chargeable.

CITROËN CARS LTD.
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May 1952

GENERAL INFORMATION

| Capacities— | FRENCH | ENGLISH |
|--|----------------------|--------------------------------------|
| Engine sump | 4 litres | 7 pints |
| Gearbox and differential | 2 litres | 3½ pints |
| Hydraulic brake system (special Lockheed fluid) | 0.750 litres | 1½ pints |
| Water cooling system | 7.5 litres | 14 pints |
| Petrol tank | 45 litres | 10 gallons |
| Various Adjustments— | | |
| Tappet, Inlet Valve (warm) | 0.15m/m | .006 ins. <i>.008"</i> |
| Tappet, Exhaust Valve (warm) | 0.20m/m | .006 ins. <i>.010"</i> |
| Gap between spark plug electrodes | 0.6 to 0.7m/m | .025 ins. to .028 ins. |
| Gap between distributor contact points | 0.4m/m | .015 ins. |
| Alignment of front wheels (track) | 0 to 2m/m TOE OUT | 0 to 5/64 ins TOE OUT |
| Tyre Pressures (165 x 400) | | |
| Front wheels | 1,200 Kg | 18 lbs. |
| Rear wheels | 1,400 Kg | 20 lbs. |
| Spare wheel | 1,600 Kg | 22 lbs. |

Wheels. Wheels when originally fitted are balanced with the tyres fitted, tyre wear or repair to tyres or tubes may result in wheels becoming unbalanced. This, in the case of the front wheels, causes the steering wheel to flicker slightly. Should this occur, have the wheel balance checked and rectified if necessary, this is a simple operation.

Spare Wheel. It is recommended that the pressure in the spare tyre should be kept slightly higher than the running wheels to allow for loss when not in use. The pressure should be checked and adjusted, if necessary, when the spare wheel is used.

Tyre Pressure. Pay particular attention to the pressures given in the table on page 2, as under inflation may cause premature tyre wear and over inflation will detract from the riding comfort. See the note on wheel balancing.

Identity Plates. The plate carrying the chassis number is fitted on the left-hand side of body hull under the bonnet. The plate carrying the engine number is fitted to the right-hand side of the engine crankcase.

RUNNING IN

Upon the degree of care given to the running in of the car, the ultimate results will largely depend.

The following recommendations should therefore be strictly observed.

During the first 350 miles the speed should not exceed 45 miles per hour in top gear, and 30 miles per hour in second gear.

Between 350 and 1,250 miles the speed in top gear can be progressively increased.

After 1,250 miles have been covered the most important part of the running in period is completed.

At 2,000 miles, drain out the engine oil when warm and refill with fresh oil.

RUNNING INSTRUCTIONS

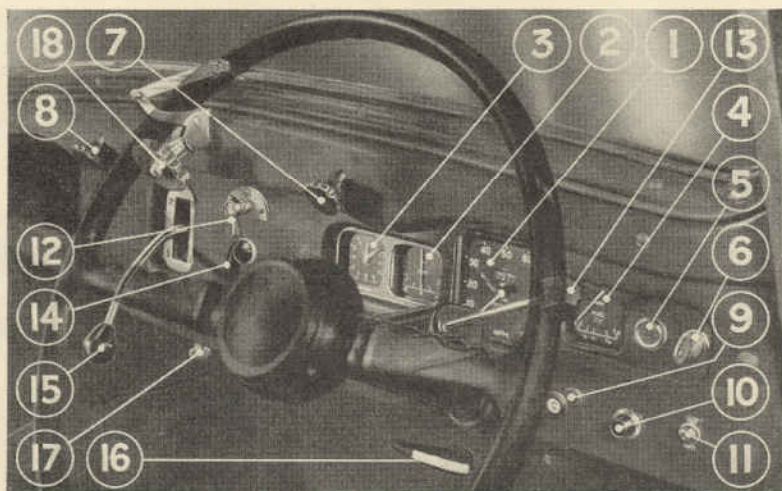


Fig. 1. Instruments and Controls.

1. Speedometer; 2. Ammeter; 3. Clock; 4. Petrol Gauge; 5. Oil Warning Light; 6. Ignition Switch; 7. Windscreen Wiper Switch and R.H. Blade Control; 8. Windscreen Wiper L.H. Blade Control; 9. Choke Control; 10. Starter Switch; 11. Panel Light Switch; 12. Manual Ignition Control; 13. Head and Side Lamp, Dipper and Horn Switch; 14. Direction Indicator Switch; 15. Gear Lever; 16. Handbrake Control; 17. Scuttle Ventilator Control; 18. Windscreen Control.

The convenient layout of the instruments and controls is shown in Fig. 1 above. It is advisable to be familiar with the uses of them as indicated in the following pages.

Before Starting the Car—verify the following:-

- (1) That the oil level in the sump is between the upper and lower limits of the reduced width at the bottom of the dipstick. This should be done when the car is on a level surface. The level should never be above the upper or below the lower limits. (See B, Fig. 4.)
- (2) That there is sufficient water in the Radiator. The water level should be $1\frac{1}{4}$ " below the top of the filler neck.

- (3) That there is sufficient petrol in the tank as shown by the Petrol Gauge (4).
- (4) That the Gear Lever (15) is in the neutral position.
- (5) That the Hand Brake (16) is on.

Starting when the Engine is cold—Declutch. Pull out the Choke Control (9) fully and press the Starter Switch (10) without depressing the Accelerator Pedal. Should the engine fail to start, wait for about 10 seconds and press the Starter Switch again. Do not keep the Starter Switch depressed for more than 5 seconds at a time. After the engine has run for a brief period, push the Choke Control to the halfway position and leave it in that position until the engine is properly warmed; then push the Choke Control right in.

Starting when the Engine is hot—Fully depress the Accelerator Pedal and press the Starter Switch (10). Release the Accelerator Pedal when the Engine starts and do not allow the engine to race when the car is stationary, it is unnecessary and harmful.

