

CITROËN

Instruction Book

for

Six Cylinder Model
Front Wheel Drive



CITROËN CARS LTD.,
TRADING ESTATE
SLOUGH-BUCKS
ENGLAND

TELEGRAMS:-
CITROWORKS, SLOUGH

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CITROEN INSTRUCTION BOOK

for SIX CYLINDER 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.

**CITROEN CARS LTD.
TRADING ESTATE
SLOUGH, BUCKS.**

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GENERAL DATA

CAPACITIES OF:-	FRENCH	ENGLISH
Engine sump	7 LITRES	12½ PINTS
Gearbox and differential	2.75 LITRES	5 PINTS
Hydraulic brake system (special Lockheed fluid)	1 LITRE	1¾ PINTS
Water cooling system	12 LITRES	21 PINTS
Petrol tank	70 LITRES	15 GALLONS
TAPPET CLEARANCES (engine warm)		
Inlet Valve	.15m/m	.006 ins.
Exhaust Valve	.20m/m	.008 ins.
Gap between spark plug electrodes	.6m/m to .7m/m	.025 to .028 ins.
Gap between distributor contact points	.4m/m	.015 ins.
Ignition advance (hand control in position R)	6°	6°
Alignment of front wheels (track)	0 to 2m/m TOE OUT	0 to 5/64 ins. TOE OUT
*TYRE PRESSURES (185 x 400 "PILOTE")		
Front wheels	1,400 KG	20 LBS.
Rear wheels	1,600 KG	23 LBS.
Spare wheel	1,800 KG	25 LBS.

*See also page 28 for cars fitted with hydro-pneumatic suspension.

TYRE PRESSURE

Pay particular attention to the pressures given on Page 2.

Under-inflation may cause premature wear.

Over-inflation will detract from the riding comfort.

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 whilst not in use. The pressure should be checked and adjusted if necessary when the spare wheel is used.

Wheels and tyres, when originally fitted, are balanced. Tyre wear or repair to tyres or tubes may result in wheels becoming unbalanced, thereby causing the steering wheel to flicker slightly. Should this occur, have the wheel balance checked and rectified if necessary, which is a simple operation.

IDENTITY PLATES

The plate carrying the chassis number is fitted on the left hand side of the bulkhead, under the bonnet.

The plate carrying the engine number is fitted on the left hand side of the cylinder block, under the oil filler.

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 gradually increased to 70 miles per hour.

After 1,250 miles have been covered the most important part of the running in period is completed, and the speed can be progressively increased.

At 2000 miles, drain out the engine oil when warm and refill with fresh oil.

When 3000 miles have been reached the car should be capable of maximum performance.

GENERAL INSTRUCTIONS

BEFORE STARTING THE ENGINE

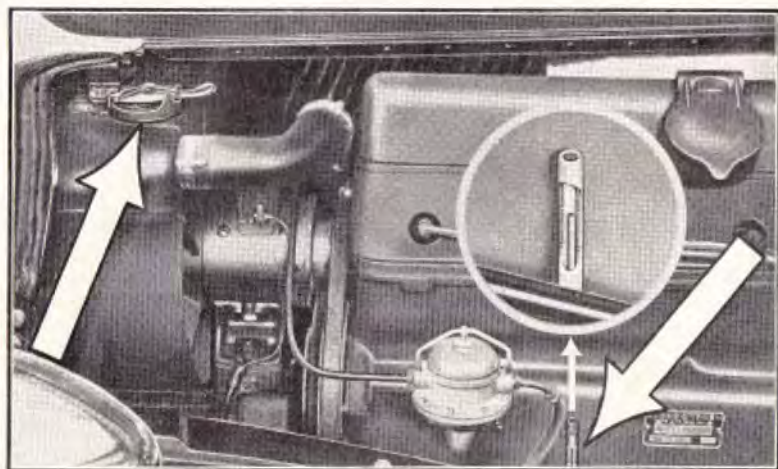


Fig. 1. Radiator Filler Cap and Oil Level Gauge.

VERIFY THE FOLLOWING:—

1. The oil level in the engine sump. This is indicated by a rod which rises and falls in a tube, the movement being directly controlled by a float in the sump. The top of the rod should be between the lower and intermediate marks (FIG. 1); the top mark indicates the level at which the oil should be kept during the running in period.
2. The water level in the Radiator (FIG. 1). This should be $1\frac{1}{4}$ inches below the top of the filler neck.
3. That sufficient petrol is in the tank. The gauge operates only when the ignition is switched on.
4. That the gear lever is in neutral.
5. That the hand brake is on.

STARTING THE ENGINE WHEN COLD

Declutch.

Set the ignition advance control to position R and switch on the ignition.

Pull out the choke control fully, and press starter control, without depressing the accelerator pedal.

Do not keep the starter control engaged for more than 5 or 6 seconds at any one time.

Should the engine fail to respond on the first use of the control, allow an interval of 8 to 10 seconds before using it again.

After the engine has run for a brief period, push the choke control in to the halfway position. Leave it in this position for a few minutes until the engine is properly warmed up, then push the choke control right back.

When high grade petrol is used, ignition advance control should be set at A.

STARTING WHEN THE ENGINE IS HOT

When using the starter, fully depress the accelerator pedal. Never race the engine when the car is stationary; it is unnecessary and harmful.

Before engaging the clutch, do not forget to release the handbrake by pushing the control lever downwards fully.

CHANGING GEAR

The gear lever is locked in position whilst the clutch is engaged, therefore always depress fully the clutch pedal when changing gear. Always move the gear lever lightly.

WITH THE CAR IN MOTION

INSTRUMENTS

The grouping of the instruments is such that all dials are readily visible, the layout being as follows:—

Speedometer in the centre flanked on the left by the ammeter and clock, and on the right by petrol gauge and lighting switch.

