

AKD1174C

*The*  
**MORRIS**  
*Mini-Minor*  
**DRIVER'S HANDBOOK**



# ALL CAR OWNERS

*should read*

*Motoring*

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SPORTS SECTIONS ARE REGULAR  
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**MOTORING**

The Nuffield Organization  
Cowley, Oxford, England

## ADDENDA

## THE AUSTIN SEVEN DRIVER'S HANDBOOK

Part No. AKD1173C

*Page 14***Fuel pump**

The fuel pump is mounted on the left-hand side-member of the rear under-frame, and is accessible from beneath the car.

Should the pump fail to operate, check the electrical feed and earth connections on the pump body to ensure they are making good contact and that the retaining nuts are reasonably tight. Examine and, if necessary, tighten up the inlet and delivery connections at the pump unions. Air leakage into the fuel line on the inlet side will cause a falling off in the fuel delivery rate, with consequent fuel starvation at high engine speeds.

*Page 27***Hub cover removal (later-type de-luxe covers)**

The redesigned hub cover fitted to the later de-luxe models can be removed from the road wheel with the flattened end of the wheelbrace inserted between the lip of the cover and the wheel rim. Lever the cover away from the wheel, using the tyre as a fulcrum for the wheelbrace at a point diametrically opposite the tyre valve.

*Page 35***Hand brake cable guides**

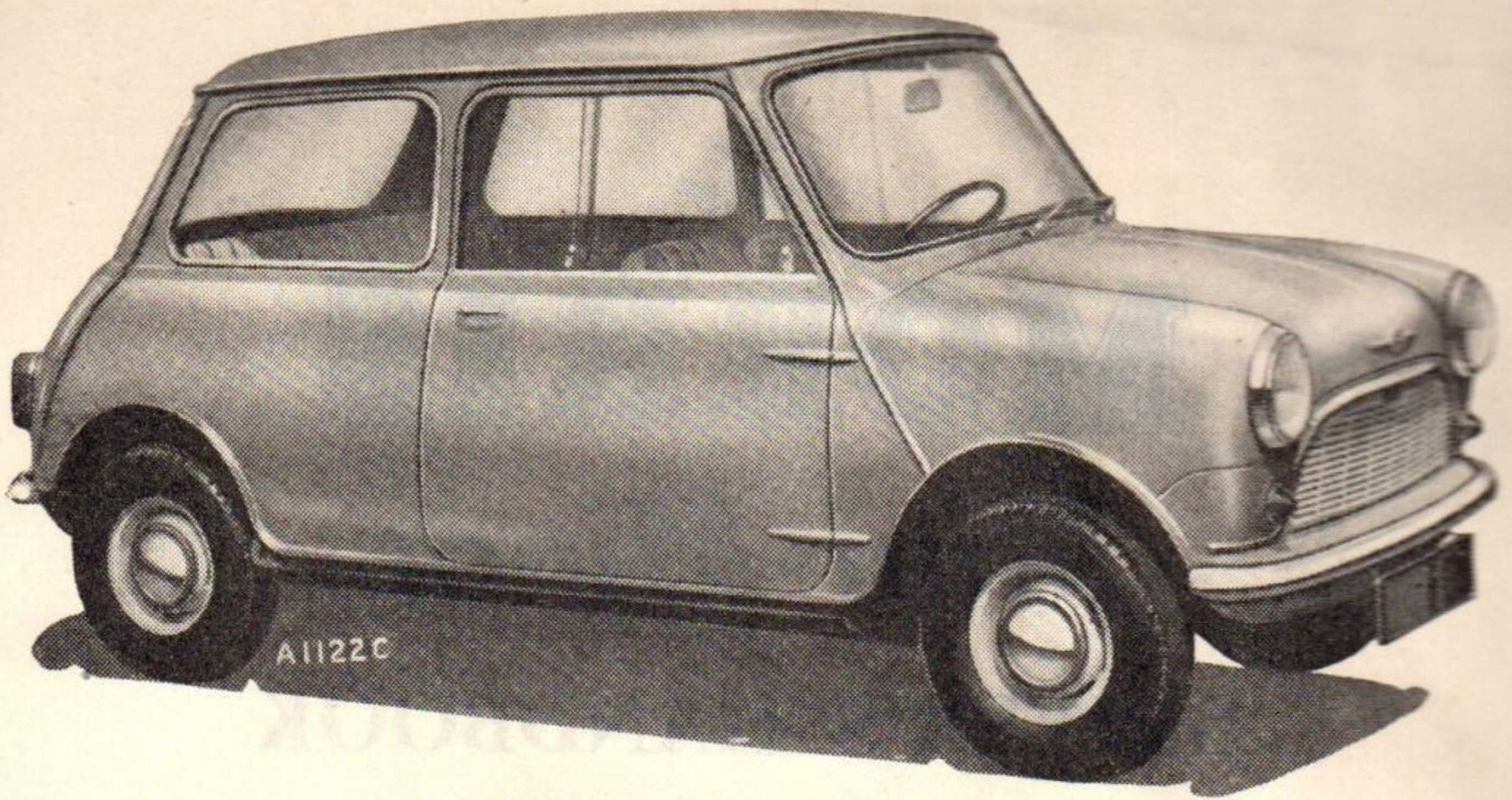
Lubricate the cable sector pivot located on the radius arms of later models with oil to Ref. D.

*Page 40***Brake relining**

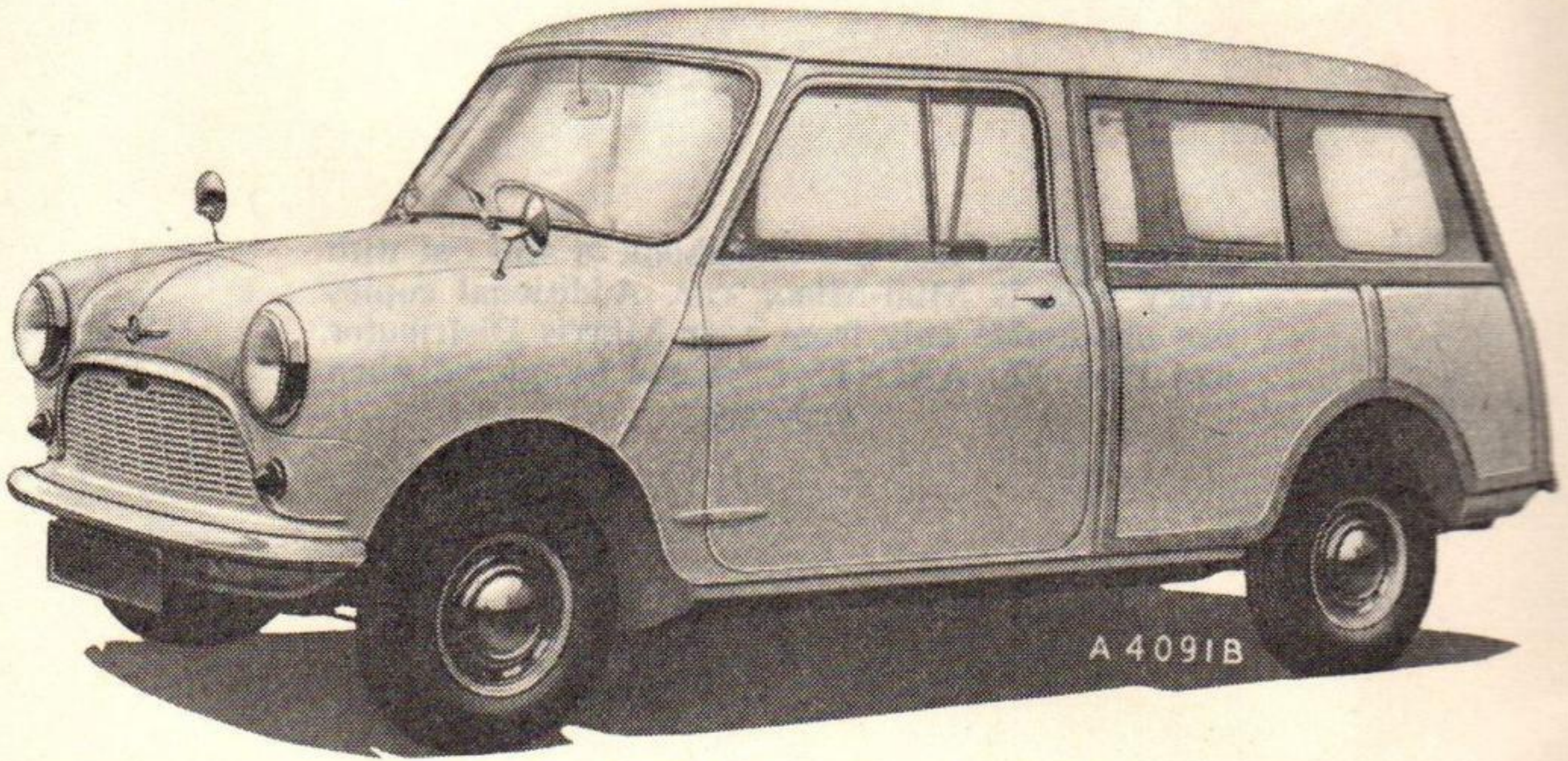
When it becomes necessary to renew the brake linings it is essential that the material used is the same as that originally specified, otherwise the front-to-rear brake balance will be adversely affected, with serious consequences due to out-of-balance braking. Under no circumstances must linings of varying characteristics be used at different brake stations. To maintain the balance required and ensure maximum braking efficiency, B.M.C. Service Replacement shoes should be fitted in preference to relining.

*Centre pages***KEY TO LUBRICATION CHART**

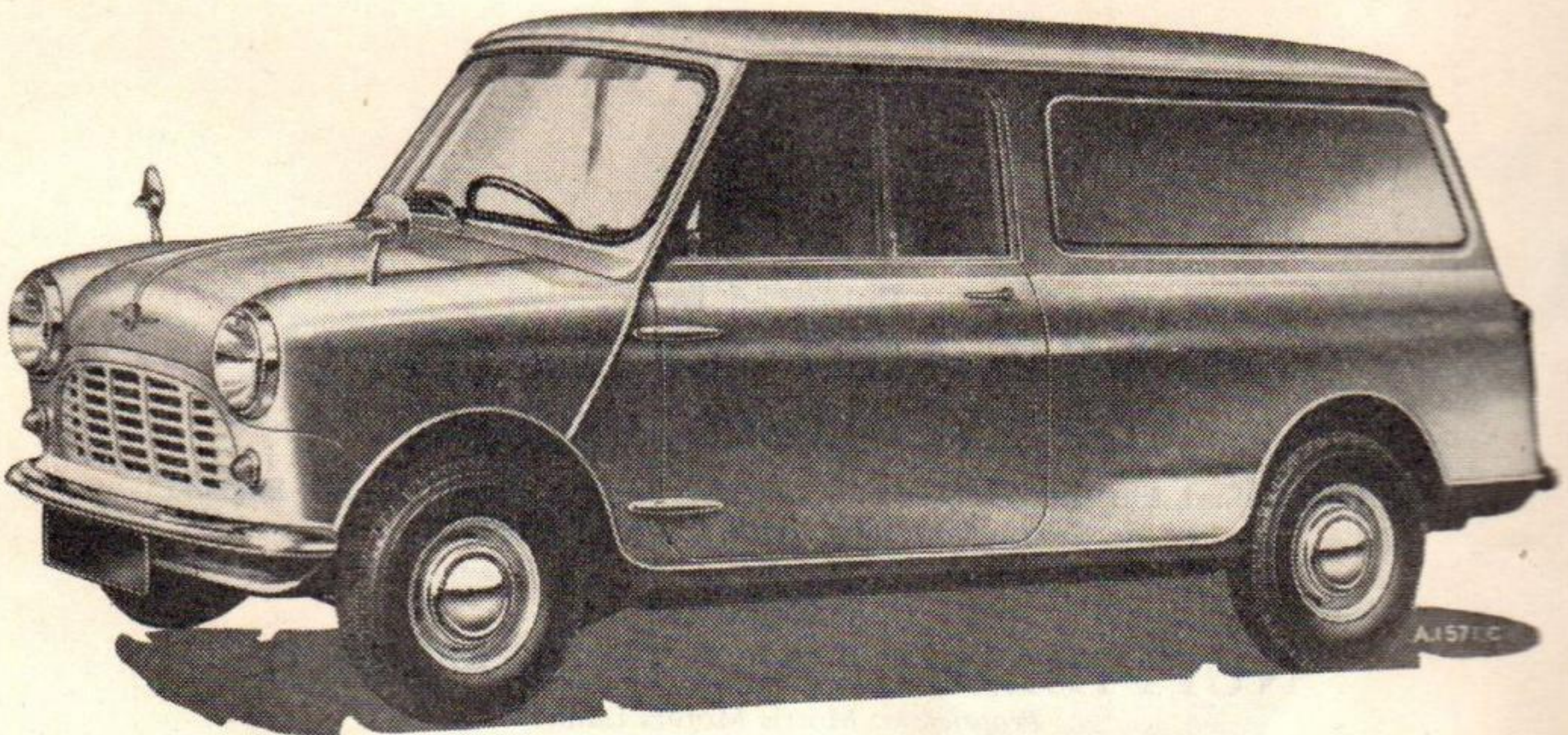
- (5) HAND BRAKE CABLE GUIDE CHANNELS. Lubricate the cable sector fitted to the later models with oil to Ref. D.



THE MORRIS MINI-MINOR



THE MORRIS MINI-TRAVELLER



THE MORRIS MINI-VAN

## FOREWORD

**T**HE information contained in this Driver's Handbook has been confined to the essentials necessary for the proper running and driving of the car. Nevertheless, the owner will find all the information required to maintain the car in first-class condition and to enable him to give it those all-important items of attention which go so far to ensure trouble-free and satisfactory service.

Every Morris car leaving the Works is capable of giving absolute satisfaction if attention is given to the essential maintenance operations detailed in this book. Remember that Morris Distributors and Dealers are better equipped to provide routine and repair service than the owner-driver. If you encounter trouble consult your Distributor or Dealer—they are at your service.

An exchange scheme for many major items and assemblies is run by B.M.C. Service Limited; ask your Distributor or Dealer for details.

For those requiring information of a more detailed and technical nature than is contained in the Driver's Handbook a Workshop Manual is available at a reasonable price from your Distributor or Dealer.

### IDENTIFICATION

When communicating with your Distributor or Dealer always quote the car and engine numbers; the registration number is of no use and is not required.