Putting the car in motion—Release the handbrake by pulling the Control (16) upwards, pressing the central catch and pushing the control downwards fully. Put the car into gear by depressing the clutch pedal to the fullest extent and moving the Gear Lever (15) down and to the Right for 1st speed, upwards and to the Left for 2nd speed, downwards and to the left for 3rd speed, and upwards and to the right for reverse. The gear lever is locked in position when the clutch is engaged and is released when the clutch pedal is fully depressed. Always move the Gear Lever (15) lightly.

When the car is in motion—Look at the instruments occasionally, particularly the Ammeter (2) and the Oil Warning Light (5), and especially during the running in period.

The Ammeter needle should normally register on the charge side. The rate of charge will vary according to the condition of the battery and the number of lights in use. During daytime running and with the battery in a fully charged condition the charge reading will be very low. Should the needle remain at Zero when the engine is running or show a discharge when the car is stationary with all switches off, the cause should be ascertained immediately.

The Oil Warning Light (5) will light up when the ignition is switched on, and go out immediately the engine is started, or as the engine revolutions increase above idling speed. Should the warning light come on when the car is in motion and the engine running above idling speed, stop at once and investigate the cause. First check the oil level, if correct examine the pressure switch situated at the rear of the engine. If in doubt, consult a Citroen agent.

The Windscreen Wiper is controlled by two knobs (7 & 8) above the instrument board. To start the wiper arm on the driver's side, push in the knob (7) and turn it anti-clockwise. To start the wiper arm on the passenger's side push in the knob (8) and turn it clockwise. To stop the wiper and park the blades, push in each knob and turn in the reverse direction to that above.

The Manual Ignition Control (12). For best results, set the control according to varying conditions of speed and load, so that the engine runs just before "pinking" point. Proper use will assist engine efficiency and fuel economy.

The Headlamps, Side and Tail Lamps and Horns are controlled by the switch arm (13) on the steering column. Turning the knob through 90° towards the windscreen switches on the side and tail lamps, turning it through a further 90° switches on the headlamps. Depressing the arm dips the headlamp. The Horns are operated by pushing the knob towards the steering column, the first contact sounds a single horn, pressing the knob as far as it will go sounds the two horns together.

The Direction Indicators are operated by the switch (14). Turning the switch to the right raises and lights the right-hand indicator. Turning the switch to the left raises and lights the left-hand indicator. A timing device incorporated in the switch holds the switch on for approximately 10 seconds.

The Handbrake should always be applied when stopping by pulling out the control (16). As a precaution, when stopped on a gradient, engage either first or reverse gears. To release the handbrake pull the handle towards you, press the central catch and push the handle down as far as it will go.

Ventilation, when desired, can be attained by opening either the windscreen by the control (18) or the scuttle ventilator by the thumbscrew (17) or both.

POSSIBLE INCIDENTS

Engine failure to start immediately on use of the starter, the carburettor float chamber may be empty.

This should be refilled by using the hand priming lever B (Fig. 2) on the petrol pump. It is normally sufficient to work this lever up and down 5 or 6 times.

If this is ineffective, turn the engine slightly and use the hand priming lever again.

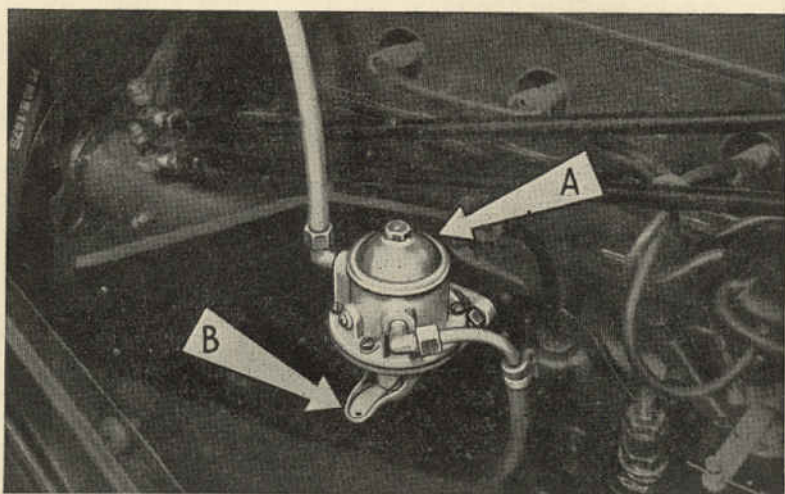


Fig. 2. Petrol Pump.

Irregular petrol supply to carburettor is probably caused by choking of the petrol filter. To dismantle for cleaning remove the screw A (Fig. 2) and carefully withdraw the metal filter.

After cleaning, reassemble, checking and renewing the joints if necessary. Make sure the screw is securely tightened. Before attempting to start the engine refill the carburettor float chamber by working the hand lever B on the pump (Fig. 2).

Should the engine fail to start or the petrol supply still be irregular, clean the filter and jet of the carburettor in accordance with the Manufacturer's leaflet supplied with this book. If this is ineffective, have the ignition system checked by a Citroen agent.

GENERAL MAINTENANCE

Battery. Frequently examine the level of the liquid in the battery to make sure the plates are covered. The level should be at least half an inch above the top of the plates.

To maintain the level, add distilled water only. Never add acid.

Never allow the terminals to become corroded or sulphated. Regularly clean them and keep coated with Vaseline after tightening, and ensure the felt grease-retaining washers are in position on the terminals.

The resistance to freezing is greatest when fully charged. A completely discharged 12V battery will freeze at 14° Fahr.

Cooling System. If, during severe cold weather, an anti-freeze solution is not added to the water system, both Radiator (see Fig. 3) and Cylinder block (see A, Fig. 4) should be drained nightly.