An occasional glance should be given to them, especially during the running in period, with particular regard to the ammeter and the oil indicator light.

The ammeter needle should 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 running, or register a discharge when the car is stationary with all switches off, the cause should be ascertained immediately.

The oil indicator light will come on when the ignition is switched on, and go out immediately the engine is started, or as the engine revolutions are increased above idling speed.

Should the warning light come on whilst the car is in motion, and the engine running above idling speed, stop at once and investigate the cause.

The oil level should first be checked and if correct, examine the oil pressure switch situated at the rear of the engine between the timing case and the starter.

If in doubt, consult a Citroen agent.

CONTROLS

The various controls are conveniently placed as follows:—

WINDSCREEN WIPERS

The windscreen wiper operating knobs are placed either side of the central windscreen opening control.

To start the arm on the driver's side, push the knob inward and turn anti-clockwise.

To start the arm on the passenger's side push the corresponding knob inward and turn clockwise.

To release and park the blades, push each knob inwards and turn in the reverse direction to above.

CHOKE CONTROL

This is on the facia board to the right of the steering column and is marked C.

STARTER CONTROL

This is on the facia board to the right of the choke control

INSTRUMENT LIGHT

This is controlled by a switch on the extreme right of the facia board.

OIL INDICATOR LIGHT

This is placed on the facia board to the right of the gear lever. On some models this is on the R.H. side of the Instrument Board.

IGNITION ADVANCE CONTROL

This is fitted between the oil indicator light and the gear lever on the quadrant marked R and A. On some models this is fitted in the centre of the Instrument Board.

TRAFFICATORS, DIPPING HEADLAMP AND HORN

On some models the controls for these are on the arm below the steering wheel. The larger curved lever operates the trafficators, the smaller lever the dipping headlamp, the horn button being on the end of the control arm.

Alternatively, the trafficator switch is mounted on the instrument board. Turning the switch arm to the right raises and lights the right hand indicator, and to the left the corresponding indicator. A timing device in the switch holds either arm out for approximately 10 seconds before cancelling. The steering column arm then operates as follows:-

Turn knob through 90° towards windscreen for side and tail lamps, and a further 90° for head lamps. Depress arm to dip headlamps. Push knob towards steering column to operate horns, the first contact sounds one horn, and pressing the knob as far as it will go sounds two horns together.

WHEN STOPPING

Always put the hand brake on by pulling out the control lever. As a precaution, when stopping on a gradient, engage either first or reverse gear. To release the hand brake, pull handle upwards, depress central catch and push downward fully.

POSSIBLE INCIDENTS

Should the engine fail to respond immediately to use of the starter, the carburettor float chamber may be empty.

This should be refilled by using the hand priming lever 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.

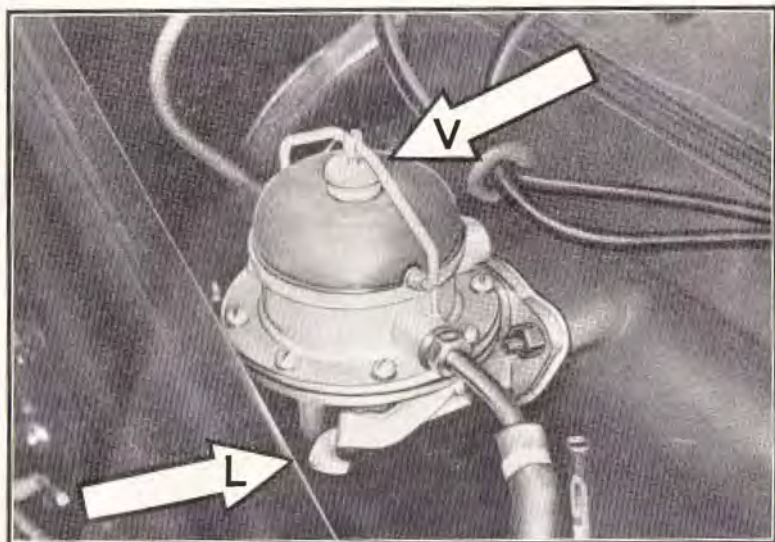


Fig. 4. S.E.V. Petrol Pump.

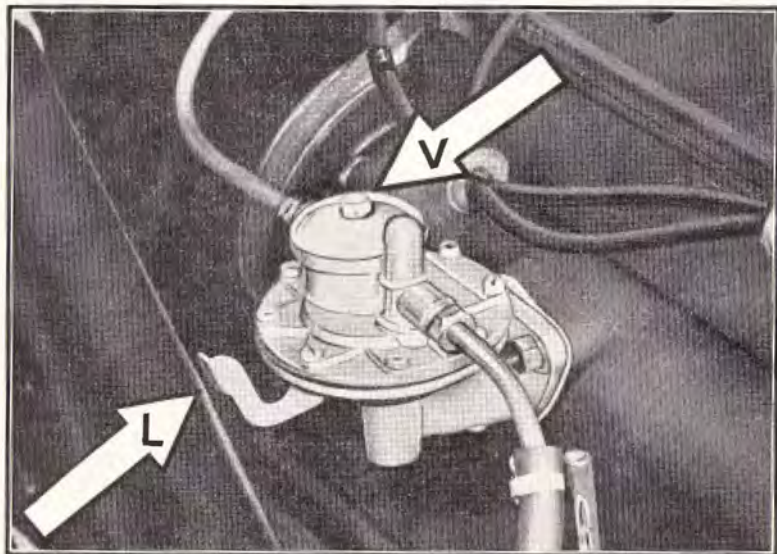


Fig. 5. Guiot Petrol Pump.

IRREGULAR PETROL SUPPLY TO CARBURETTOR

This is probably caused by choking of the petrol filter. To dismantle for cleaning remove the screw V (Fig: 4 or 5) 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 L on the pump (Fig: 4 or 5).