**Car number.** Located on a plate mounted between the radiator and the left-hand wing valance.

**Engine number.** Stamped on a metal plate fixed to the right-hand side of the cylinder block.

**Transmission casing assembly.** Stamped on a facing provided on the casing just below the starter motor.

# GENERAL DATA

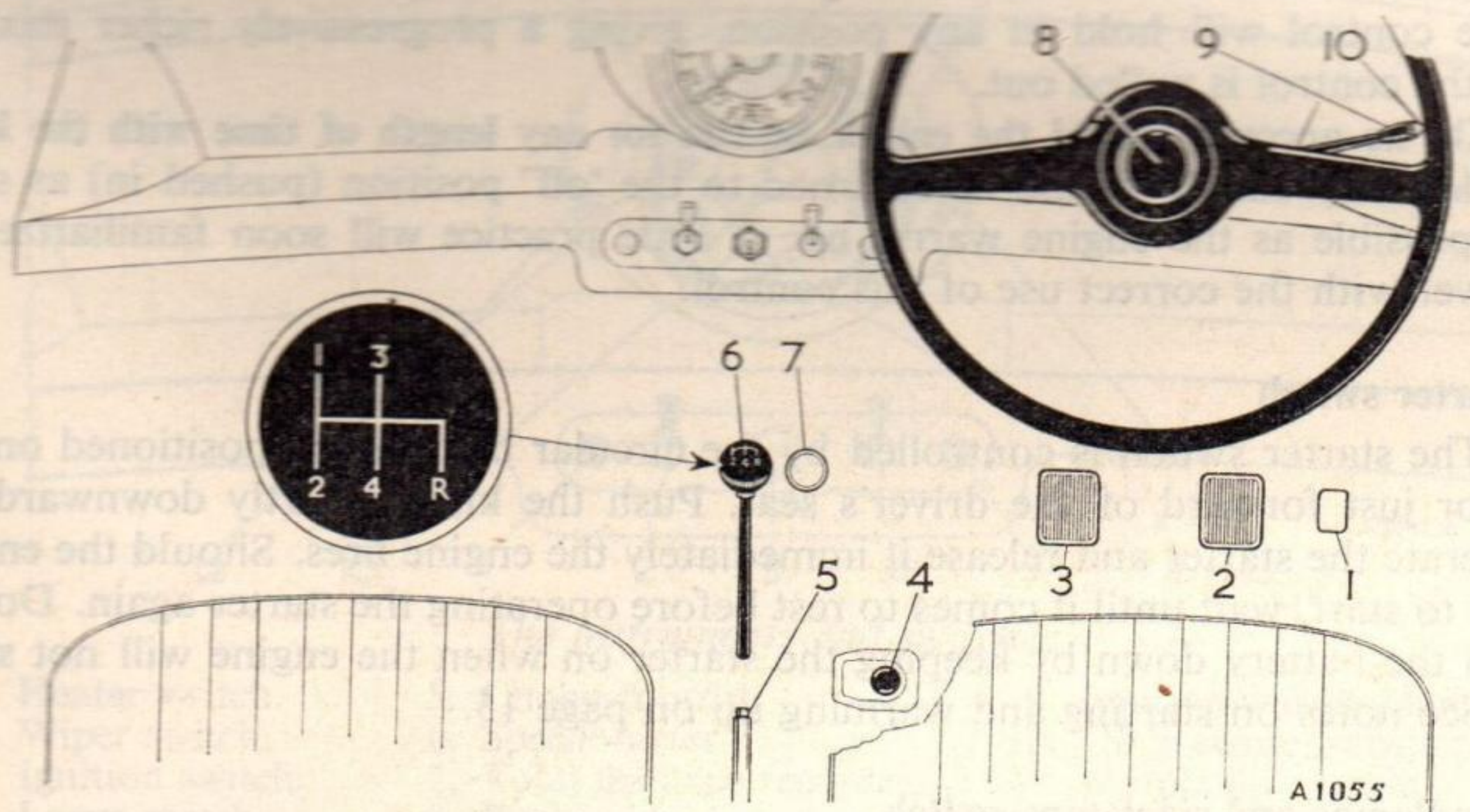
Engine	.. .. .	4-cylinder, overhead valves
Bore	.. .. .	2.477 in. (63 mm.)
Stroke	.. .. .	2.687 in. (68.26 mm.)
Cubic capacity	.. .. .	51.79 cu. in. (848 c.c.)
Compression ratio	.. .. .	8.3 : 1
Firing order	.. .. .	1, 3, 4, 2
Valve rocker clearance (cold)	.. .. .	.012 in. (.30 mm.)
Sparking plugs	.. .. .	N5, 14 mm.
Sparking plug gap	.. .. .	.025 in. (.64 mm.)
Ignition timing	.. .. .	See page 18
Contact breaker gap	.. .. .	.014 to .016 in. (.36 to .40 mm.)
Carburetter needle (standard)	.. .. .	EB
Tyre size	.. .. .	5.20—10
Tyre pressures:		
Normal conditions: Front	.. .. .	24 lb./sq. in. (1.7 kg./cm. <sup>2</sup> )
Rear	.. .. .	22 lb./sq. in. (1.6 kg./cm. <sup>2</sup> )
Full load: Rear	.. .. .	24 lb./sq. in. (1.7 kg./cm. <sup>2</sup> )
<b>WARNING.—It is essential that all wheels are changed round every 2,000 miles (3200 km.) without removing the tyres (see page 37).</b>		
Overall gear ratios: First	.. .. .	13.657
With synchromesh	{	Second .. .. . 8.176
		Third .. .. . 5.317
		Fourth .. .. . 3.765
		Reverse .. .. . 13.657
Dimensions:		
Track (front)	.. .. .	47 $\frac{3}{4}$ in. (1.206 m.)
Track (rear)	.. .. .	45 $\frac{7}{8}$ in. (1.164 m.)
Turning circle: Saloon	.. .. .	31 ft. 0 in. (9.449 m.)
Traveller and Van	.. .. .	32 ft. 9 in. (9.983 m.)
Front wheel alignment	.. .. .	$\frac{1}{16}$ in. (1.59 mm.) toe-out
Wheelbase: Saloon	.. .. .	6 ft. 8 $\frac{5}{32}$ in. (2.036 m.)
Traveller and Van	.. .. .	7 ft. 0 $\frac{5}{32}$ in. (2.138 m.)
Overall length: Saloon	.. .. .	10 ft. 0 $\frac{1}{4}$ in. (3.05 m.)
Traveller and Van	.. .. .	10 ft. 9 $\frac{7}{8}$ in. (3.259 m.)
Overall width	.. .. .	4 ft. 7 $\frac{1}{2}$ in. (1.41 m.)
Overall height: Saloon	.. .. .	4 ft. 5 in. (1.35 m.)
Traveller	.. .. .	4 ft. 5 $\frac{1}{2}$ in. (1.36 m.)
Van	.. .. .	4 ft. 6 $\frac{1}{2}$ in. (1.38 m.)
Fuel tank capacity: Saloon	.. .. .	5 $\frac{1}{2}$ gal. (25 litres, 6.6 U.S. gal.)
Traveller	.. .. .	6 $\frac{1}{2}$ gal. (29.6 litres, 7.8 U.S. gal.)
Van	.. .. .	6 gal. (27 litres, 7.2 U.S. gal.)
Engine and transmission oil capacity includes filter	.. .. .	8 $\frac{1}{2}$ pints (4.83 litres, 10.2 U.S. pints)
Water capacity	.. .. .	5 $\frac{1}{4}$ pints (3 litres, 6.3 U.S. pints)
Weight (kerbside): Saloon	.. .. .	1,294 lb. (587 kg.) approx.
Traveller	.. .. .	1,456 lb. (660 kg.) approx.
Van	.. .. .	1,334 lb. (605 kg.) approx.

# CONTROLS

## Gear lever

The gear lever is centrally situated and comes readily to hand. First and second gears are selected by moving the lever to the left, and engaged by moving it forwards for first gear or backwards for second gear. Third and fourth gears are selected by moving the lever to the right through the neutral position till resistance is felt, then forwards for third gear and backwards for fourth gear.

To engage the reverse gear move the lever to the right in the neutral position until resistance is felt, continue moving the lever to the right against the spring pressure until the stop is reached, and then move it rearwards to engage the gear.



*The controls*

- |                       |                         |  |
|-----------------------|-------------------------|--|
| 1. Accelerator pedal. | 5. Hand brake.          | 9. Direction indicator.                |
| 2. Brake pedal.       | 6. Gear lever.          | 10. Direction indicator warning light. |
| 3. Clutch pedal.      | 7. Headlamp dip switch. |  |
| 4. Starter switch.    | 8. Horn-push.           |  |

## Pedal controls

The pedal controls are arranged in the orthodox positions—namely, the clutch pedal, brake pedal, and accelerator, reading from left to right. Do not drive with your foot resting on the clutch pedal.

## Hand brake

Pulling the lever upwards operates the rear wheel brake-shoes mechanically. Brake release is achieved by pulling on the lever to take the load and then pressing on the ratchet release with the thumb before pushing the handle downwards into the 'off' position.

## Ignition switch

The ignition switch is located in the control panel and is operated by a removable key, which also serves to lock the driver's door.

Never leave the switch in the 'on' position when the engine is not running.

# INSTRUMENTS AND SWITCHES

## Ignition warning light

The ignition warning light positioned in the speedometer on the right-hand side glows red when the ignition is switched on and will go out when the dynamo is charging adequately. It may glow when the engine is idling, but no harm will be done so long as the engine is running.

On no account must it be allowed to glow for more than a few moments with the car and engine stationary. Switch off the ignition immediately.

## Choke or mixture control

To enrich the mixture and to assist starting when the engine is cold pull out the control knob marked 'C' positioned on the right of the control panel. The control will hold in any position, giving a progressively richer mixture as the control is pulled out.

**On no account should the engine be run for any length of time with the knob pulled fully out.** It should be returned to the 'off' position (pushed in) as soon as possible as the engine warms up. A little practice will soon familiarize the driver with the correct use of this control.

## Starter switch

The starter switch is controlled by the circular black knob positioned on the floor just forward of the driver's seat. Push the knob smartly downwards to operate the starter and release it immediately the engine fires. Should the engine fail to start, wait until it comes to rest before operating the starter again. Do not run the battery down by keeping the starter on when the engine will not start.

See notes on starting and warming up on page 15.

## Headlamps and sidelamps switch

The headlamps and sidelamps switch is positioned to the right of the ignition switch on the control panel.

The sidelamps, tail lamps, and instrument lamp are all brought into operation when the switch is moved downwards to the central position. Further downward movement of the switch to the lower position will bring the headlamps into operation.

## Headlamp beam dipping switch and warning light

The headlamp beam dipping switch is situated in the centre of the toeboard and is foot-operated. It is of the single-acting repeating type, dipping the lamp beams on one depression and raising the beams on the next depression.

A warning light at the top of the instrument dial will glow red when the headlamp beams are in the raised position.

## Windshield wiper switch

The windshield wiper switch is positioned on the left of the ignition switch. Move the switch downwards to operate the wipers, which will function only if the ignition switch is on. Park the blades by switching off at the end of the stroke when the blades are in the required position.

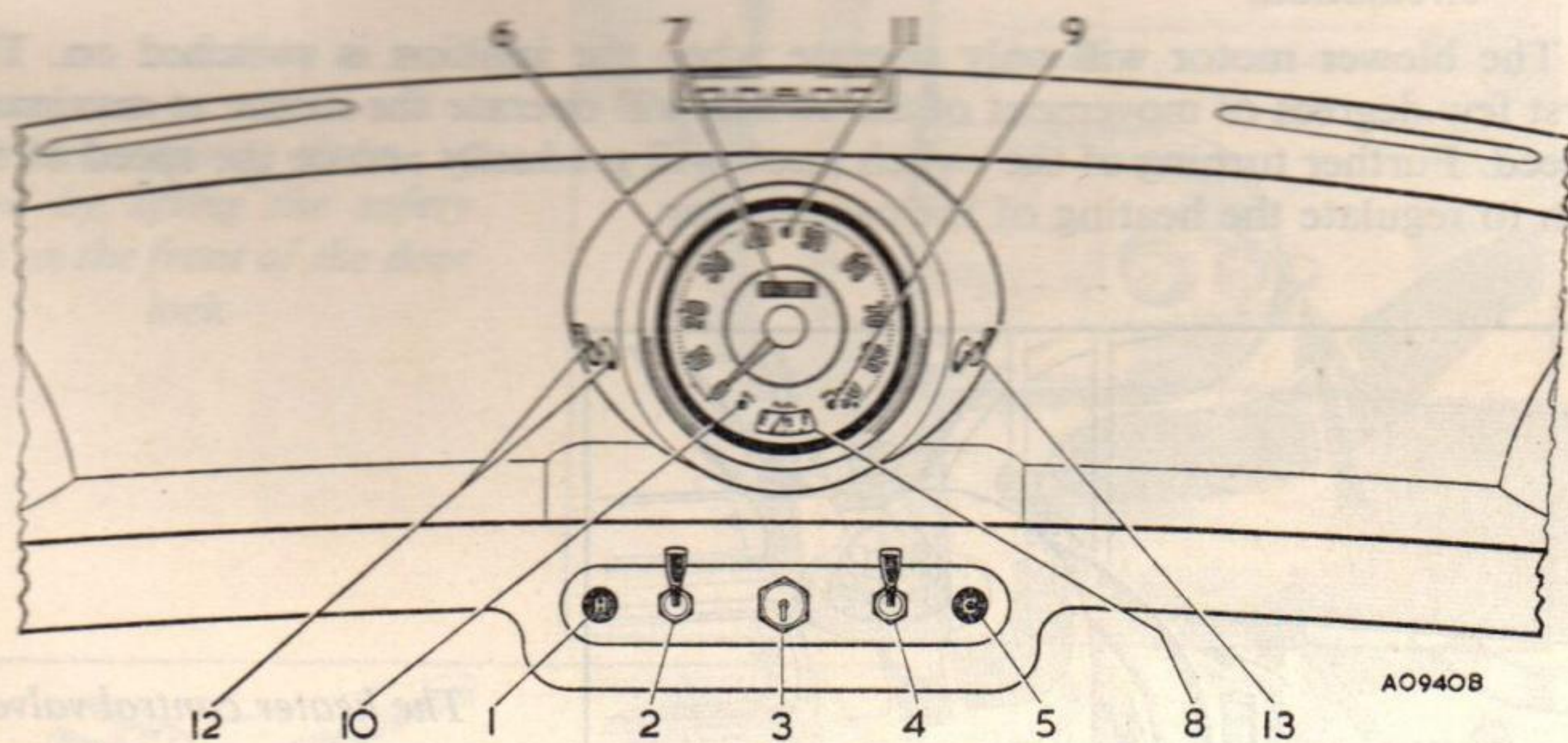
## Horn switch

The horn is operated by pressing the centre disc of the steering-wheel.

# INSTRUMENTS AND SWITCHES

## Fuel gauge, oil pressure warning light

The fuel level gauge is clearly marked and is incorporated in the combined central instrument dial. To the left of the fuel gauge is an oil pressure warning light which will glow red when the ignition is switched on prior to starting the engine. The light should go out once the engine is running, but should it not do so under normal running conditions, the oil level in the engine sump should be checked and replenished as necessary. If the light continues to glow, stop the engine immediately and have the lubrication system checked.



*The instruments and switches*

- |   |                             |                                      |
|---|-----------------------------|--------------------------------------|
| 1. Heater switch.   | 5. Choke control.           | 9. Ignition warning lamp.            |
| 2. Wiper switch.  | 6. Speedometer.             | 10. Oil pressure warning lamp.       |
| 3. Ignition switch.   | 7. Total distance recorder. | 11. Headlamp main beam warning lamp. |
| 4. Lamp switch.   | 8. Fuel gauge.              |                                      |
| 12. Parcel shelf lamp and switch (instrument light switch—L.H.D. models).   |                             |                                      |
| 13. Instrument panel light switch (parcel shelf lamp switch—L.H.D. models). |                             |                                      |

## Flashing direction indicators

The flashing direction indicators are operated (when the ignition is switched on) by a lever switch fitted on the steering-column.

On R.H.D. models the switch lever is moved upwards to operate the left-hand flashing indicators and downwards to operate the right-hand flashing indicators.

On L.H.D. models upward movement will operate the right-hand flashing indicators and downwards movement the left-hand indicators.

A warning lamp in the end of the switch lever will light up when either indicator is flashing.