Many kinds of anti-freeze mixtures are available, both proprietary and otherwise, therefore the quantity to use must be decided by the characteristics of the solution chosen or the makers' recommendations. It should be remembered that anti-freeze solutions do not usually evaporate, therefore when it is required to increase the contents of the water system, water only should be added.

The Carburettor Air Inlet Filter must be kept clean. Filters of both the dry and oil wetted types should, under normal conditions, be cleaned every 5,000 miles. To remove the element of the dry type, unscrew the wing nut, remove the end cup and withdraw the element. To clean this, stand it on end and gently tap it until all the dust has fallen out. A new element should, under normal conditions, be fitted after every 15,000 miles. To remove the element of the later series of the wet type, unscrew the two knurled nuts (Fig. 5) on the top of the filter and remove the cover. To clean the element, remove from the casing, wash it thoroughly in petrol. Allow element to dry, dip it in thin oil and drain off before refitting. Owners are recommended to carry a spare element already cleaned and oiled as described for use whilst the dirty element is being cleaned.

It must be emphasised that the frequency at which any element requires cleaning or replacing will depend entirely on running conditions. Cars running in sandy or dusty areas will need the elements cleaning at more frequent intervals, the length of which must be determined by local conditions.

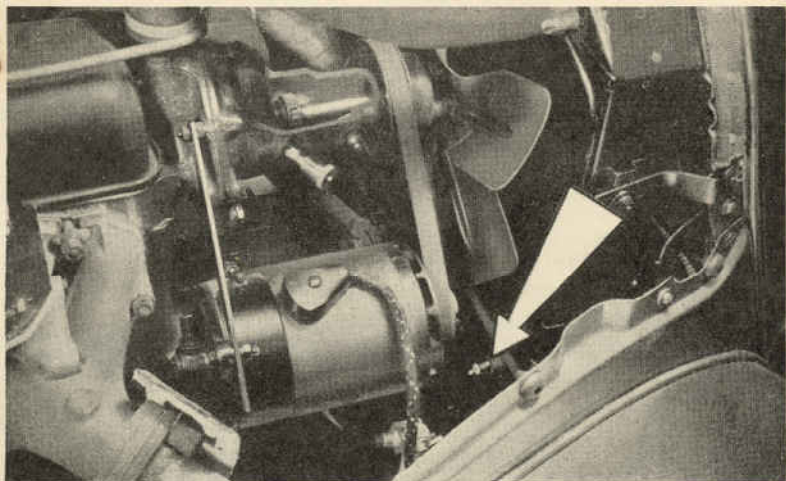


Fig. 3. The Radiator Drain Tap.

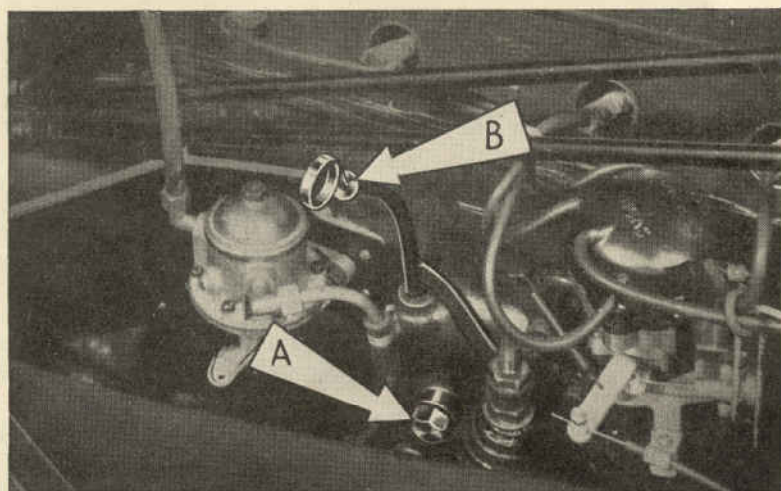


Fig. 4. The Cylinder Block Drain Tap and Dipstick.

Interior Heater. A simple and detachable heating system can be fitted at a small extra charge. This enables the interior of the car to be heated to an adequate temperature.

Use is made of air heated in passing through the upper part of the Radiator. This heated air is taken to the interior of the car through a tube which has its outlet on the left side of the front compartment.

A plug is fitted in the end of the tube, and by its removal and replacement, the quantity of warm air entering the car can be controlled.

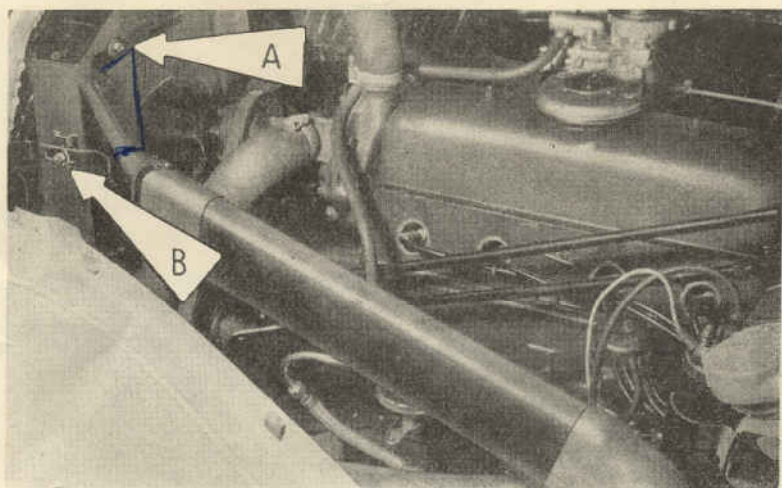


Fig. 8. Heating System.

Heater Dismantling Instructions. When the outside temperature reaches an average of 20°C . (68°F .) or more, the heater assembly must be removed as described below:—

Remove nut A (Fig. 8), loosen nut B (Fig. 8) and remove the rear rubber connection. The complete assembly, that is the tube, front connection and front intake, can now be taken off. Retighten nut B and refit nut A and close the entry into the body with the control plug.