Should the engine fail to start or the petrol supply still be irregular, examine the filter and jets of the carburettor.

The filter f is inside the union R. Remove and clean.

The two main jets G are screwed into the carriers J.

The slow running jets are situated at g. Unscrew these jets and clean by blowing air through them.

When the jet carriers J are removed the float chamber will empty. Rinse out by working the petrol pump hand lever several times.

IMPORTANT NOTE—Dismantling of the carburettor is a matter for great care. Do not disturb any parts other than those mentioned above, and if the foregoing is ineffective, have the carburation system checked by a Citroen agent.

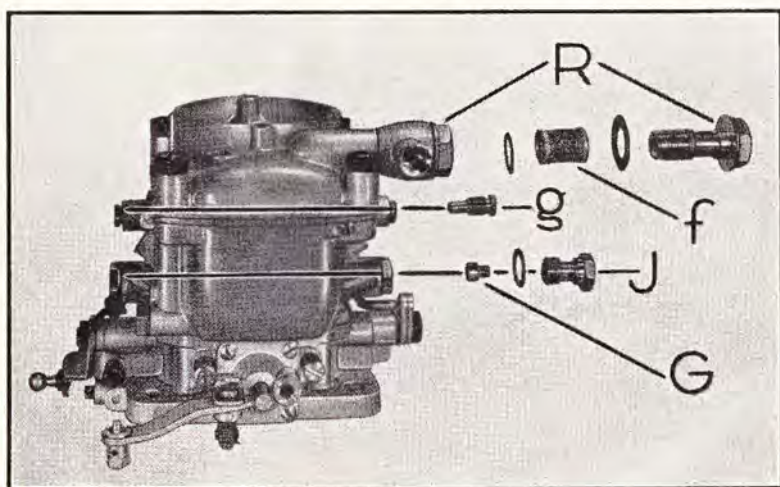


Fig. 6. Carburettor.

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.

AT THE APPROACH OF WINTER

If, during severe cold weather, an anti-freeze solution is not added to the water system, both Radiator (see Fig: 7) and Cylinder block (see Fig: 8) should be drained nightly.

ANTI-FREEZE SOLUTION

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.

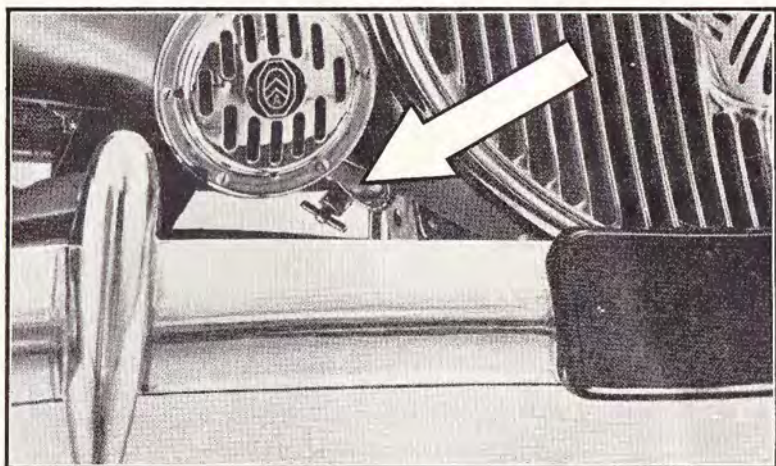


Fig. 7. The Radiator Drain Tap.

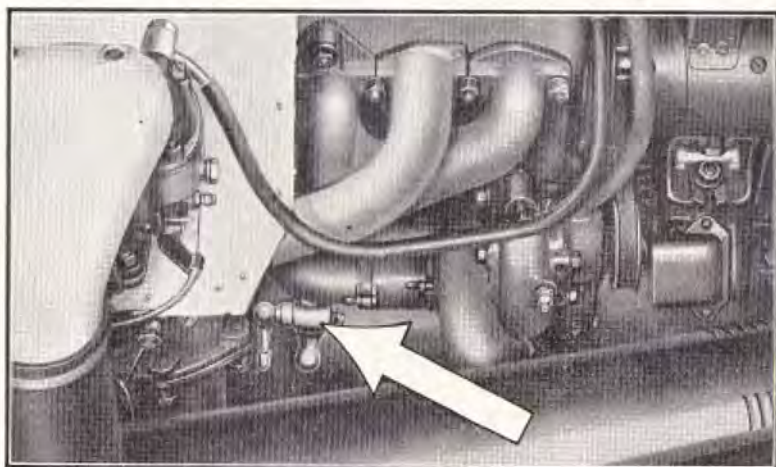


Fig. 8. The Cylinder Block Drain Tap.

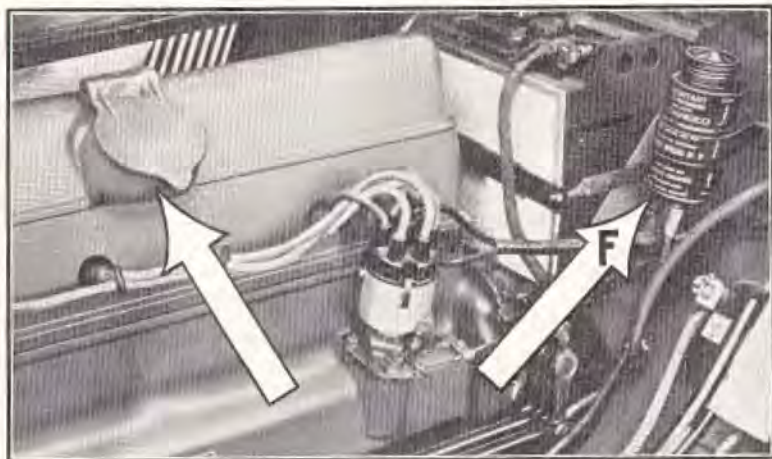


Fig. 9. The Oil Filler Cap and Lockheed Reservoir.