## Parcel shelf and instrument lights

Two lights, one on each side of the central instrument, are provided to illuminate the parcel shelf and are operated by a tumbler switch located on the passenger's side of the instrument cowl.

The switch on the driver's side of the instrument cowl operates the instrument light when the car lights are switched on.

## Rear companion pocket lighting (de-luxe models)

A lamp together with its independent tumbler switch is positioned in the front vertical inner wall of each rear companion pocket. This lighting is only operative when the car lights are switched on.

# HEATER

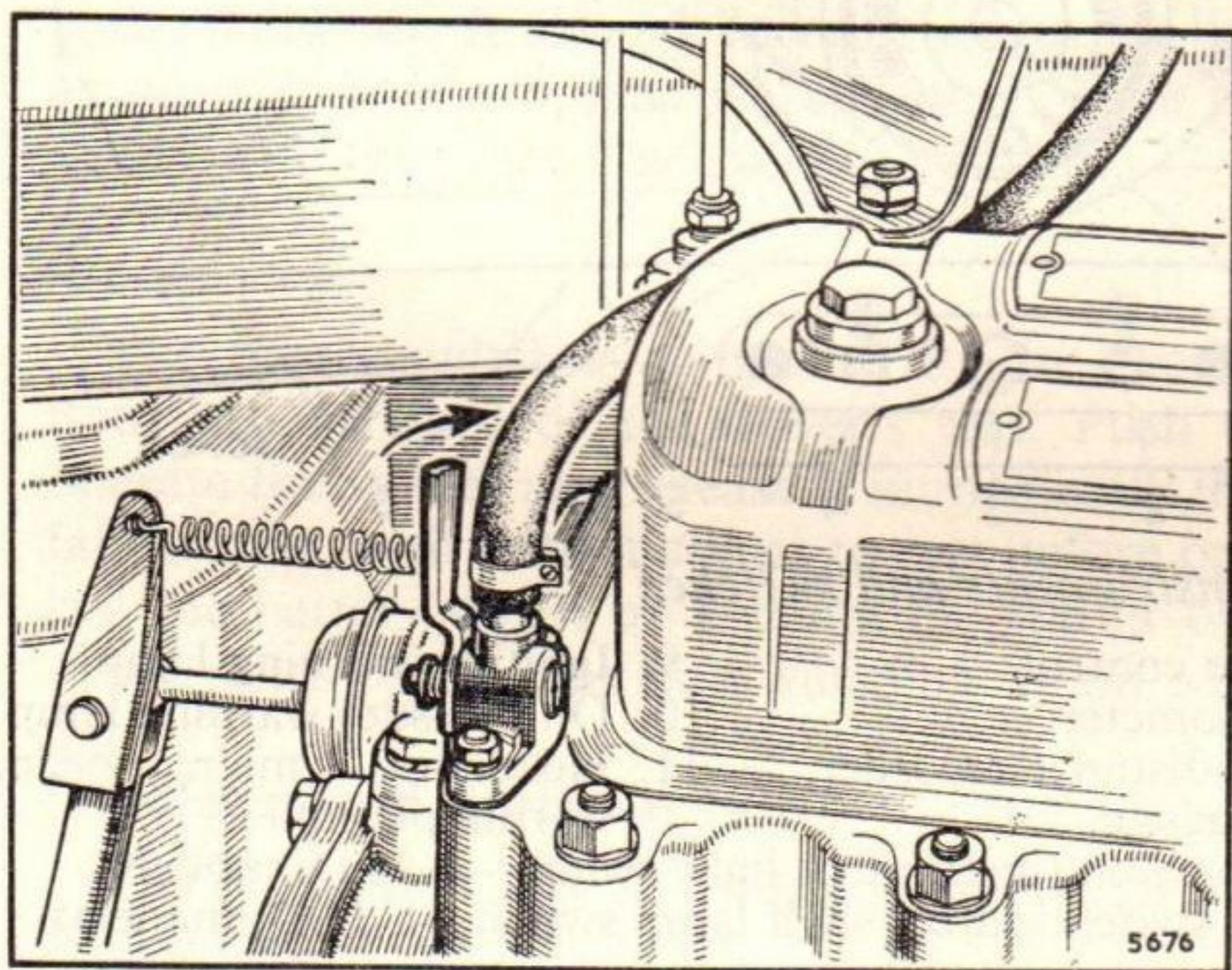
## Heater (optional equipment)

The heater is of the air recirculating type, which is provided with hot water from the engine cooling system and is equipped with an air-circulating fan.

The operation of the heater is quite simple, there being only two controls:

- (1) A rheostat switch on the left of the control panel.
- (2) A control valve on the right of the cylinder head which closes the water circulation.

The blower motor will only operate when the ignition is switched on. The first few degrees of movement of the switch will operate the motor at maximum speed. Further turning of the switch knob will gradually reduce the speed of the fan to regulate the heating of the car interior.



*The heater control valve*

The valve on the engine is intended to be closed in hot weather when heating inside the car is not required. The circulating fan may be used to circulate the air in the car in hot weather, although it is primarily intended to circulate warmed air in cold weather and to provide a current of hot air onto the windshield for demisting.

It must be appreciated that the heater unit is not necessarily cold when the circulation valve is shut off as a certain amount of heat is still transferred by conduction. The blower only circulates the interior air and is not a means of introducing fresh air into the vehicle.

See 'Frost precautions' on page 16.

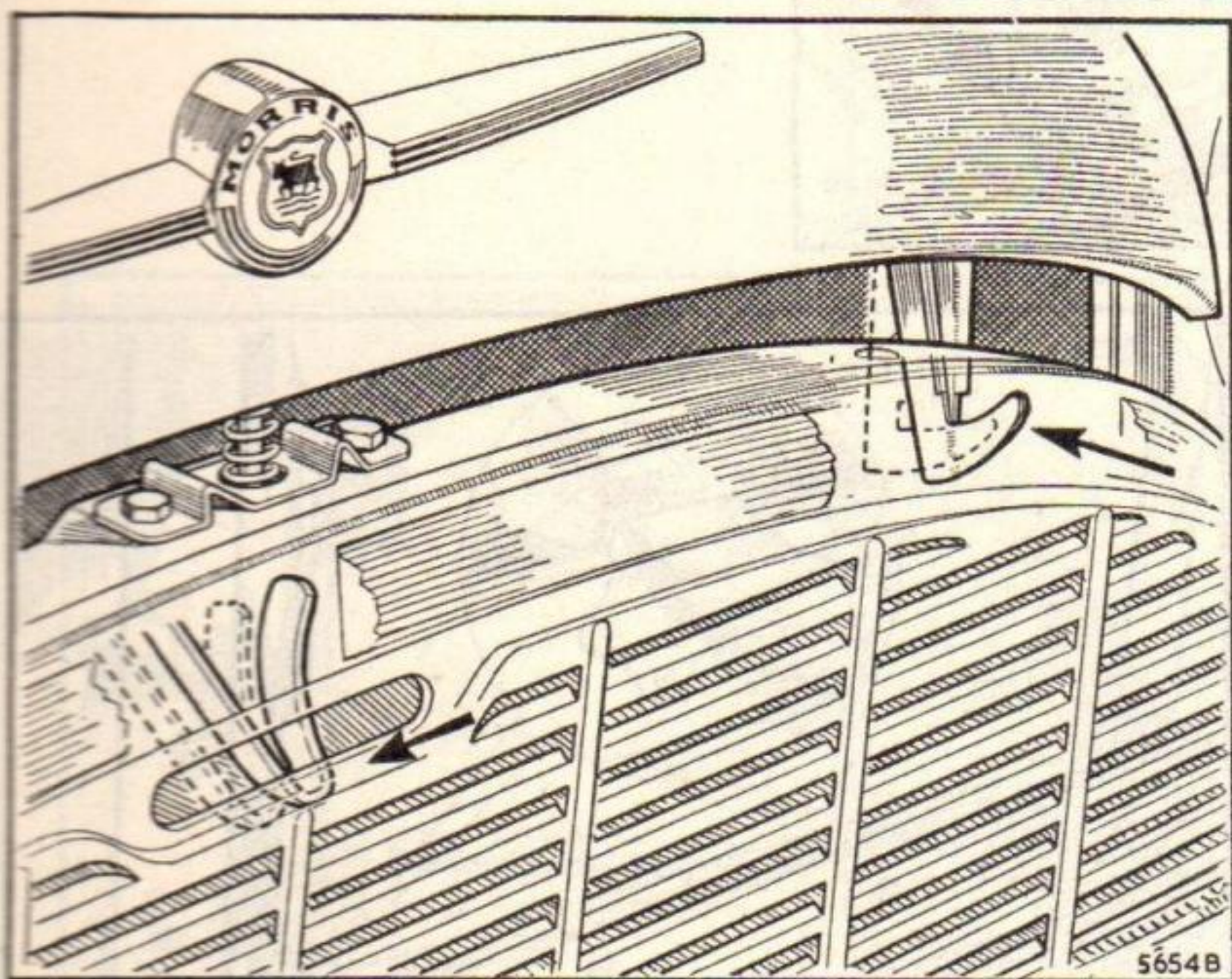
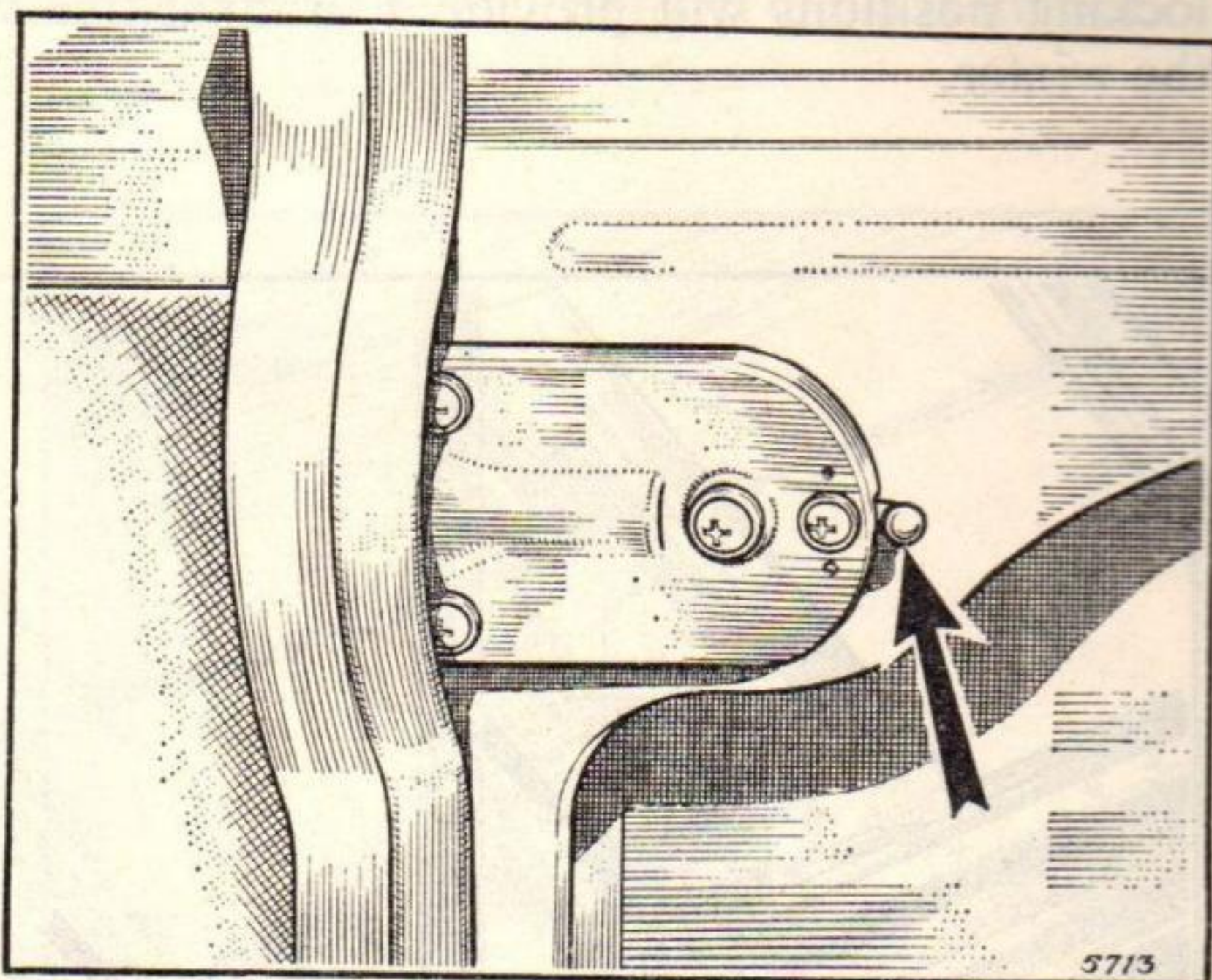
# BODY

## Door locks

The passenger door may be locked from the inside by lifting up the small safety catch on the front of the door lock.

The driver's door is locked from the outside by means of the ignition key.

*The passenger's door is locked by lifting the safety catch on the front of the door lock*



*Move the release lever to the right-hand side of the car to release the bonnet catch. Release the safety catch on the left-hand side by pushing it inwards*

## Bonnet lock

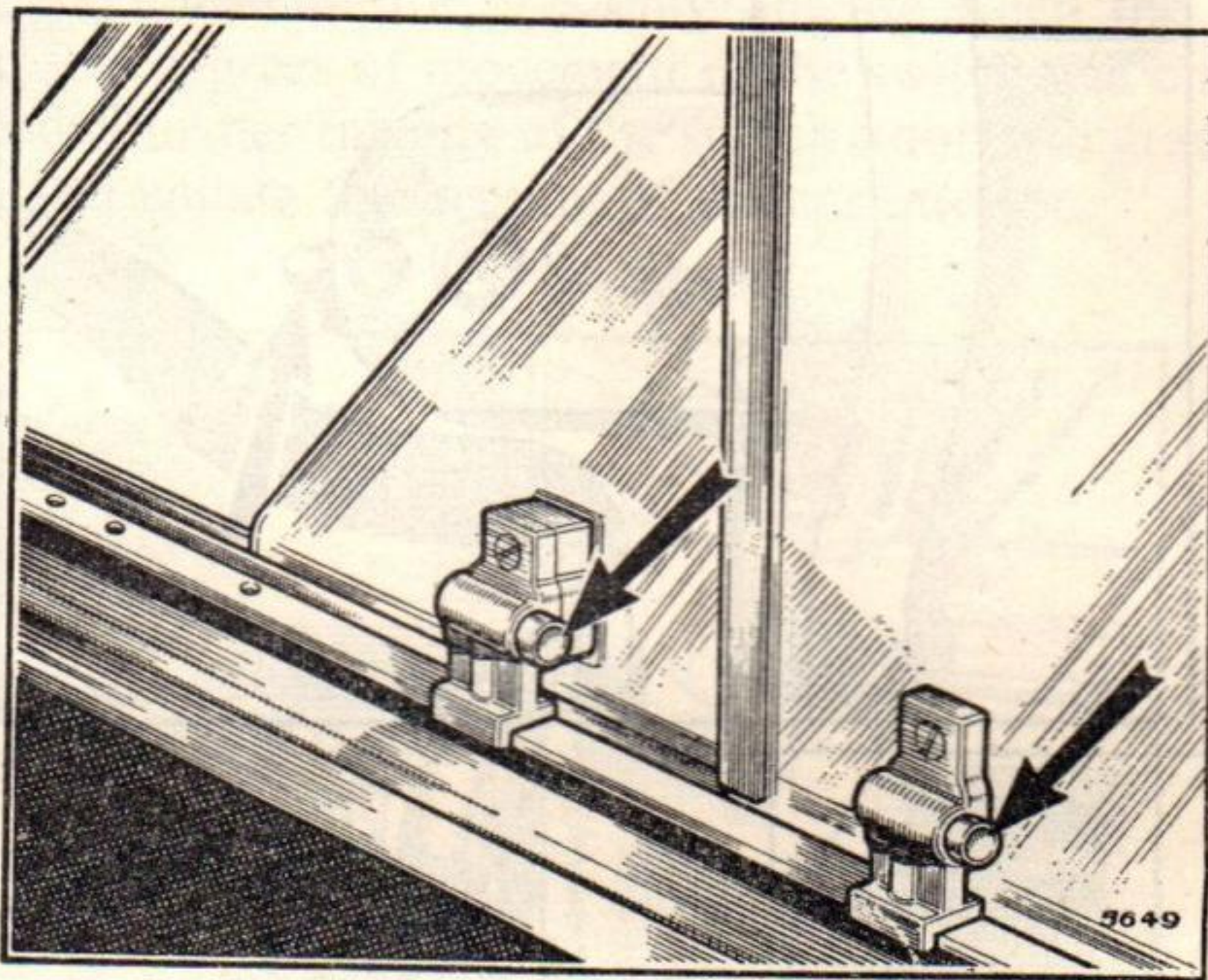
The bonnet is released by inserting a finger in the centre top louvre of the radiator shell and moving the release lever towards the right-hand side of the car; movement of the release lever is assisted by applying downward hand pressure to the bonnet. The bonnet will still be held by the safety catch, which is located beneath the bonnet on the left-hand side; push the safety catch inwards and raise the bonnet, which may be held in the open position by a prop secured in a rubber clip on the right-hand side. Detach the prop from the clip and secure the end in the support bracket on the right-hand valance.