To refit the heater reverse the procedure.

Brakes. Check the level of the liquid in the reservoir A (Fig. 5) monthly; it should be maintained at a level $\frac{3}{4}$ to 1 inch below the cap.

Only use the special Lockheed fluid.

Occasionally, check the brackets fixing the brake pipes to the hull. Looseness here may cause vibration which could lead to chafing or fracture of the pipes.

Should the brake system become inefficient, the brake shoes can be set closer to the drums by normal adjustment. Have the pipes throughout the hydraulic system checked for leakage, bled and refilled if necessary.

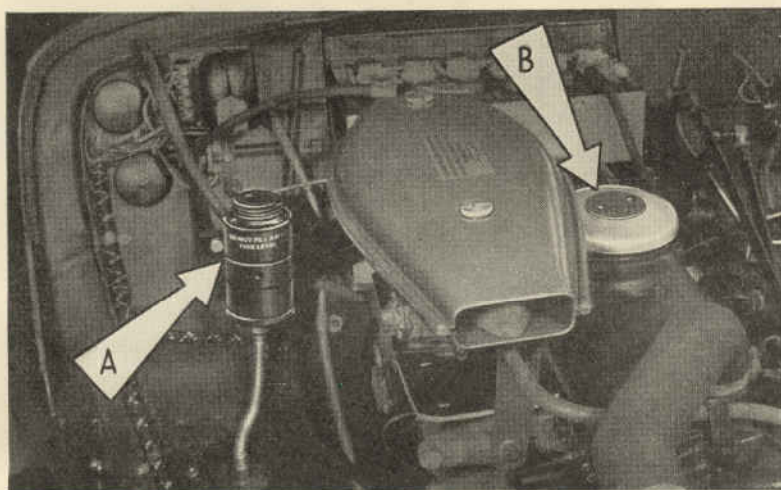


Fig. 5. The Oil Filler Cap and Lockheed Reservoir.

Wheels. When changing a wheel take care to place the head of the jack in the position provided at both front and rear, as shown in Figs. 6 and 7. Never lift the car by placing the jack in the centre of the rear axle. Remove the embellisher by levering or by unscrewing the centre, according to type. Unscrew the nuts by turning them anti-clockwise.

When fitting a wheel, screw the nuts on lightly to start with, then very tightly, working round on alternate nuts.

Check and if necessary retighten after 30 miles have been covered.

Check the wheel nuts periodically for tightness.

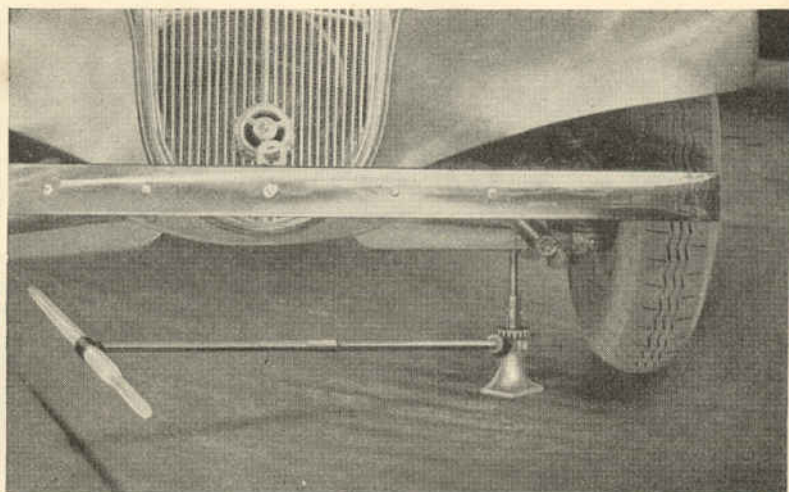


Fig. 6. Jacking Position for Front Wheel.

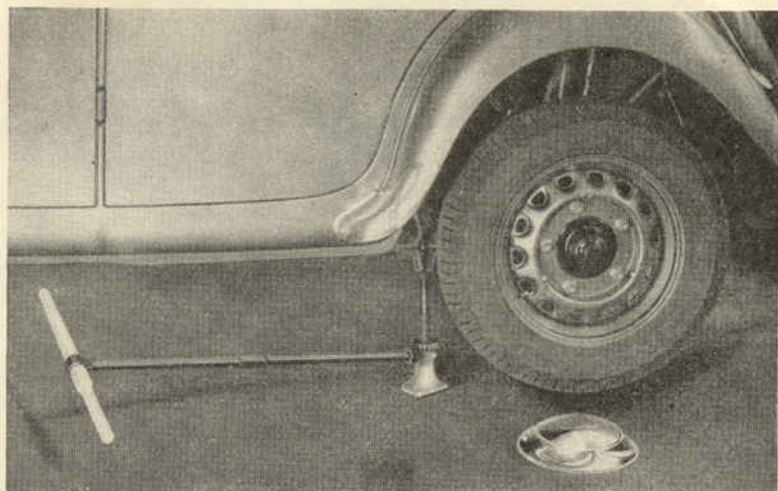


Fig. 7. Jacking Position for Rear Wheel.

Body. Washing the bodywork should be done with a hose and a chamois leather.

Care should be taken when brushing under the body, not to remove the sound deadening material.

Avoid all cleaning or polishing substances of an abrasive nature.

Tyres. To prolong the life of the tyres, change the fronts with the rear tyres diagonally every 3,000 miles. Make sure the pressure is correct.