BRAKES

Monthly, check the level of the liquid in the reservoir; it should be maintained at a level $\frac{3}{4}$ to 1 inch below the cap.

Only use the special Lockheed fluid. (Fig: 9).

Occasionally, check the brackets fixing the brake pins 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.

WHEELS (See page 26 for hydro-pneumatic suspension.) *

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: 11 and ~~12~~. ~~Never lift the car by placing the jack in the centre of the rear axle.~~ Remove the embellisher by unscrewing the centre screw. Unscrew the wheel 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.

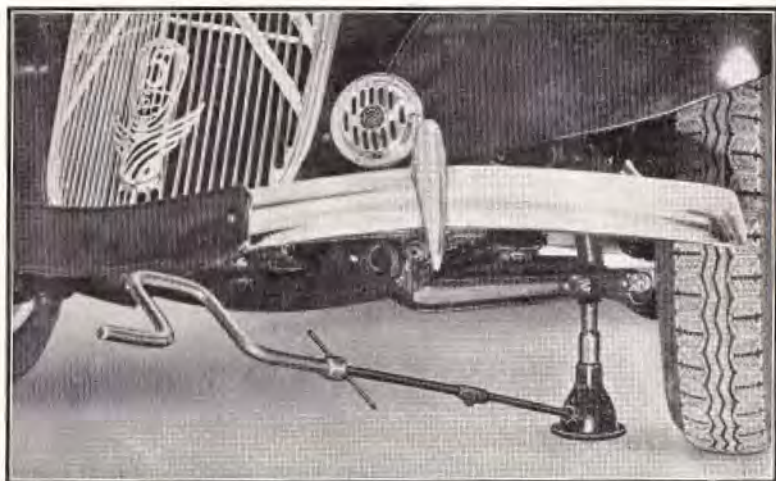


Fig. 11. Jacking Position for Front Wheel.

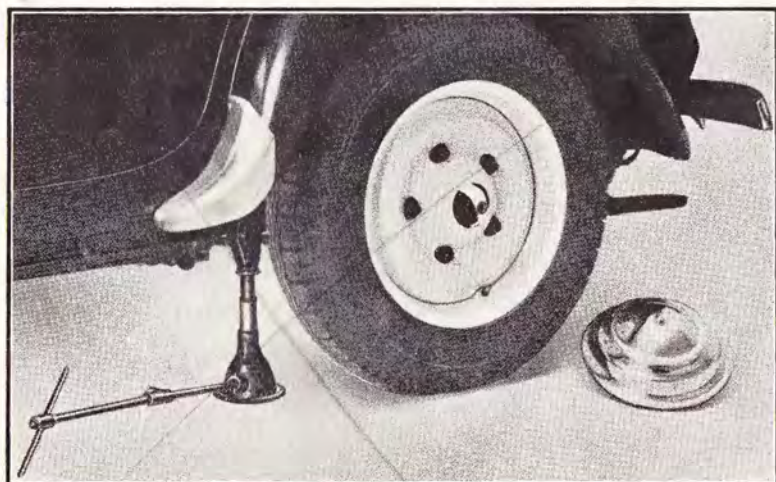


Fig. 12. Jacking Position for Rear Wheel.

WARMING THE CAR

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.

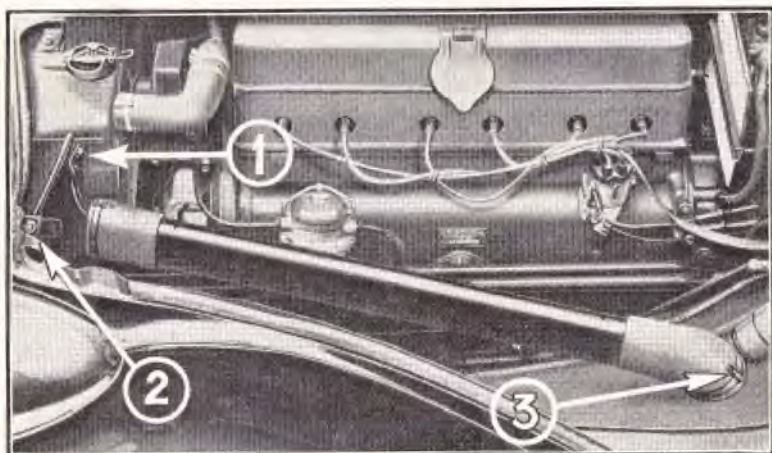


Fig. 13. Heating System.

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 (1) loosen nut (2) and remove the rear rubber connection (3). The complete assembly, that is the tube, front connection, and front intake can now be taken off. Retighten nut (2) and refit nut (1) and close the entry into the body with the control plug.

To refit the heater reverse the procedure.

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.

LUBRICATION

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

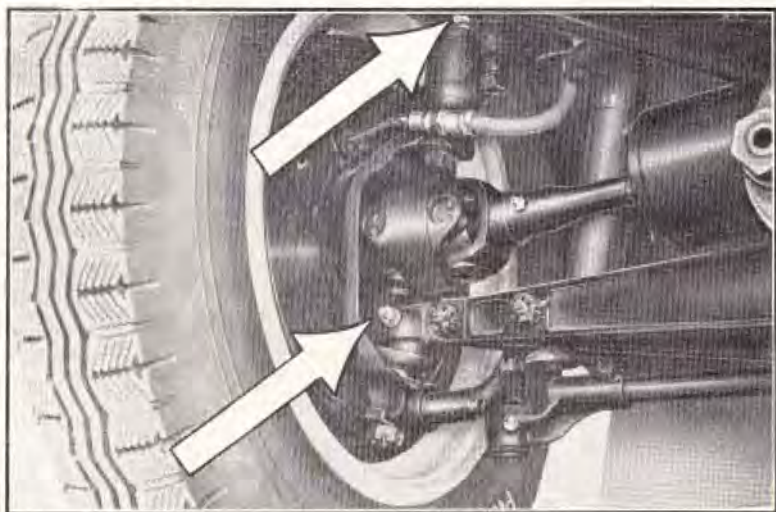
Use only good quality lubricants as recommended in the lubrication summary at end of book, and at the specified mileages in the following tables.