To close, raise the bonnet, stow the prop in the clip, and then lower the bonnet to engage the safety catch. Apply double-hand pressure to press the bonnet down into the fully closed position. The safety catch and bonnet lock will be heard to engage.

# WINDOWS

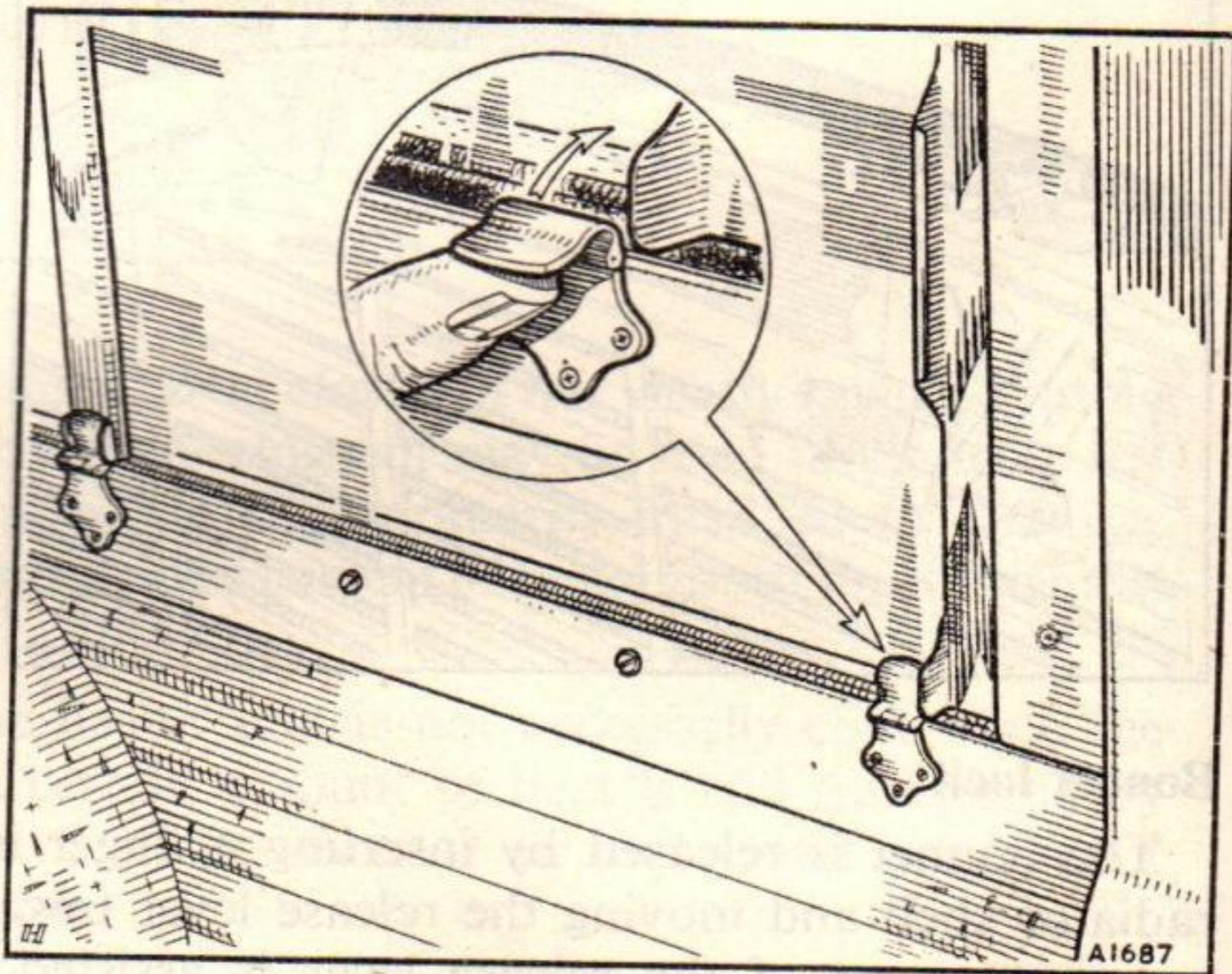
## Front sliding windows

The front or rear glass of either door may be partially opened by depressing the locking plunger and sliding the glass to the desired position. The locking plunger will secure the glass in a number of positions, providing a range of openings. Opening the front sliding glasses to the second, third, or fourth locking positions will provide a draught-free ventilation and aid demisting in the winter.



*The window glasses may be held in a number of positions to provide various openings*

*The body side sliding window locking tab, showing the method of locking the windows by folding the tab over the sliding channel to locate behind the stop plate on the hand-pull*



## Rear sliding windows (Traveller)

Both the glasses in the body side windows operate in sliding channels. To open the windows, fold the hinged locking tab inwards clear of the stop plate and pull the glasses to the desired position, using the hand-pull provided on the forward edge of each glass.

When locking the vehicle to prevent unauthorized entry make sure that the locking tabs are in the locked position.

## LUGGAGE COMPARTMENT

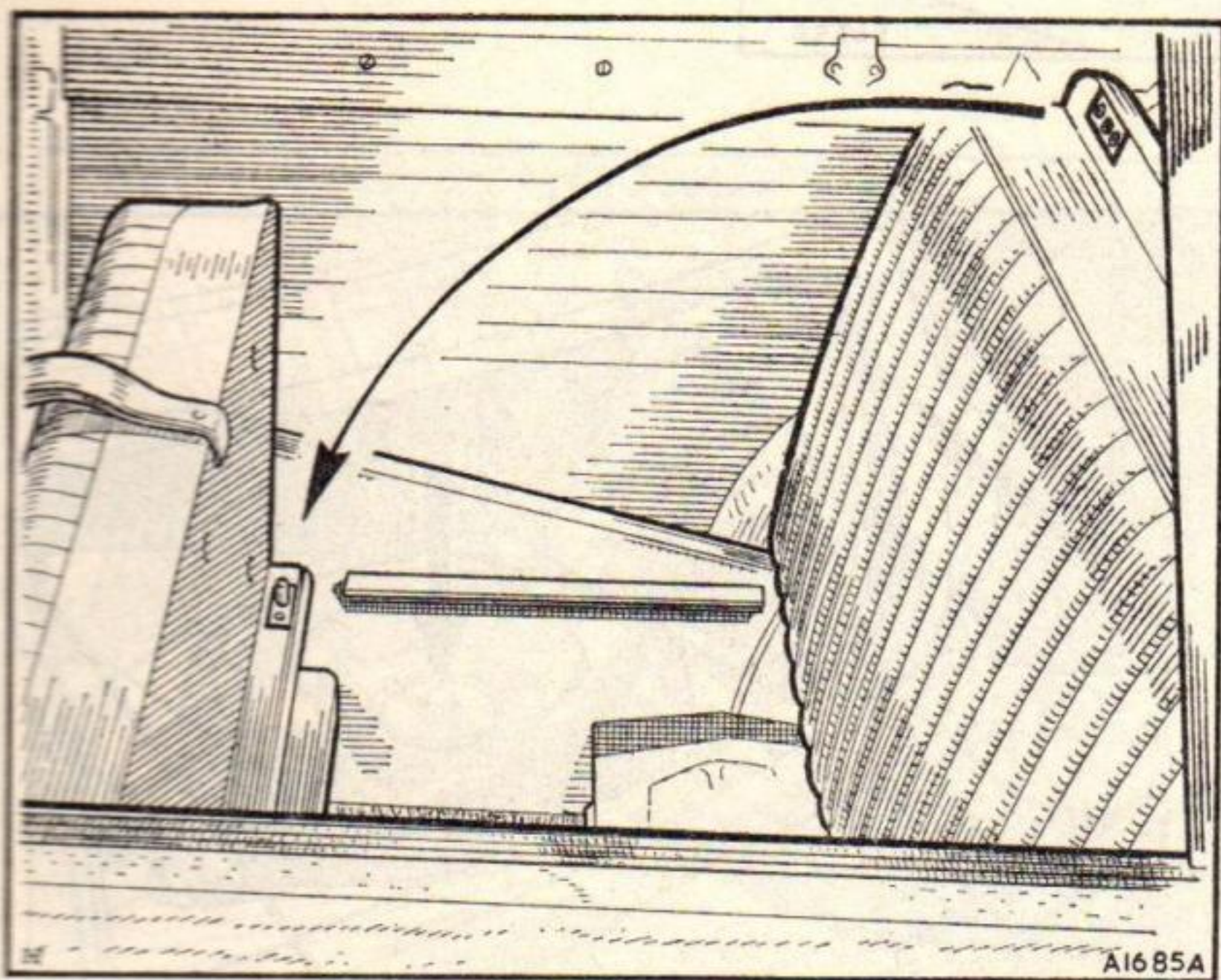
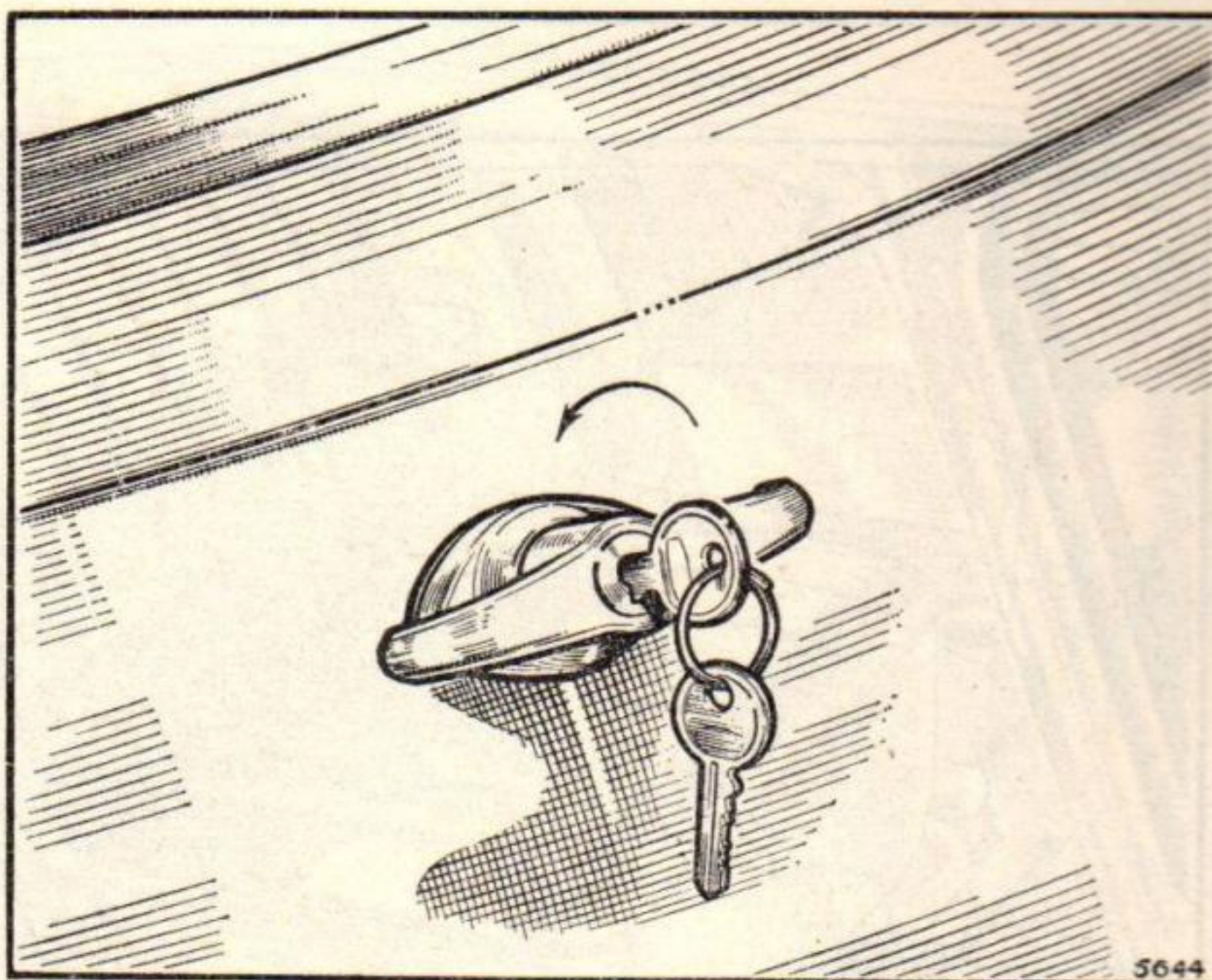
### Luggage boot

Turn the handle in an anti-clockwise direction to open the boot lid. To close, shut the lid and turn the handle clockwise.

The boot lid can be locked in the closed position with the ignition key.

Additional luggage-carrying capacity is provided by making use of the boot lid in the open position, for which purpose the rear number-plate is hinged.

*Turn the handle anti-clockwise to open the boot lid. When closed, the lid may be locked with the key provided*



*The rear passengers' seat cushion pulled up to allow the squab to fold down and increase the loading area of the luggage platform*

### Luggage loading platform (Traveller)

The rear passengers' seat squab can be folded down to increase the area of the luggage platform when additional luggage-carrying capacity is required.

Pull the seat cushion up into a vertical position, using the central hand-pull located between the cushion and the squab. Release the two sliding bolts retaining the squab against the support brackets and fold the squab down into the position normally occupied by the seat cushion.