LUBRICATION

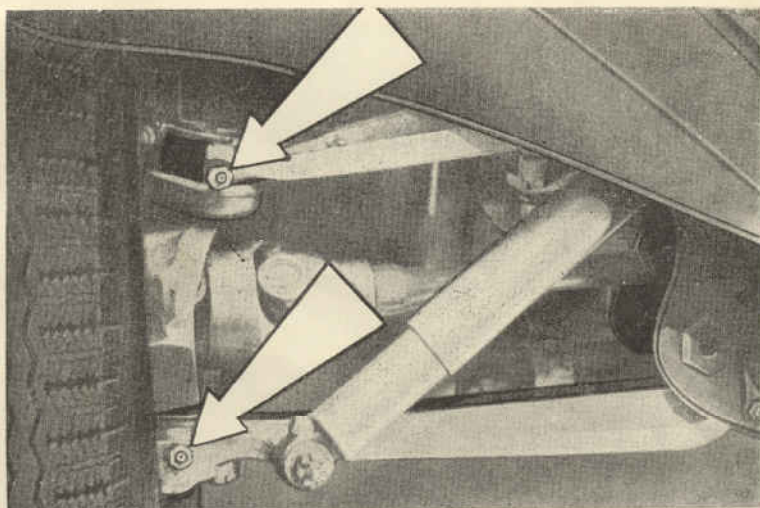
Complete and regular greasing and general lubrication is the basis of good maintenance, and the foundation of the efficient running of a car.

Use only good quality lubricants as recommended in the lubrication summary at end of book, and at the specified mileages in the following pages.

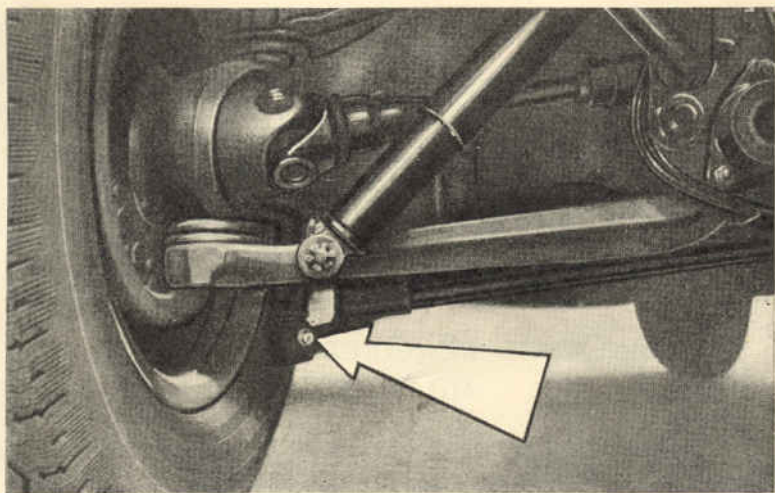
LUBRICATION REQUIRED AT SPECIFIED MILEAGES

The following comprise the various lubricating operations at 1,000, 2,000, 4,000, and 12,000 miles.

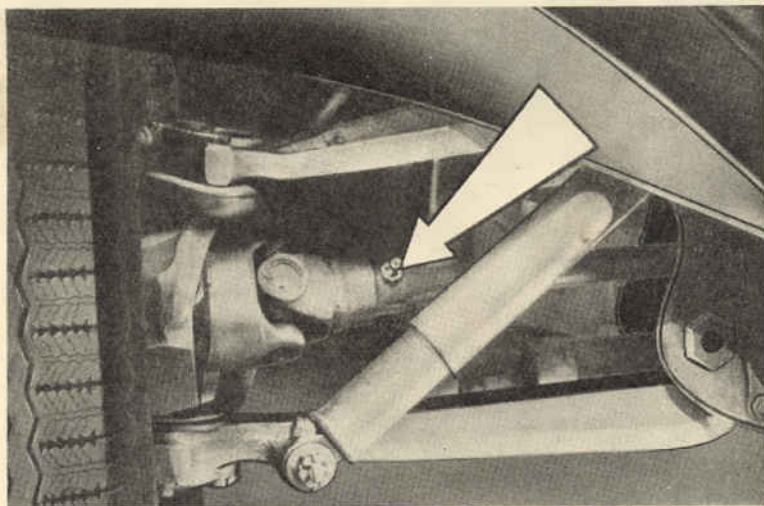
1. **EVERY 1,000 MILES.** Grease the following points, using one of the recommended greases.



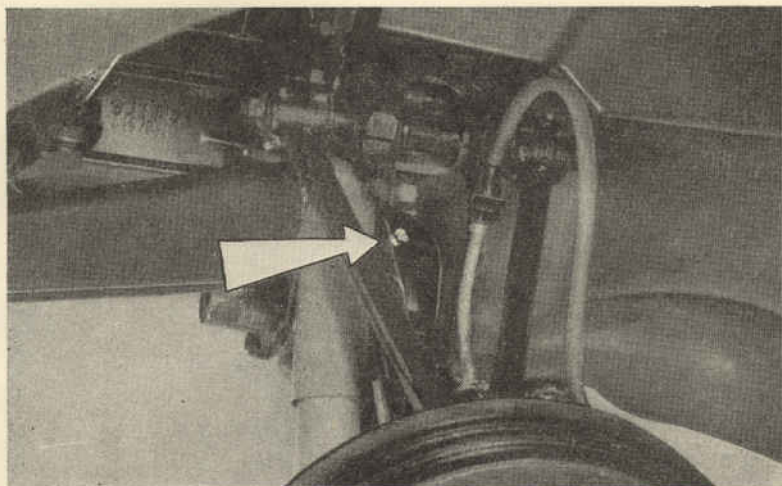
Ball Joints of Suspension Links. 4 greasers—2 on the left and 2 on the right. Pump in grease until it comes out of the joints