TABLE OF GENERAL LUBRICATION AT SPECIFIED MILEAGES

The following comprise the various lubricating operations at 600, 2000, 4000, and 12,000 miles.

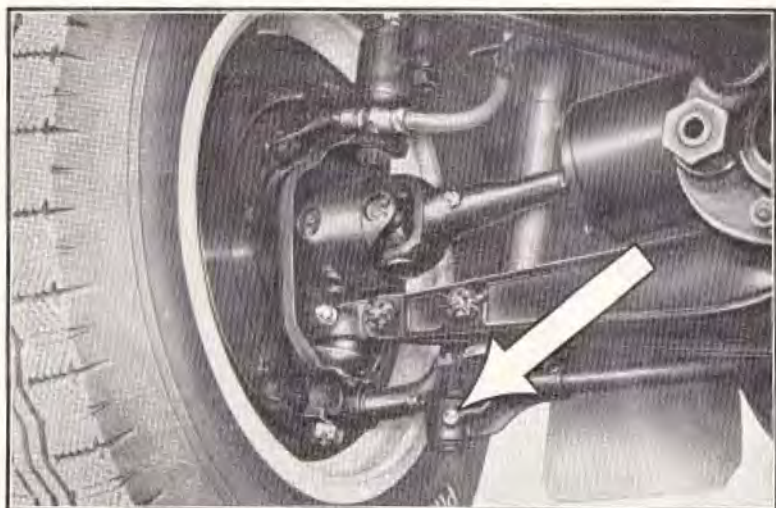
1. EVERY 600 MILES

- A. Grease the following points using one of the recommended greases.



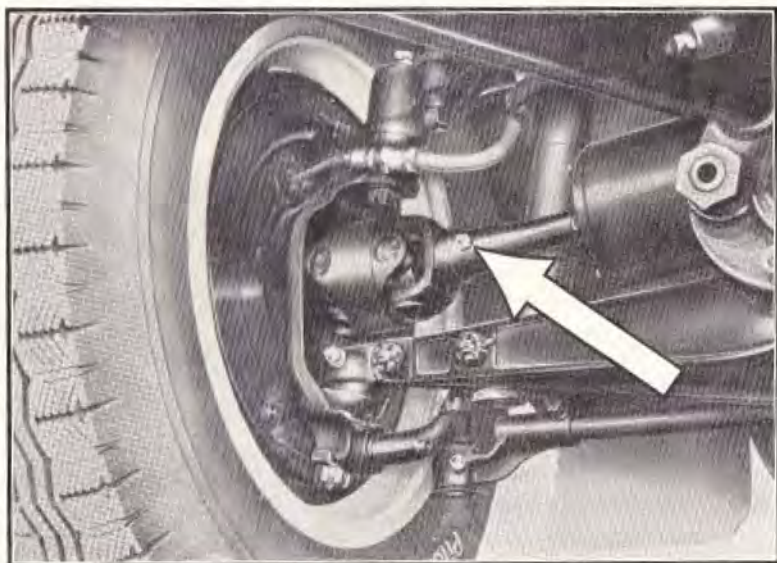
BALL JOINTS OF SUSPENSION LINKS

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.



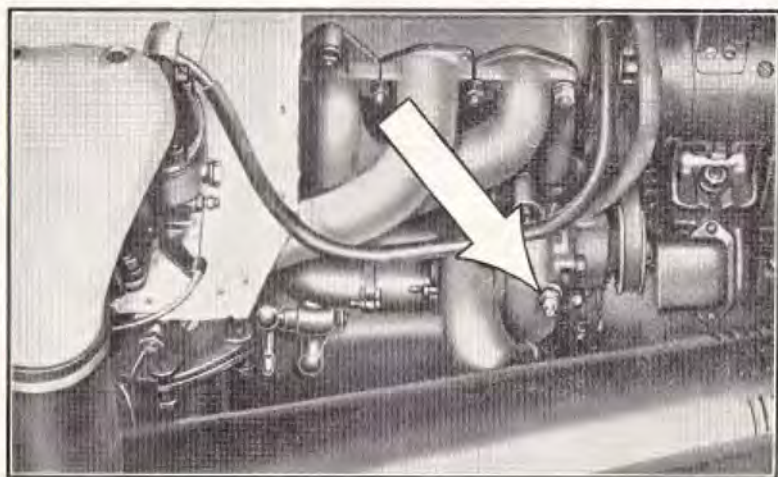
OUTER UNIVERSAL JOINTS

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.

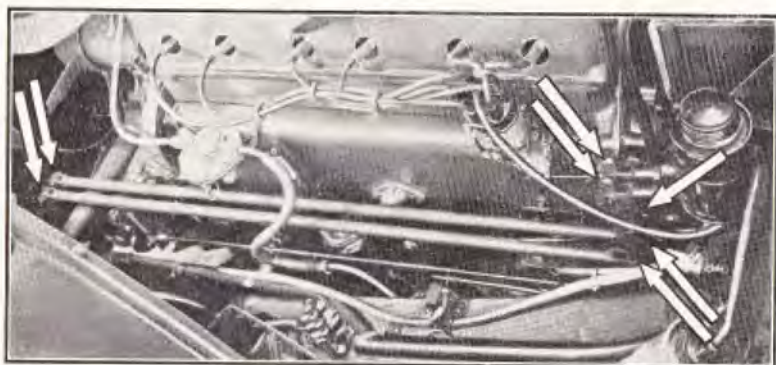
EVERY 600 MILES

B. With a grease having a melting point above 100°C (212°F).



WATER PUMP SHAFT—1 Greaser

Give 3 to 5 strokes of the pump, not more. Avoid over-greasing.