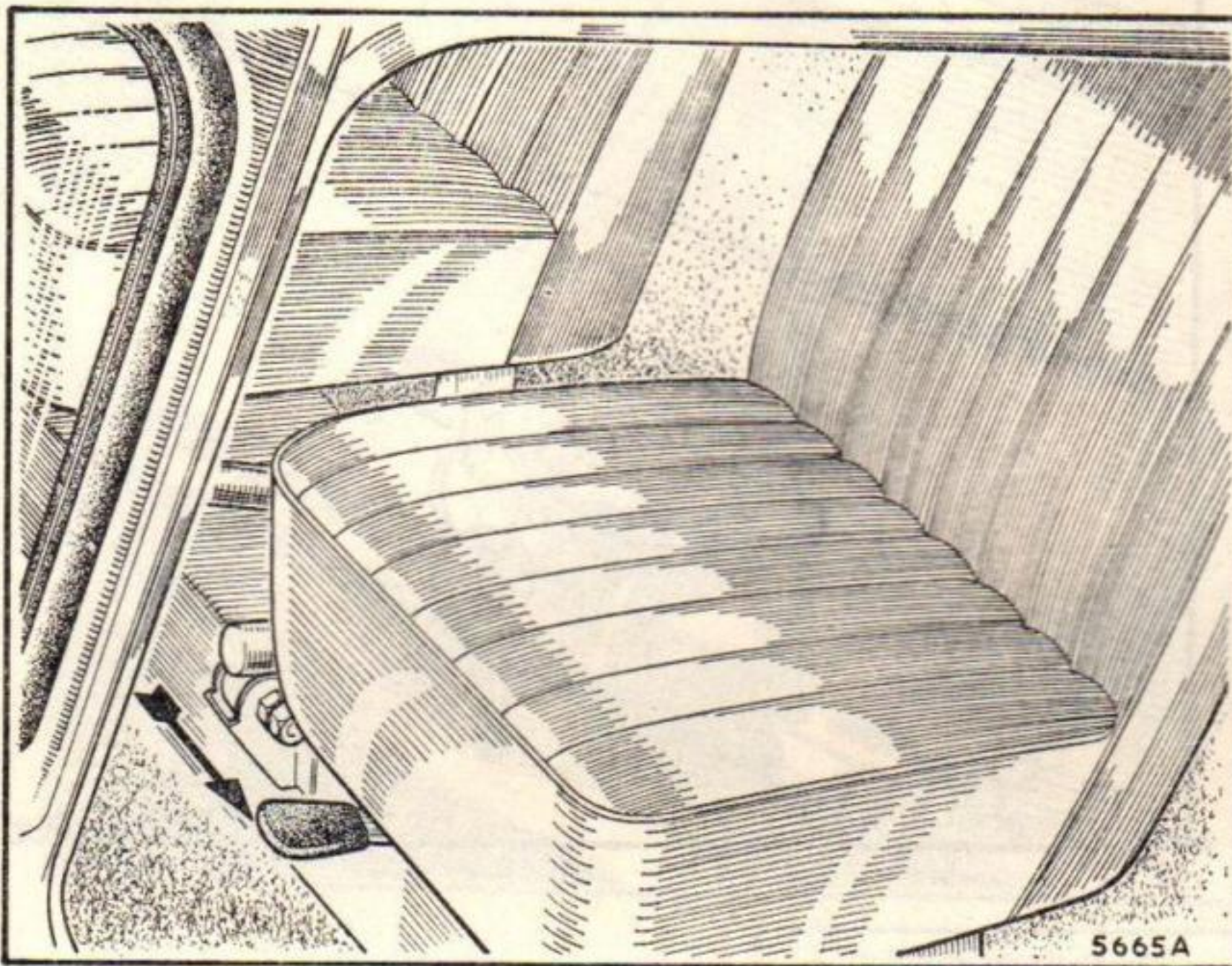
Use the lid for carrying bulky rather than heavy articles.

## SEATS

### Seat adjustment

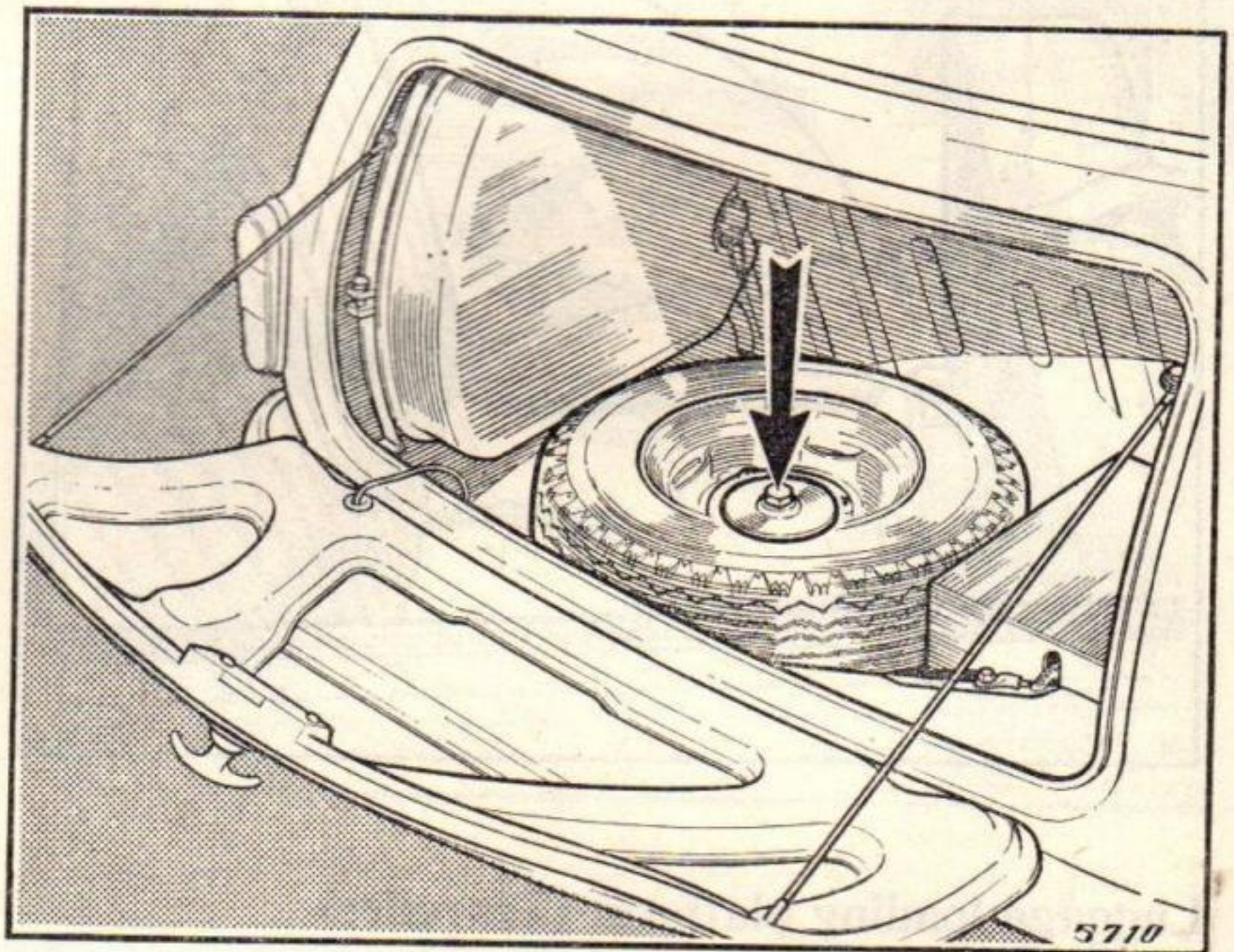
The driver's seat is adjustable and secured in position by a spring-loaded lever which extends beyond the front of the seat. Move the lever to the left to release the seat for adjustment and move the seat either forwards or rearwards as required. When the lever is released it automatically engages its stop to lock the seat in position.

Both the driver's and front passenger's seat on the de-luxe models are adjustable.



*Move the lever to the left to release the seat for adjustment*

*The spare wheel is secured by a clamp plate and bolt*



### Spare wheel (Saloon)

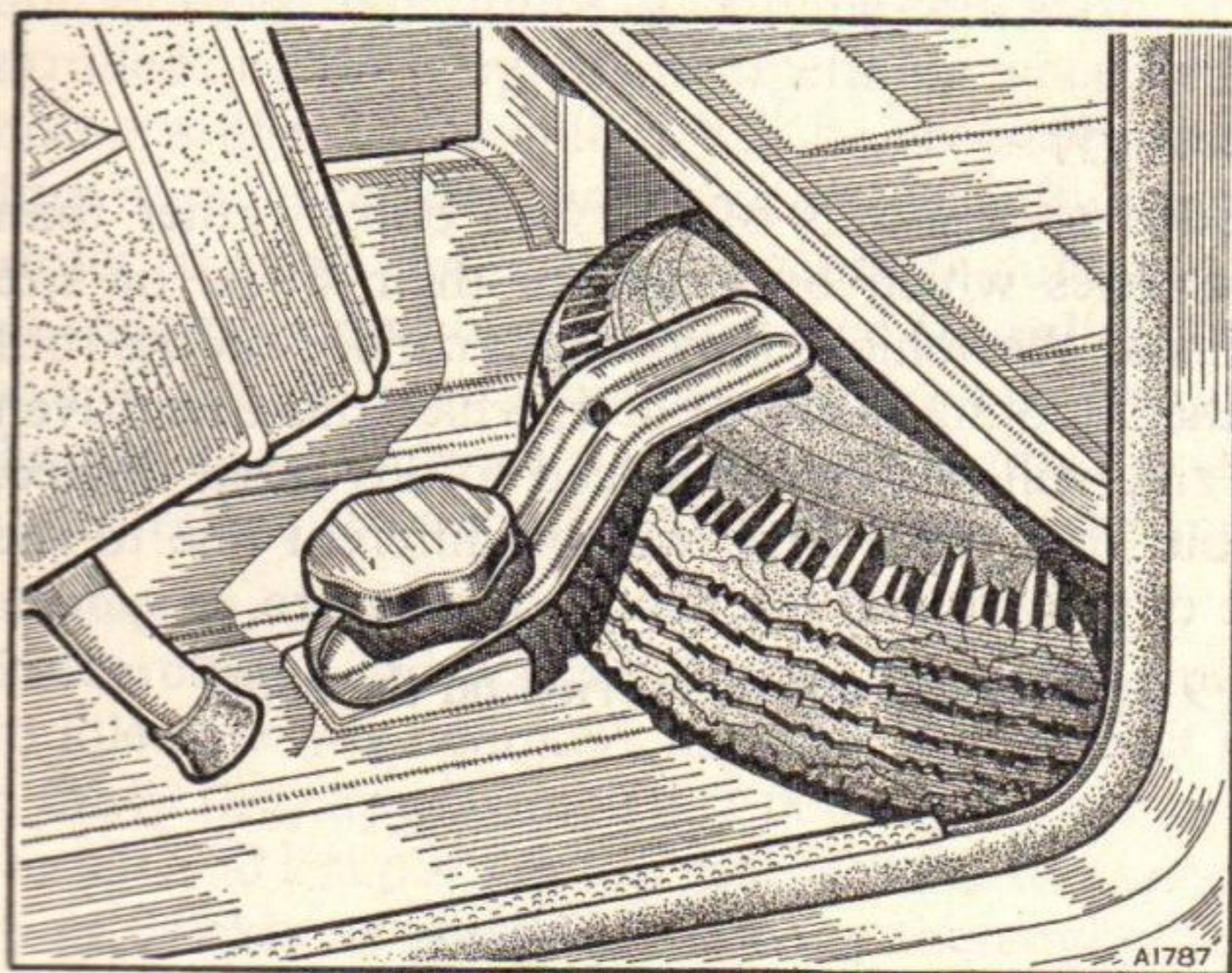
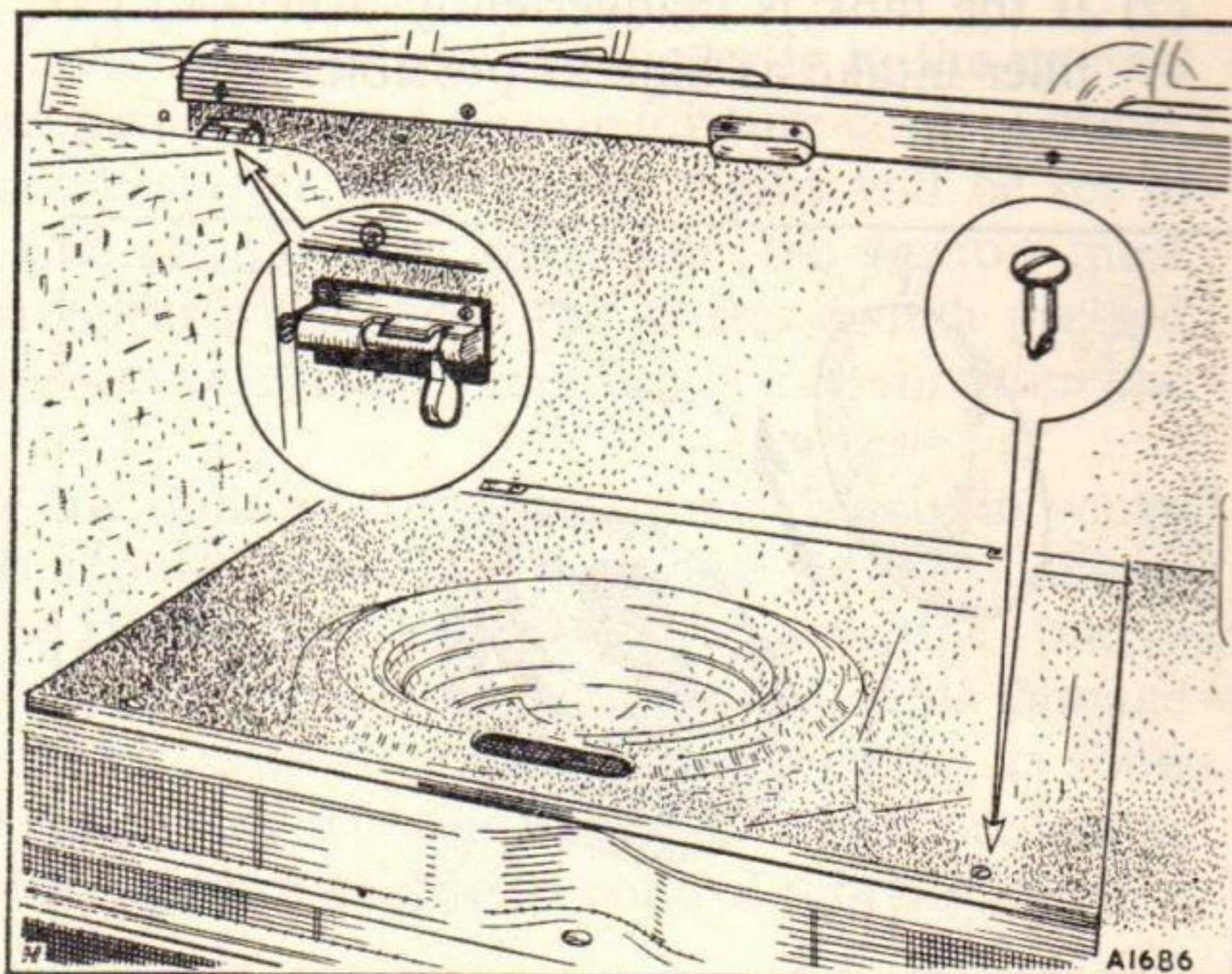
The spare wheel is stowed on the floor of the luggage boot and is secured by a clamp plate which may be released by unscrewing the bolt with the aid of the wheel nut spanner.