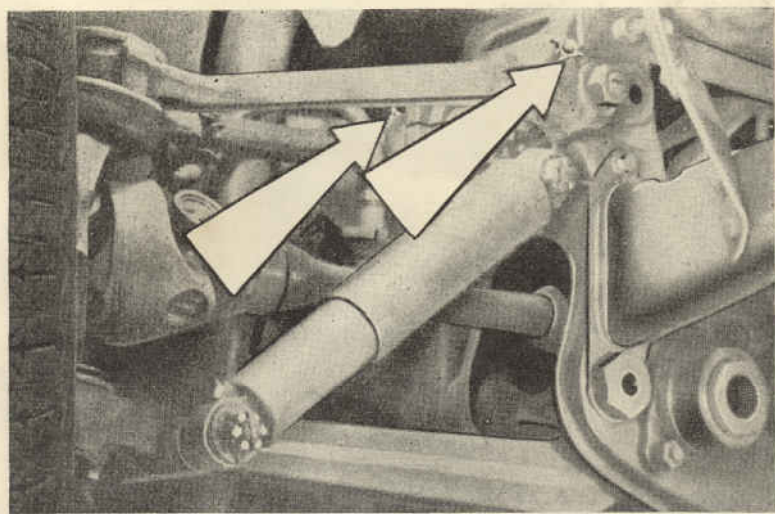
Ball Joints of Steering Side Rods. 2 greasers—one on the left, and one on the right. Pump in grease until it comes out of the joint.



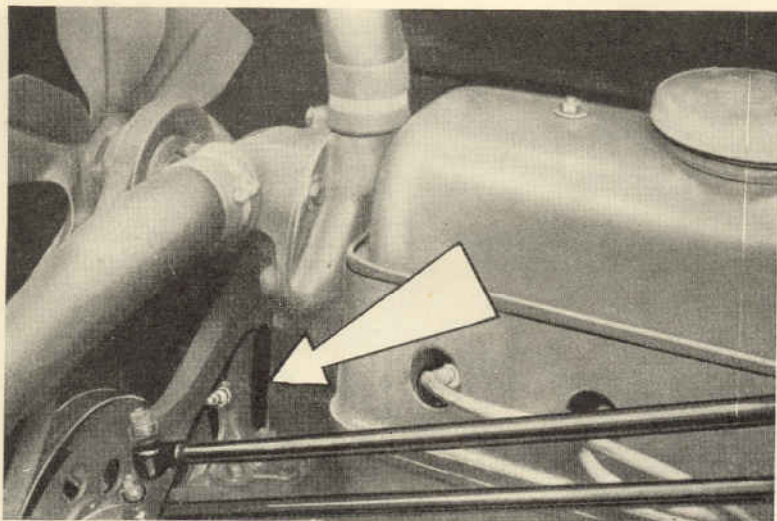
Outer Universal Joints. 2 greasers—one on the left, and one on the right. Pump in grease until resistance is high. Maximum 30 strokes of the grease gun.



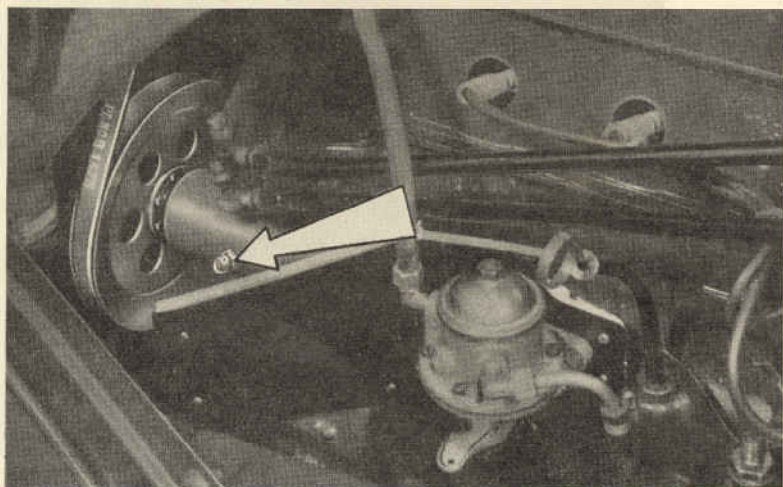
Driving Shaft Splines. 2 greasers—1 on the left side, 1 on the right. 60 strokes of the grease gun.



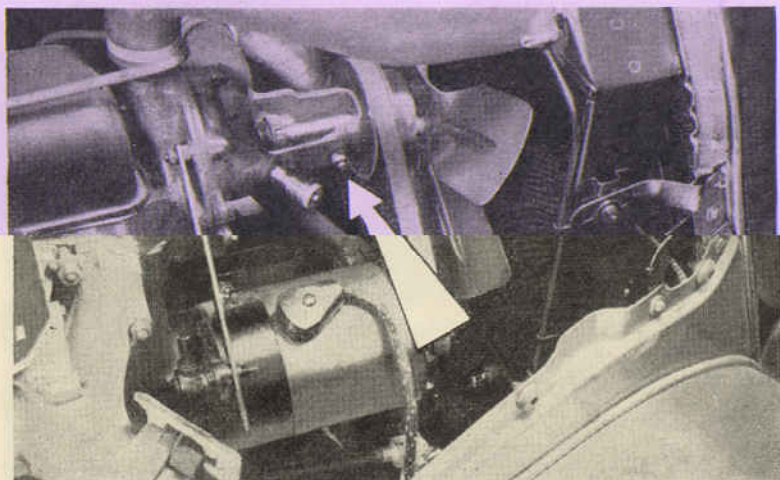
Top Link Shaft. 4 greasers—2 on the left, 2 on the right. Pump until grease exudes from the ends of the bushes.



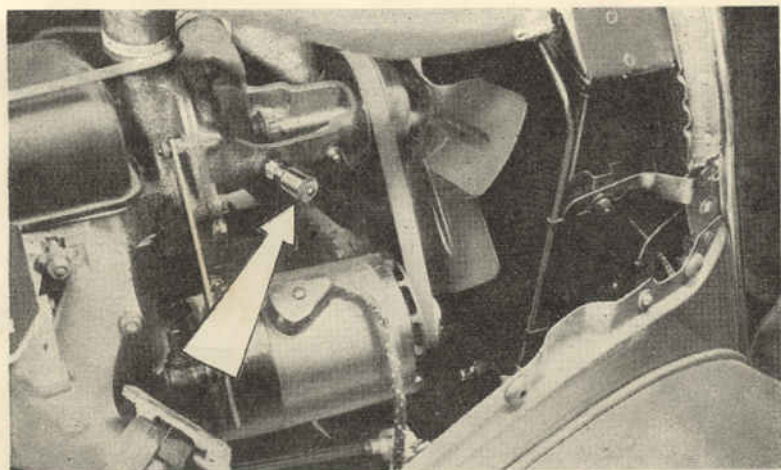
Change Speed Lever Shaft. Engage 1st gear and pump 10 strokes with the grease gun.