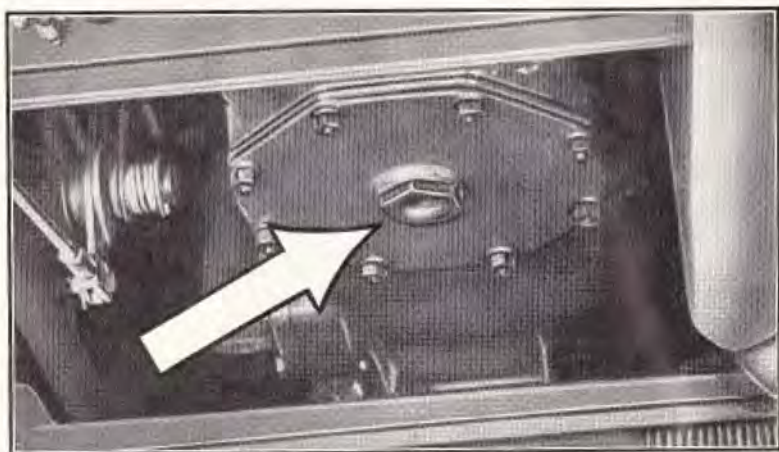
BALL JOINTS OF GEAR CHANGE CONTROL LEVERS

7 points—give several drops of thin oil.

Apply several drops of thin oil to each of the door hinges and the bonnet hinge, wiping off any excess.

2. EVERY 2000 MILES

A. 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 at intervals, making sure the car stands on a level floor (See Fig. 1).

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 $3\frac{1}{2}$ pints.

B. To prolong the life of the tyres, change the fronts with the rear tyres diagonally. Make sure the pressure is correct.

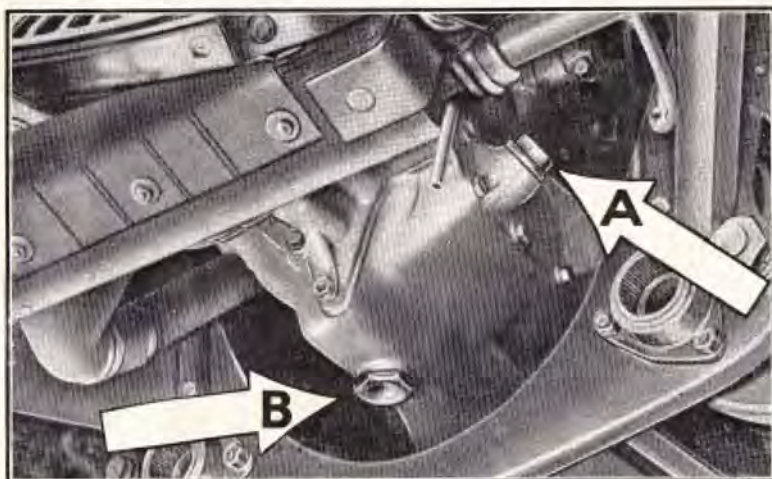
3. EVERY 4000 MILES

A. Check the oil level in the gearbox. Remove the filler plug A and wipe the dip rod attached. Replace the plug, screwing it in one turn only. Again remove it to check the level indicated by the presence of oil on the dip rod.

The oil level should be maintained within 5m/m either side of the shallow groove on the rod.

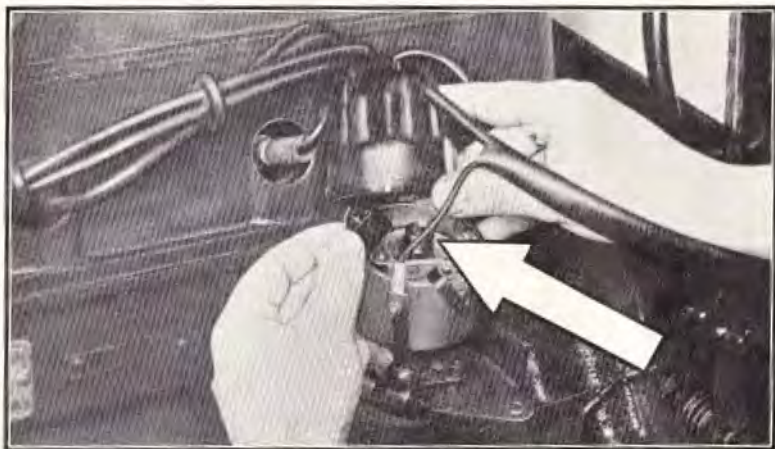
Should the level be low, drain and refill, using the special hypoid oil resistant to high pressure. **DO NOT ADD OIL.** The addition of small quantities or "topping up" to correct the oil level is not recommended. The characteristics of high pressure oils are such that mixing is unadvisable.