## SPARE WHEEL

### Spare wheel and battery (Traveller)

The spare wheel and battery are both carried beneath the luggage platform floor. The platform is secured in position by two slotted, quick-release fasteners. Turn the fasteners anti-clockwise to release them, lift the platform by the hand slot provided, and pull it rearwards to remove it from the vehicle.

*The spare wheel location beneath the luggage platform, with the platform quick-release fastener and the rear squab seat sliding bolt shown inset*



*The spare wheel stowage and wheel locating clamp*

### Spare wheel (Van)

The spare wheel is carried beneath the van body floor and is accessible when the left-hand seat is pulled forward. Rotate the locating pin anti-clockwise to release the clamp plate.

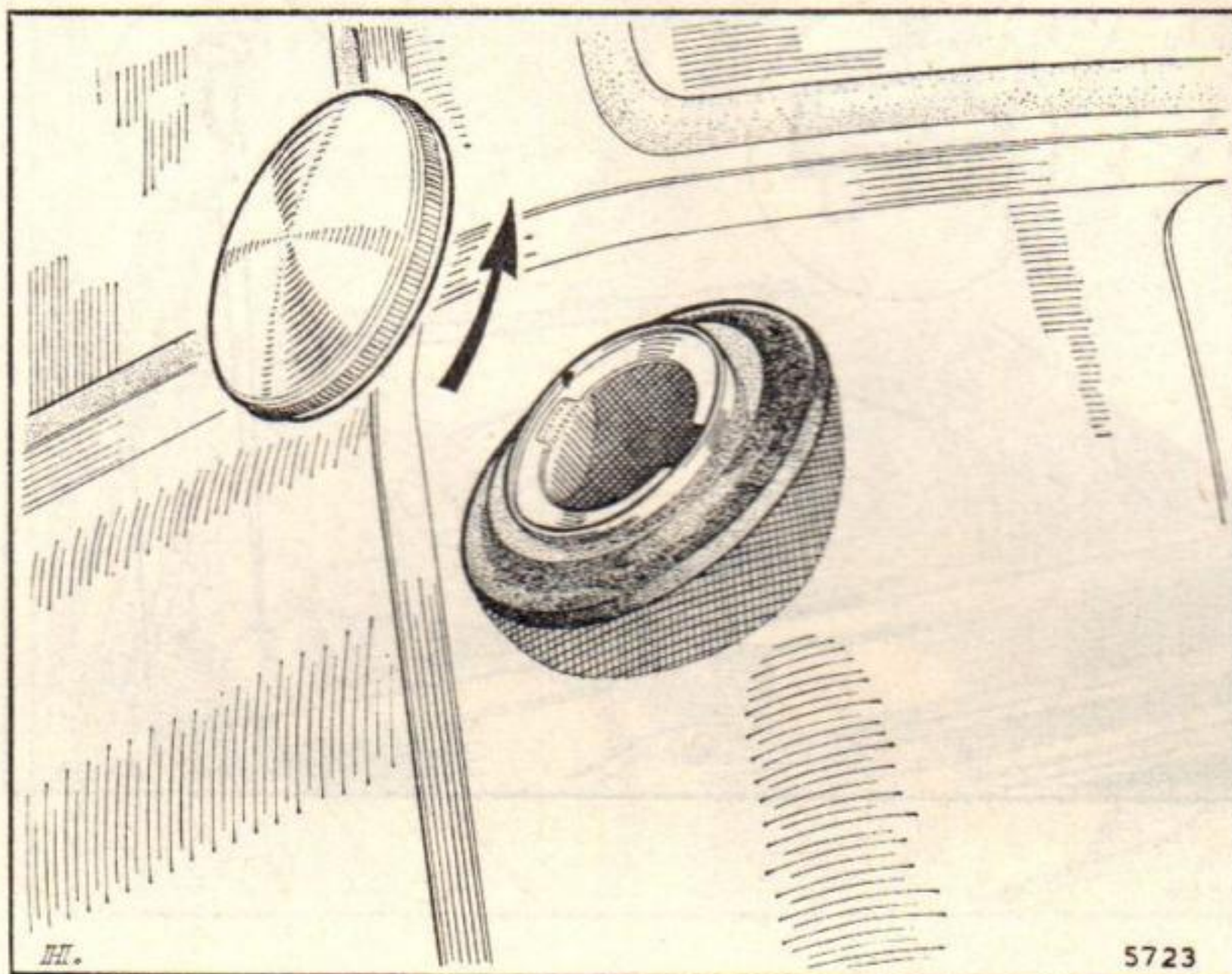
## FUEL TANK

### Filling up with fuel

Considerable loss of fuel can occur as a result of filling the tank until the fuel is visible in the filler tube. If this is done and the car is left in the sun, expansion due to heat will cause leakage, with consequent loss of and danger from exposed fuel.

When filling up therefore:

- (1) Avoid filling the tank until the fuel is visible in the filler tube.
- (2) If the tank is inadvertently overfilled park the car in the shade with the filler intake as high as possible.



*Turn the fuel filler cap anti-clockwise to release*

### Roof rack (when fitted as an accessory)

The roof rack must be regarded as a means of carrying bulky rather than heavy articles of luggage, i.e. articles which by virtue of their shape or size cannot be stowed conveniently inside the vehicle. Any weight carried on the roof must have an adverse effect on the handling of the vehicle, which must be driven with due discretion. A straight ride will not be influenced to any great degree, although cornering and behaviour in a cross-wind will be different due to the change in position of the centre of gravity and the centre of pressure.

**Weight in excess of 35 lb. (15.9 kg.) should not be carried on the roof.**

# RUNNING INSTRUCTIONS

## Running-in speeds

The treatment given to a new car will have an important bearing on its subsequent life, and engine speeds during this early period must be limited. The following instructions should be strictly adhered to:

### *During the first 500 miles (800 km.)*

- DO NOT exceed 45 m.p.h. (72 km.p.h.).
- DO NOT operate at full throttle in any gear.
- DO NOT allow the engine to labour in any gear.

## Starting up

Before starting up the engine make sure that the gear lever is in the neutral position. When starting from cold pull out the choke or mixture control knob. Switch on the ignition and press the starter button. The engine will be set in motion and after a second or two should start up, when the button must immediately be released. It is bad practice to keep the starter switch pressed if the engine refuses to start as the starter takes a very heavy current from the battery and may discharge it.

After the engine has run for a few minutes, or almost immediately in warm weather, the choke control knob should be pushed in to the 'weak' position. On no account must the engine be run for any length of time with this control pulled out or neat fuel will be drawn into the cylinders and considerable damage may be caused. The control should be returned to its normal position as soon as the engine is warm enough to run evenly without its use. It is not necessary, in fact it is detrimental, to use the mixture or choke control when starting a warm engine.

## Carburettor heaters

Carburettor induction and suction chamber heaters are fitted to cars in countries where conditions of extreme cold exist. The heaters are thermostatically controlled and are brought into operation when the ignition is switched on. Under conditions of extreme cold it will be necessary to allow a waiting period of up to four minutes between switching on the ignition and operating the starter control in order to allow the heaters to generate sufficient heat to ensure easy starting. This waiting period may be shortened according to the severity of the conditions under which the vehicle may be required to operate. In the event of the engine failing to start a further waiting period with the ignition switched on is recommended rather than continued operation of the starter control.

## Warming up

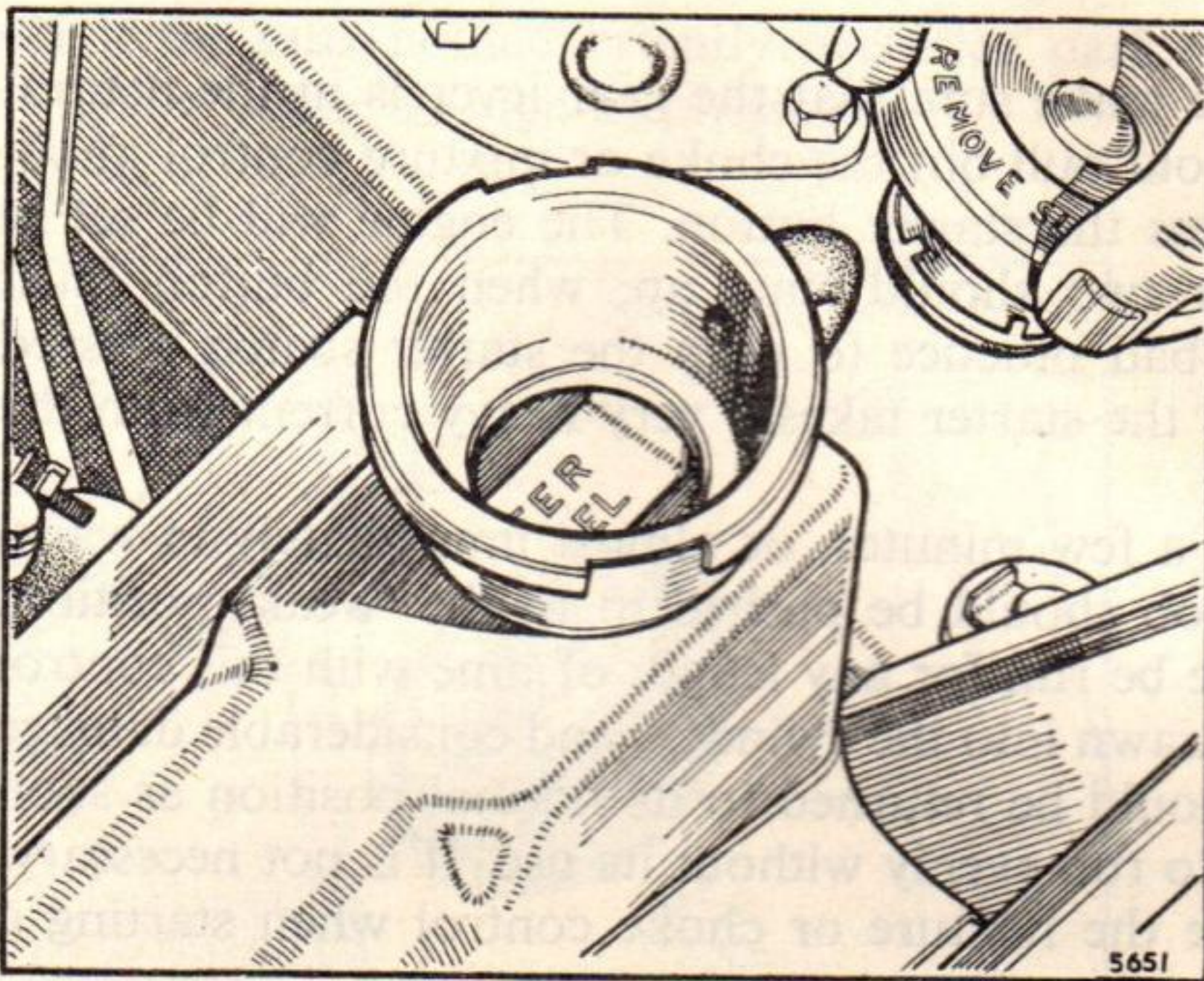
Research has proved that the practice of warming up an engine by allowing it to idle slowly is definitely harmful. The correct procedure is to let the engine run fairly fast, approximately 1,000 r.p.m., corresponding to a speed of about 18 m.p.h. (30 km.p.h.) in top gear, so that it attains its correct working temperature as **quickly as possible**. Allowing the engine to work slowly in a cold state leads to excessive cylinder wear, and far less damage is done by driving the car straight on the road from cold than by letting the engine idle slowly in the garage.

## Wet brakes

After the vehicle has been washed or driven through water the brake linings may become wet. To dry them apply the brakes several times with the vehicle moving slowly. Emergency braking with wet brakes is extremely dangerous and is to be avoided at all costs. Keep the hand brake fully on when using high-pressure washing equipment.

# COOLING SYSTEM

A pressurized cooling system is used on this vehicle and the pressure must be released gradually when removing the radiator filler cap while the system is hot. It is advisable to protect the hands against escaping steam and then turn the cap slowly anti-clockwise until the resistance of the safety stop is felt. Leave the cap in this position until all pressure is released. Press the cap downwards against the spring to clear the safety stops and continue turning until it can be lifted off.



*Press the cap downwards and turn it anti-clockwise to release the radiator cap. A water level indicator is fitted inside the header tank*

## **Frost precautions**

Water, when it freezes, expands, and if precautions are not taken there is considerable risk of bursting the radiator, cylinder block, or heater (where fitted). Such damage may be avoided by draining the cooling system when the vehicle is left for any length of time in frosty weather, or by adding anti-freeze to the water. When a heater is fitted anti-freeze **must** be used as no provision is made for draining the unit.

Before adding anti-freeze mixture the cooling system must be drained and flushed through by inserting a hose in the filling orifice and allowing water to flow through until clean. The taps should be closed after allowing all the water to drain away and the anti-freeze should be poured in first, followed by the water.

The cooling system is of the sealed type and relatively high temperatures are developed in the radiator header tank. For this reason anti-freeze solutions having an alcohol base are unsuitable owing to their high evaporation rate producing a rapid loss of coolant and a consequent interruption of circulation.

Only anti-freeze of the ethylene glycol type incorporating the correct type of corrosion inhibitor is suitable and owners are recommended to use Bluecol, Shell Snowflake, or Esso Anti-freeze. We also approve the use of any anti-freeze which conforms to Specification B.S.3151 or B.S.3152.

Do not use radiator anti-freeze solution in the windshield-washing equipment (where fitted).