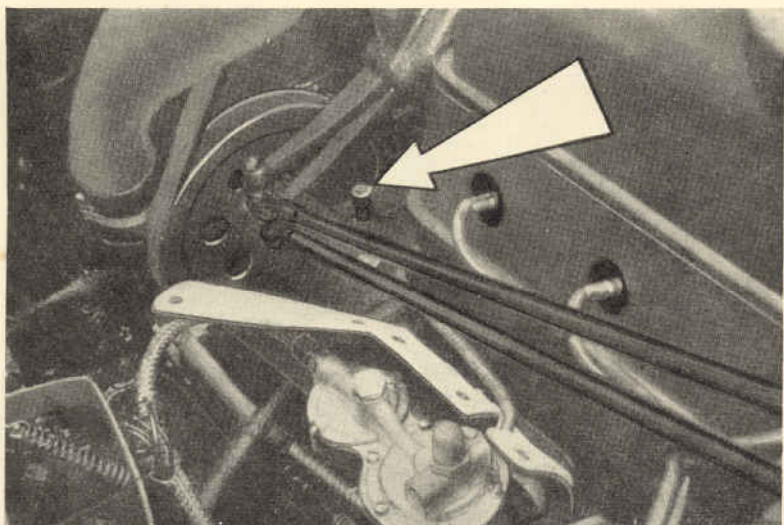
Dynamo and Fan Driving Shaft. 1 greaser. Engage 1st speed and pump 30 strokes with the grease gun.



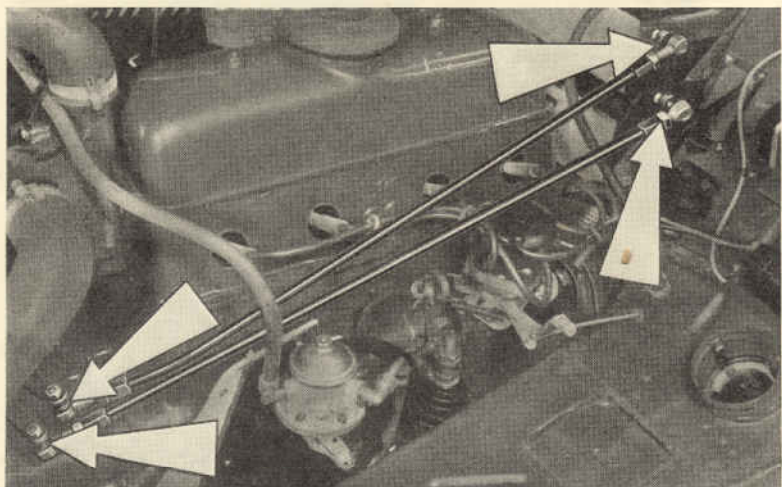
Fan Spindle Bearing. 1 greaser. Pump until grease exudes from the ends of the bush.



Water Pump Spindle Bearing. On cars fitted with a screw-down greaser it should be filled with grease and screwed up as required. Later models have a glandless packing and on these an oiler is provided on top of the bearing in place of the greaser. In this case a few drops of engine oil should be used.

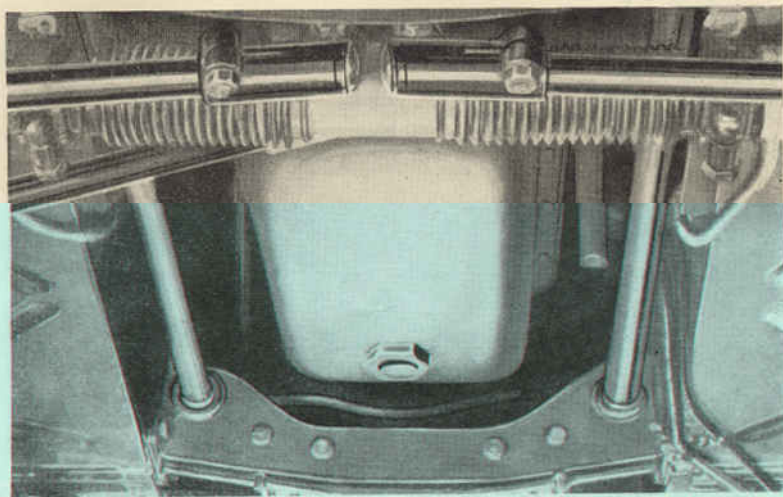


Clutch Thrust Race. 1 greaser, several drops of engine oil.



Ball Joints on Change Speed Levers. 4 points. Give several drops of thin oil.

2. **EVERY 2,000 MILES.** Drain the engine sump.