ALWAYS DRAIN AND REFILL



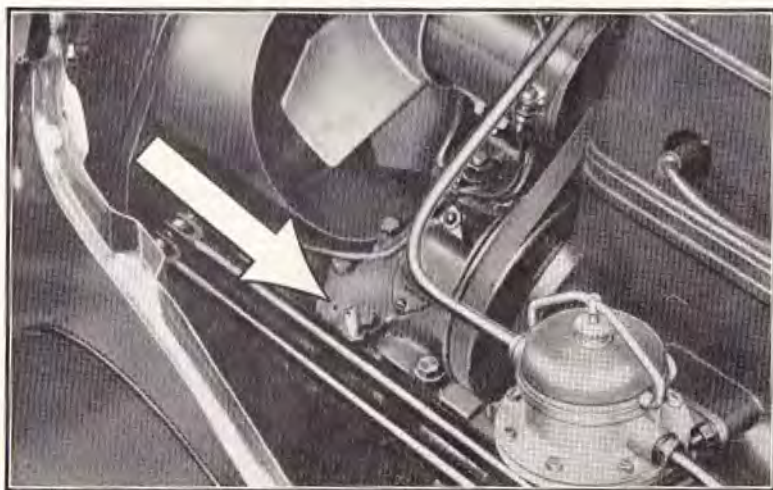
GEARBOX DRAIN AND FILLING PLUGS

B. Lubricate with thin oil.



DISTRIBUTOR AUTOMATIC ADVANCE

1 Oiling point. Remove the cover and the rotor, and apply 2 drops of oil to the felt pad under the rotor.



CLUTCH FORK SHAFTS

Apply several drops of oil to the two small holes in the casing (one on the right and one on the left).

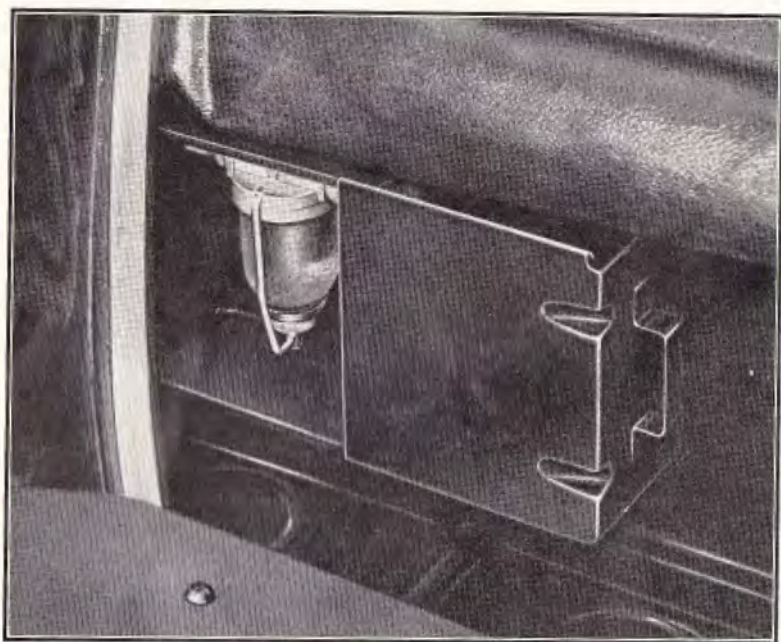
D. Have the following cleaned preferably by a Citroen agent.

The filter of the air intake silencer.

The petrol filter in the rear boot.

The petrol pump filter.

The petrol filter in the carburettor.



THE PETROL FILTER IN THE REAR BOOT
(FITTED ONLY ON EARLY SERIES)