## DRAINING THE COOLING SYSTEM

The correct quantities of anti-freeze for different degrees of frost resistance are:

*Down to 7° F. (-14° C.)*

15 per cent. solution

Quantity:  $\frac{3}{4}$  pint (.43 litre, .9 U.S. pint)

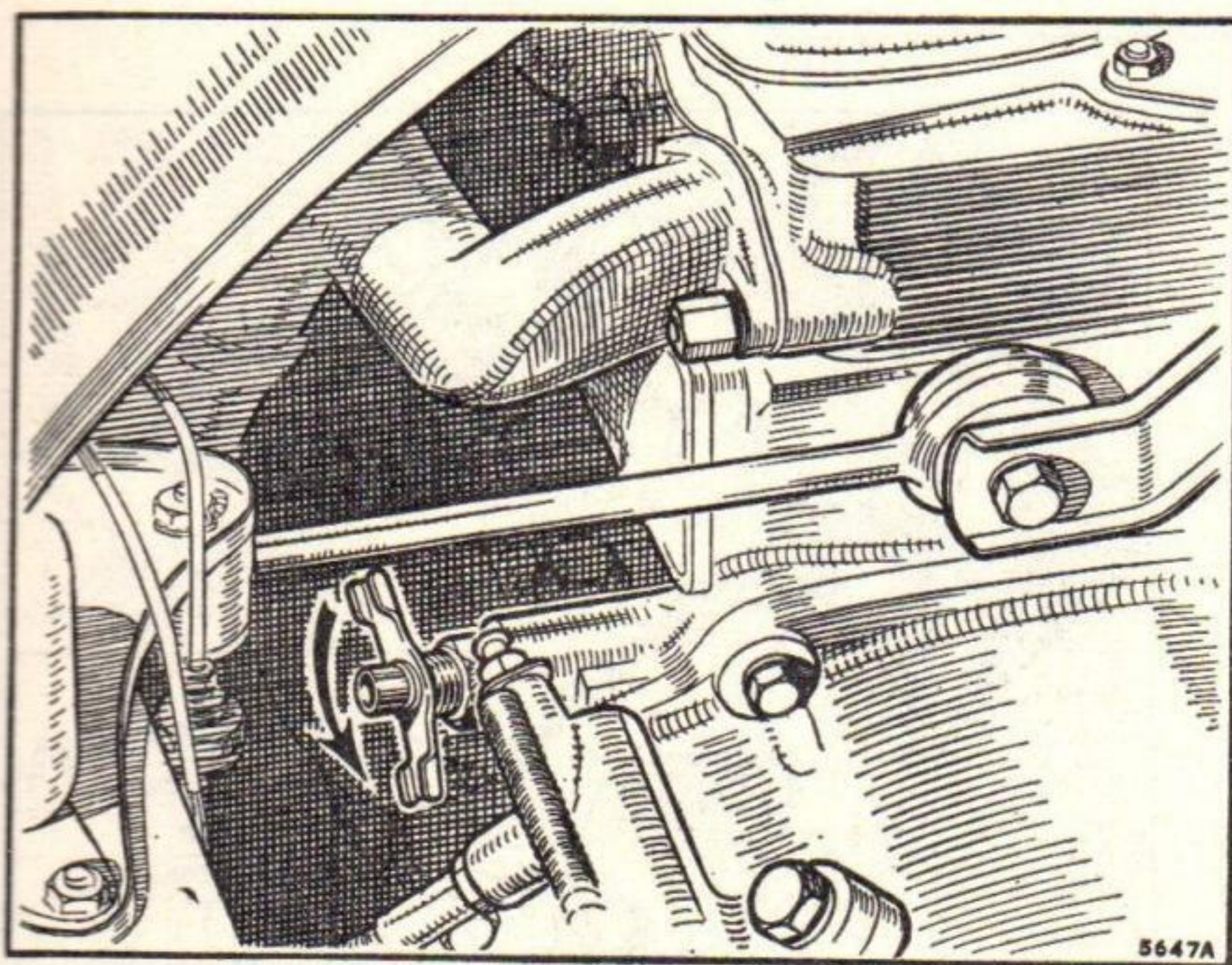
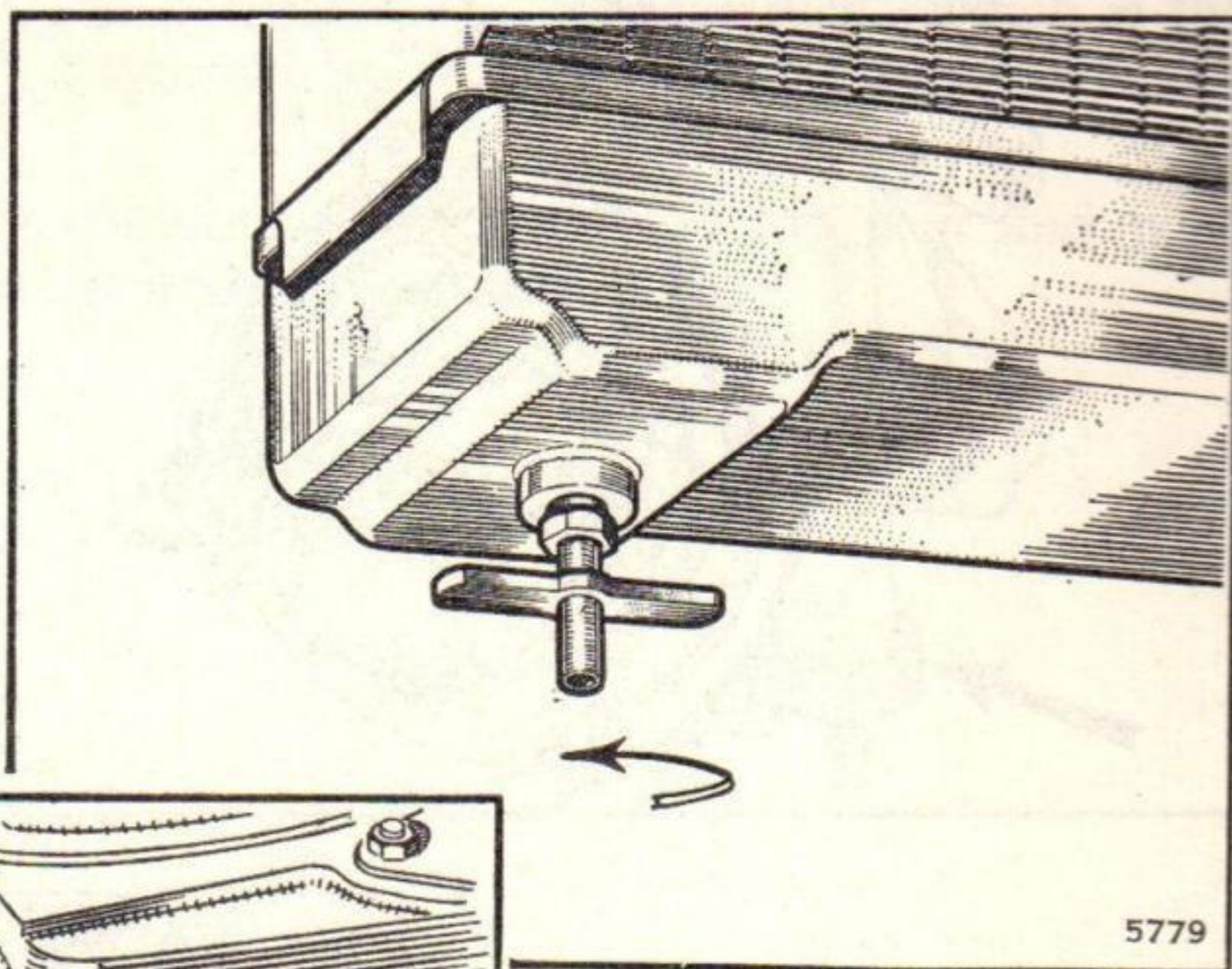
*Down to 0° F. (-18° C.)*

20 per cent. solution

Quantity: 1 pint (.57 litre, 1.2 U.S. pints)

First decide what degree of frost protection is required before adding the anti-freeze to the radiator. If temperatures below 0° F. (-18° C.) are likely, solutions of 25 per cent. or more must be employed. Consult your local Dealer for the correct proportions.

*Access to the radiator drain tap is gained from under the front of the car. Turn the tap anti-clockwise (facing tap) to open*



*The drain tap for the cylinder block is located on the rear of the block*

### Draining the cooling system

Two drain taps are provided for draining the cooling system: one is at the base of the radiator on the forward side and the other is on the rear of the cylinder block. Both are accessible from under the bonnet and both must be opened and the filler cap removed to drain the cooling system completely. If the system contains anti-freeze remember to collect it in a clean container for future use.

### Filling the cooling system

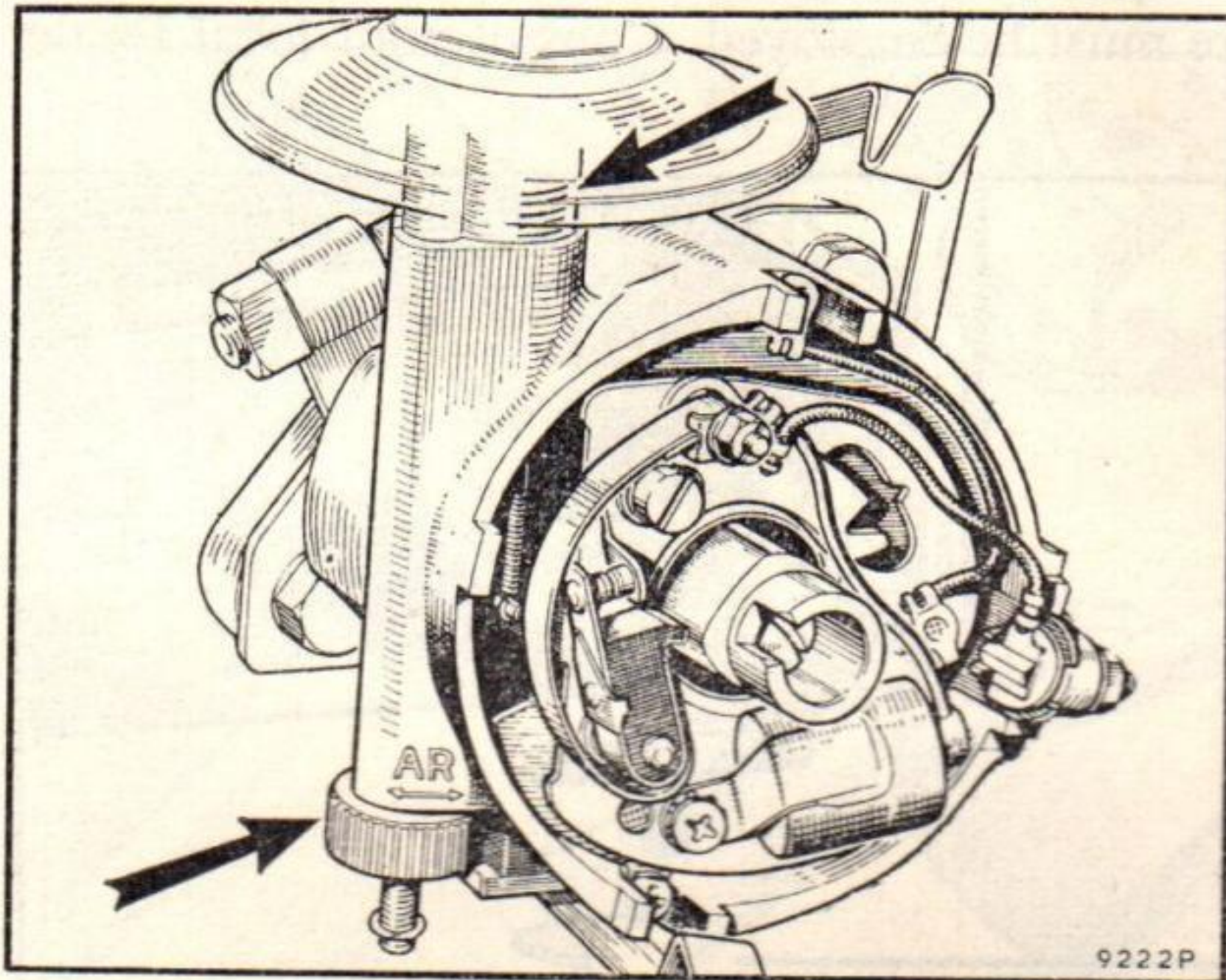
To avoid wastage by overflow add just sufficient coolant to cover the bottom of the header tank. Run the engine until it is hot and add sufficient coolant to bring the surface to the level of the indicator positioned inside the header tank below the filler neck.

# IGNITION EQUIPMENT

## Ignition adjustment

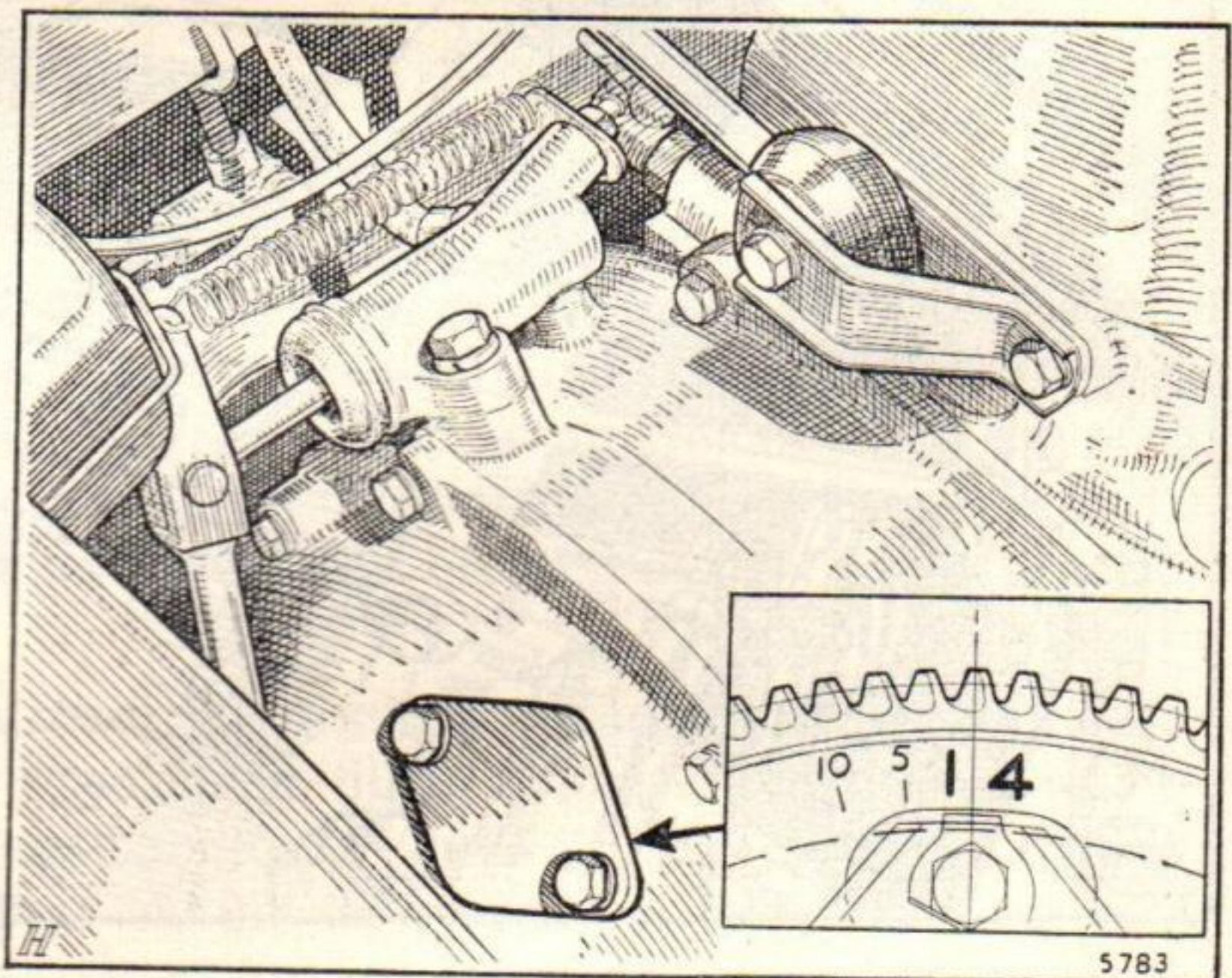
Adjustment is provided for the ignition point to enable the best setting to be attained to suit varying fuels. The adjustment nut is indicated by the lower arrow in the illustration below, and turning the nut clockwise retards the ignition. Turning it anti-clockwise advances the ignition.

The barrel of the screwed spindle has graduations to indicate the settings.



*The ignition adjusting nut and the graduated scale*

*The pointer and timing marks on the flywheel may be seen with the aid of a mirror after removing the inspection cover. T.D.C. position is indicated by the mark 1/4. Marks giving 5° and 10° B.T.D.C. positions are also provided*



## Static ignition setting

The static ignition setting for engines fitted with a distributor suitable for operating with premium-grade fuel is T.D.C. The special distributor fitted to permit the use of regular grade fuels of 90° octane and below can be identified by the letters 'FA' included in the engine serial number. The setting for engines fitted with this distributor is 3½° B.T.D.C. up to Engine Serial No. 14824 and 2½° B.T.D.C. for engines after this serial number.