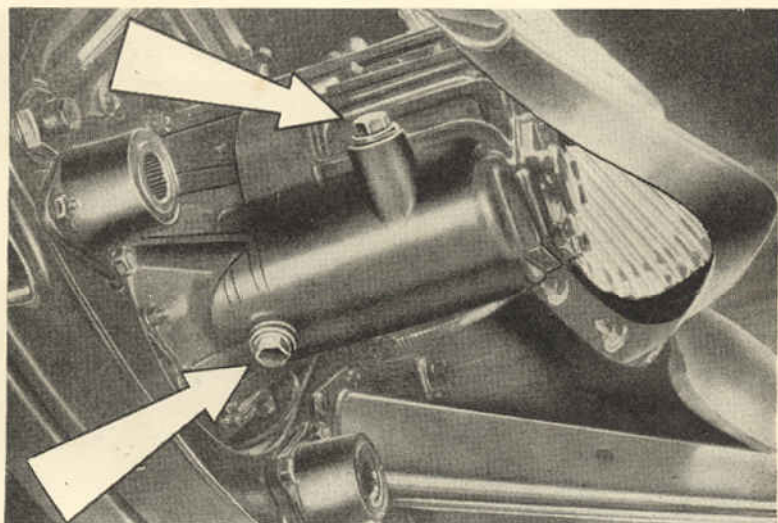
Sump Drain Plug. Draining should be done when the engine is warm, as the oil will flow more easily. Refill with oil of a recommended grade suitable to local conditions.

Between drainings check the oil level, using the dipstick (Fig. 4), at intervals, making sure the car stands on a level floor.

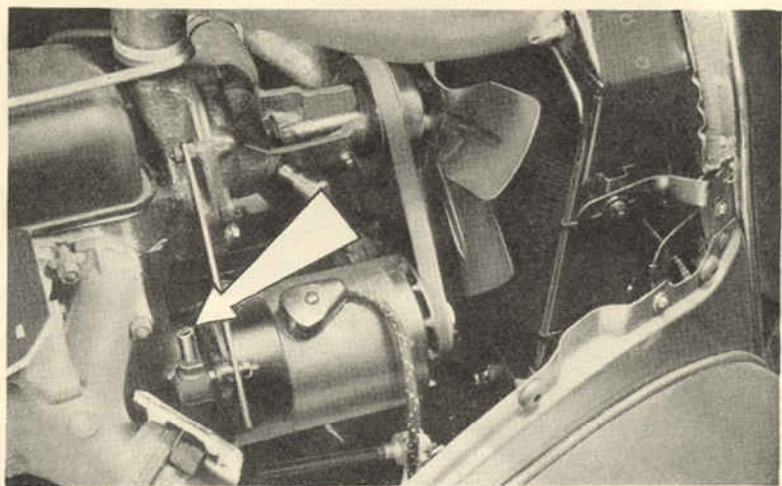
Add the required amount of oil when the level is dropping towards the minimum mark. The distance between the minimum and maximum marks corresponds to approximately $2\frac{1}{2}$ pints.

3. **EVERY 4,000 MILES.** CHECK THE OIL LEVEL IN GEARBOX.

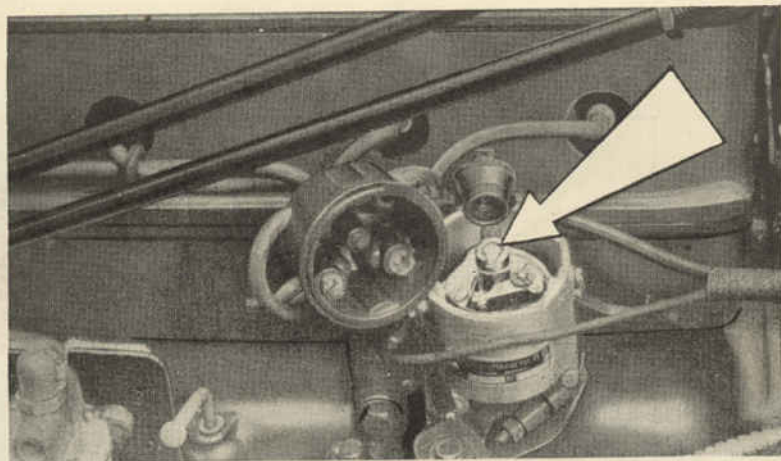
Unscrew the filler plug on the right-hand side of the gearbox. The oil should just overflow. Should the oil level be low, drain and refill, using the correct Hypoid oil. The addition of small quantities or topping up is not recommended. **DO NOT ADD OIL—ALWAYS DRAIN AND REFILL.**



Filler and Drain Plugs on Gearbox.



Dynamo Bearing. See Lucas Instruction Book.



Distributor Automatic Advance. See Lucas Instruction Book.

4. EVERY 12,000 MILES OR WHEN DISMANTLED.

- A. Have the shock absorbers examined.
- B. Have the gearbox drained when warm (Page 21). Refill with new oil.
- C. Lubricate:—
 1. The steering box and the speedometer drive, using thick grease as for the drive shafts.
 2. The choke cable with a few drops of thin oil.
 3. The front and rear hubs with the recommended grease.

ALTERNATIVE RECOMMENDED LUBRICANTS

| Make | Engine | Gearbox and Differential | Drive shaft Sliding ends. Ball joints on suspension links and track rods. | Rear hub Bearing. |
|-----------|-----------------|--------------------------------|---|----------------------|
| Esso | Essolube 20 | Esso XP90 | Esso grease | Esso grease |
| Price | Energol 20 | Energol EP SAE90 | Belmoline D | Belmoline C |
| Shell | X100 SAE 20 | Spirax 90 EP | Retinax A or CD | Retinax A or H |
| Vacuum | Mobiloil Arctic | Mobilube GX90 | Mobilgrease No. 2 | Mobilhub grease |
| Wakefield | Castrolite | Castrol Hypoy GD | Castrolease CL | Castrolease Heavy |

INSIST UPON GENUINE SPARE PARTS

When it becomes necessary to replace any parts of your car, always insist upon your repairer using genuine Citroen spare parts.

Genuine spare parts are better and cheaper than so-called alternatives. They are manufactured under the same conditions as those used for the construction of new cars, with the same quality of material and workmanship. Being made by mass production methods, low cost is assured.

Further, the use of substitute parts instead of genuine ones invalidates the guarantee issued for a new car.

Information concerning the supply of spare parts, spare part catalogues and repair manuals can be obtained from the

Spare Parts Dept.,
Citroen Cars Ltd.,
Trading Estate,
Slough, Bucks,
England.