4. EVERY 12,000 MILES OR WHEN DISMANTLED

A. Have the shock absorbers examined.

B. Have the gearbox drained when warm (B. Page 24).
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.

MODEL 6H **INSTALLATION ARRANGEMENT OF HYDRAULIC SYSTEM**

— FLOW
 - - - RETURN
 - · - LEAKAGE RETURN
 - - - FEED FROM
 - - - RESERVOIR TO PUMP

1 RESERVOIR
 2 PUMP
 3 ACCUMULATOR
 4 CONTROL VALVE
 5 NON RETURN VALVE

6 SUSPENSION CYLINDER
 7 HEIGHT CORRECTOR
 8 PNEUMATIC UNIT
 9 ANTI ROLL BAR

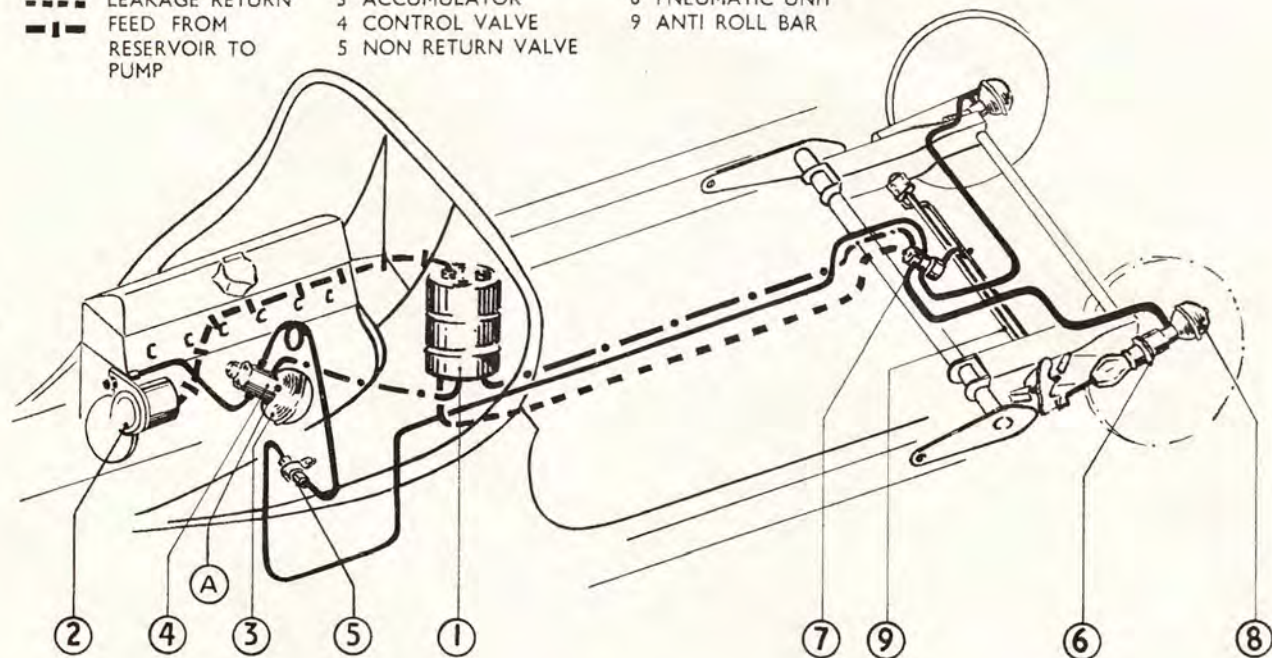


Fig 14

SUPPLEMENT

FOR

HYDRO-PNEUMATIC SUSPENSION

All the preceding details in this Instruction Book apply to all 6-Cylinder cars whatever type of rear suspension is fitted. The following refers only to cars with hydro-pneumatic suspension.

HYDRO-PNEUMATIC SUSPENSION (REAR)

The full benefits of the outstanding qualities of this suspension depend on the system being scrupulously clean. Meticulous care has been taken during assembly to ensure that the system is completely free of any dirt or foreign matter. Should it be necessary for any reason to disconnect any part of the hydraulic system it is recommended that a Citroën agent be consulted.

In order to ensure that such work is carried out under conditions of extreme cleanliness all dirt must be removed from a wide area round the point at which the work is to be carried out. All unions must be thoroughly cleaned before disconnection and all pipes plugged with clean plugs immediately they are disconnected. Any oil drained off must be discarded and the system topped up with clean filter oil. **Do not forget that the system is under high pressure** and that the pressure must be released before disconnecting any of the pipes. For this purpose unscrew the bleed screw A on Fig 14.

The general layout of the hydraulic system is shown on Fig. 14. The hydraulic fluid is taken from the reservoir (1) to the high-pressure pump (2) and delivered at high pressure to the accumulator (3). Here it is held at constant pressure by the control valve (4). From the accumulator (3) the flow of the hydraulic fluid to or from the suspension cylinder (6) via

the non-return valve (5) is controlled by the height correcting valve (7). The pneumatic unit (8) is screwed on the end of the suspension cylinder (6). Between the suspension cylinder and the pneumatic unit there is a damper valve which acts as a shock absorber. An anti-roll bar (9) is fitted.

Replacements or service adjustments effected locally should not extend beyond the following:

Pump:

Replacement of front gland.

Accumulator

Replacement of gasket.

Suspension cylinder and pneumatic unit:

Replacement of the gasket between the two components, replacement of the damper valves.

Pipe connections:

A new rubber seal must be fitted every time a union is connected and the nut tightened only moderately. Comparatively light tightening is sufficient to ensure absence of leaks. Excessive tightening is harmful and can cause leakage instead of obviating it.

Should any component be considered defective it must be exchanged for a service unit obtained either from one of our authorised Agents or direct from the factory. This is because the main components are pre-set to defined standards and any mal-adjustment may interfere with the correct functioning of the suspension.

FRONT SUSPENSION

6-Cylinder cars fitted with the hydro-pneumatic rear suspension also have a modified front suspension. This comprises longer torsion bars and the addition of an anti-roll bar.

CHANGING A REAR WHEEL

The suspension unit may be used for jacking up to change a rear wheel as follows:

1. Leave the engine idling. Put two wheel chocks in position (a) on sloping ground—under the two front wheels, or (b) on level ground—one in front of and one behind the front wheel diagonally opposite the wheel to be changed.
2. Release the handbrake—loosen the wheel-nuts.

3. Put the lever in the boot* in the 'HIGH' position, which allows the body to rise. When the maximum height is reached fit the jacking stand provided in its spring clip. (Just forward of each rear wheel. See Fig. 15.)
4. Put the lever in the boot* in the 'LOW' position, which allows the body to descend until the jacking stand is in contact with the ground, after which the wheel will rise. When the wheel has risen to its maximum remove it, and after fitting the replacement leave the wheel nuts finger tight.
5. Put the lever in the boot* in the 'HIGH' position, and again the body will rise and the wheel return to the ground. Now tighten the wheel-nuts and remove the jacking stand and wheel chocks.
6. RETURN THE LEVER TO THE 'NORMAL' POSITION.

* Alternatively the control lever may be fitted under the instrument panel.



Fig. 15. Jacking Stand.

LUBRICATION SUMMARY

	ESSO	BP	SHELL	VACUUM	WAKE-FIELD
Engine	Essolube 20	Energol SAE 20	X 100-20	Mobiloil Arctic	Castrolite
Gearbox & Differential	Esso XP Compound 90	Energol EP SAE 90	Spirax 90 EP	Mobiloil GX	Castrol Hypoy GD
Rear Hub Bearings	Esso Grease	Energrease C3	Shell H or Retinax A	Mobilhub Grease	Castrolase Heavy
Drive Shaft Sliding Ends	Esso Grease	Energrease C1	Shell CD or Retinax A	Mobilgrease No. 2	Castrolase CL
Upper & Lower Suspension Link Ball Joints					
Track Rod Ball Joints					
Water Pump Shaft	Esso Water-proof Grease	Energrease C5	Shell P or Retinax A	Mobilgrease No. 6	Castrolase Water Pump Grease
Sundry Oiling Points	Light Machine Oil				

TYRE PRESSURES

TYRE SIZE	FRONT		REAR	
165 x 400 X	1.6 kg.	23 lbs.	1.7 kg.	24½ lbs.
185 x 400	1.4 kg.	20 lbs.	1.6 kg.	23 lbs.

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 can be obtained from the

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