The ignition point can be reset if necessary by adjusting the knurled nut on the distributor body. Each graduation on the barrel is equal to approximately 5° of timing movement and one graduation is equal to 55 clicks on the knurled nut.

## IGNITION SETTING

The range of adjustment provided by the micrometer adjuster is ample to deal with any variations normally encountered.

Do not disturb the pinch-clip at the base of the distributor unless absolutely necessary.

### Top dead centre

Remove the inspection cover from the top of the clutch housing, and with the aid of a mirror look for the small pointer projecting below the top of the aperture.

Three marks are provided on the flywheel face—namely, '1/4', which is the T.D.C. position for No. 1 or No. 4 cylinder, and two further marks giving 5° and 10° B.T.D.C. positions.

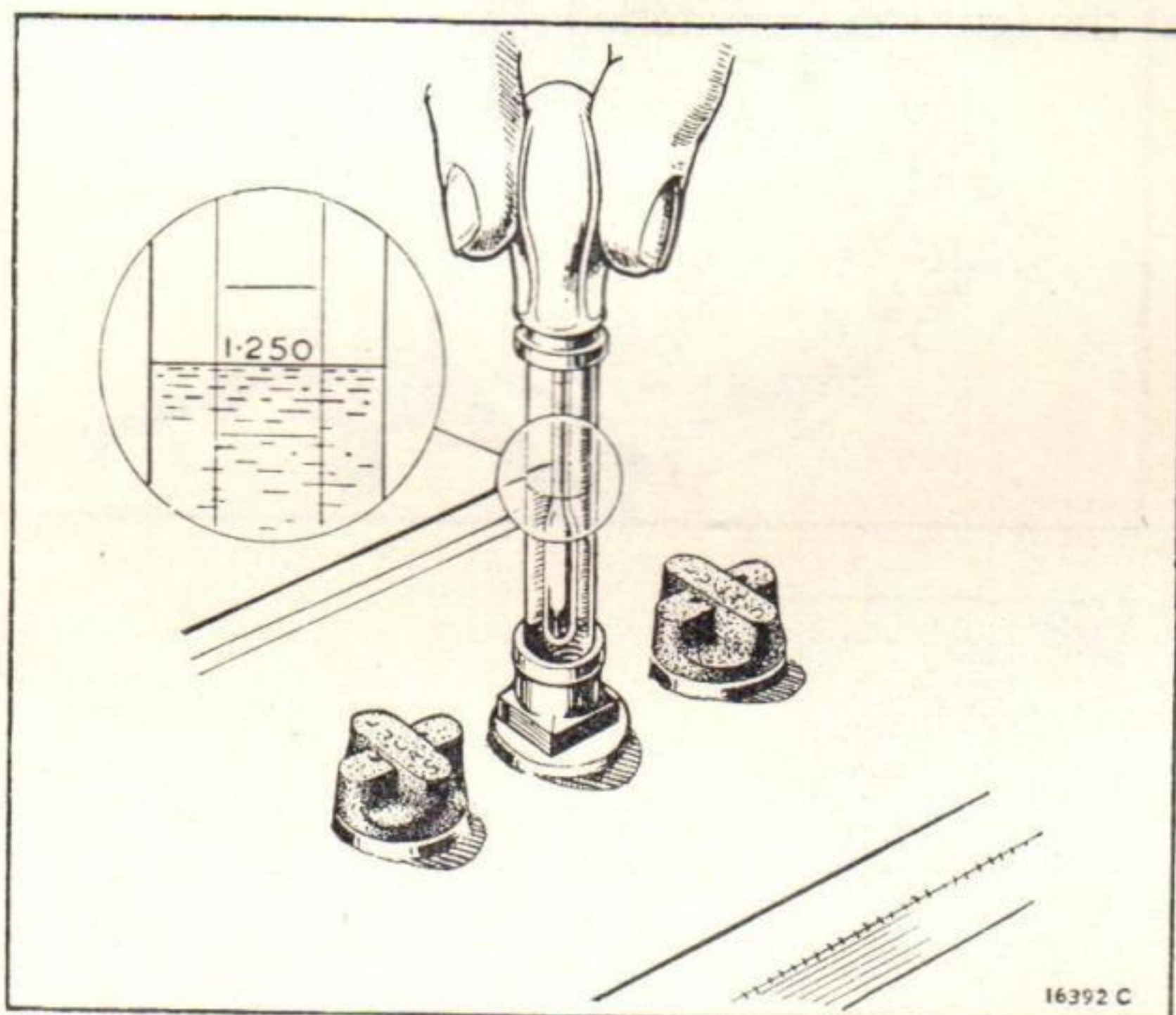
To rotate the flywheel to the required position engage top gear and push the car forward. Make sure that the ignition is switched **off**.

# ELECTRICAL EQUIPMENT

## Checking the specific gravity

Check the condition of the battery by taking hydrometer readings of the specific gravity of the electrolyte in each of the cells. Readings should not be taken immediately after topping up the cells. The hydrometer must be held vertically and the readings taken at eye-level. Check that the float is free and take care not to draw in too much electrolyte. The specific gravity readings and their indications are as follows:

	<i>For climates below 90° F. (32° C.)</i>	<i>For climates above 90° F. (32° C.)</i>
Battery fully charged ..	1.270 to 1.290	1.210 to 1.230
Battery about half-discharged	1.190 to 1.210	1.130 to 1.150
Battery fully discharged ..	1.110 to 1.130	1.050 to 1.070



*When taking hydrometer readings make certain that the float is free, hold the tube vertically, and do not draw in too much electrolyte. The readings must be taken at eye-level*

These figures are given assuming that the temperature of the solution is about 60° F. (16° C.). If the temperature of the electrolyte exceeds 60° F. (15° C.) .002 must be added to the hydrometer for each 5° F. rise to give the true specific gravity. Similarly, .002 must be subtracted from the hydrometer reading for every 5° F. below 60° F. (15° C.). The readings for all cells should be approximately the same. If one cell gives a reading very different from the rest it may be that acid has been spilled or has leaked from this particular cell, or there may be a short circuit between the plates, in which case the battery should be examined by a Lucas Service Depot or Agent.

Top up the cells with distilled water. Do not use tap-water and do not use a naked light when examining the conditions of the cells.

Do not overfill, and always wipe away all dirt and moisture from the top of the battery.

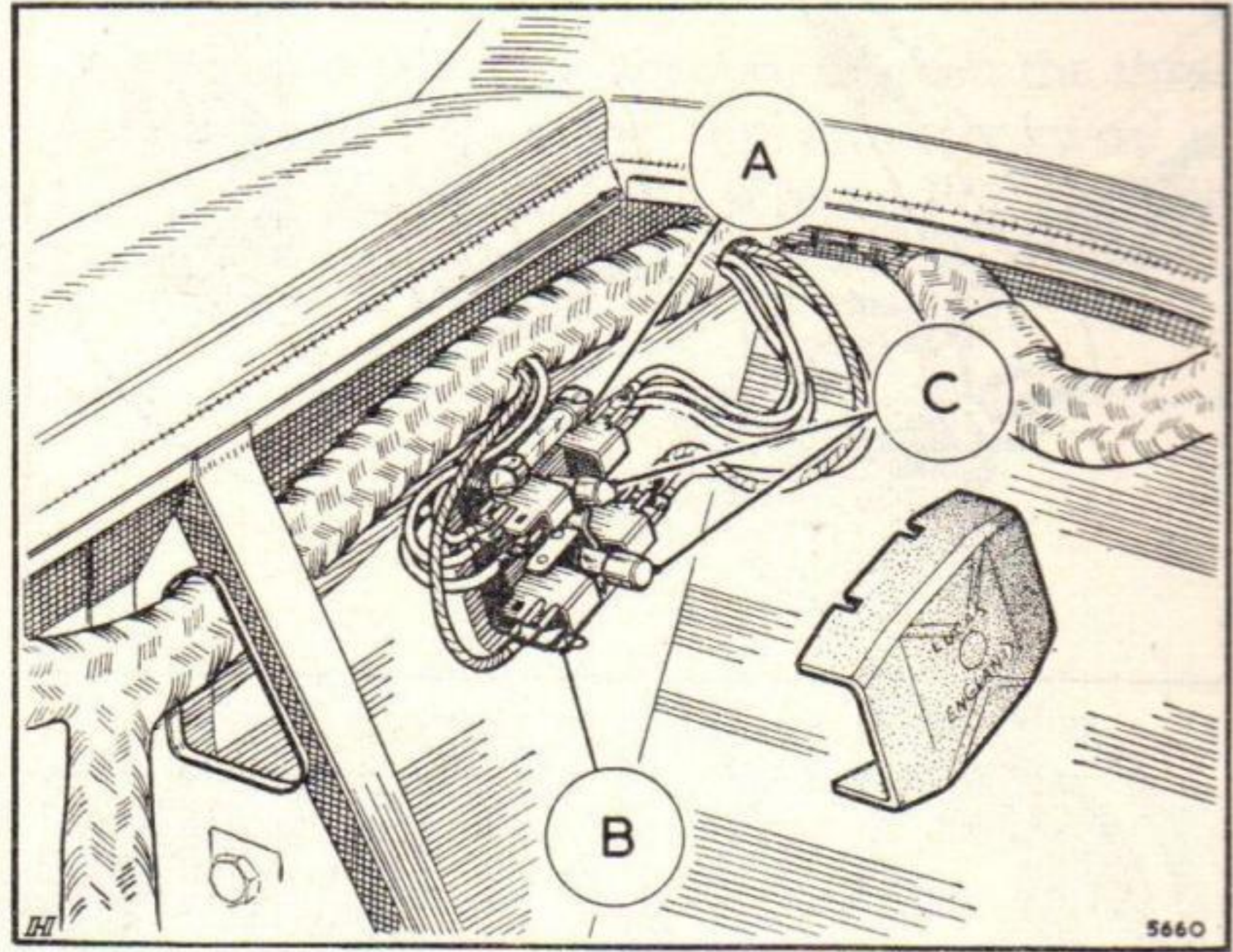
Never leave the battery in a discharged condition for any length of time. Have it fully charged, and every fortnight give it a short refreshing charge to prevent any tendency for the plates to become permanently sulphated.

## FUSES AND WINDSHIELD WIPER BLADES

### Fuses

The two fuses and two spares are to be found in a holder covered by a plastic push-on-type lid on the right-hand side of the engine bulkhead. One 35-amp. fuse connecting terminals 'A3' and 'A4' protects the circuits which operate only when the ignition is switched on. The other fused circuits are also protected by a 35-amp. fuse connecting the terminals marked 'A1' and 'A2'. Take care to use only fuses of the correct value when replacements are fitted.

*The fuses are carried in the separate fuse block mounted on the right-hand valance. (A) and (B) indicate ignition and ignition auxiliary circuits; (C) spare fuses*



### Spare fuses

Spare fuses are provided, and it is important to use only the correct replacement fuse. The fusing value is marked on a coloured paper slip inside the glass tube of the fuse. If the new fuse blows immediately and the cause of the trouble cannot be found have the equipment examined by an Authorized B.M.C. Distributor or Dealer.

### Voltage regulator

This is a sealed unit, located on the engine bulkhead, which controls the charging rate of the dynamo in accordance with the needs of the battery. It requires no attention and should not be disturbed.

### Jammed starter pinion

In the event of the starter pinion becoming jammed in mesh with the flywheel, it can usually be freed by turning the starter armature by means of a spanner applied to the shaft extension at the commutator end.

The shaft extension is protected by a removable cap.

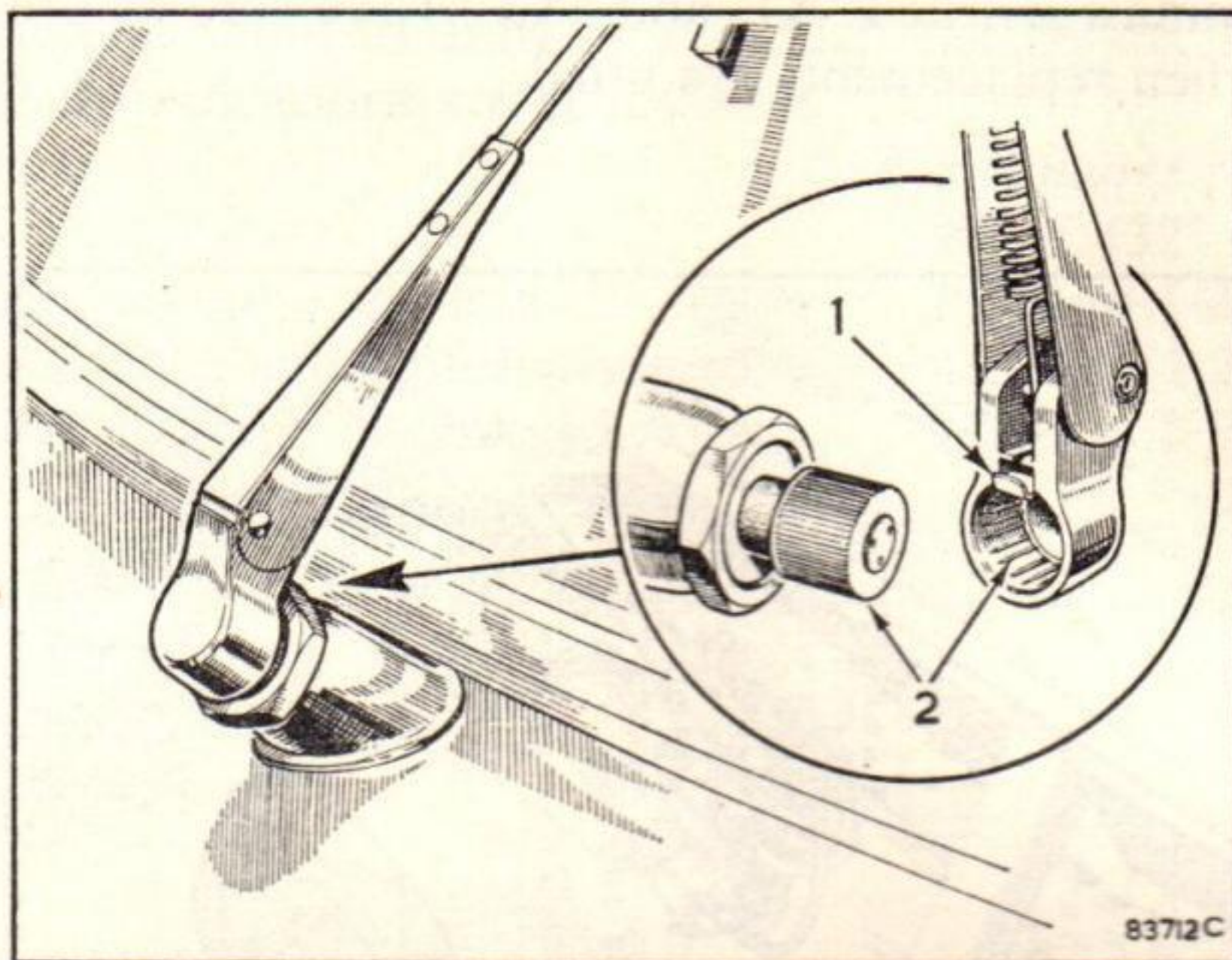
### Windshield wiper

No adjustment or lubrication is necessary as the gears are packed with grease before leaving the Factory.

Should it be necessary to reposition the wiper blades on their spindles, they

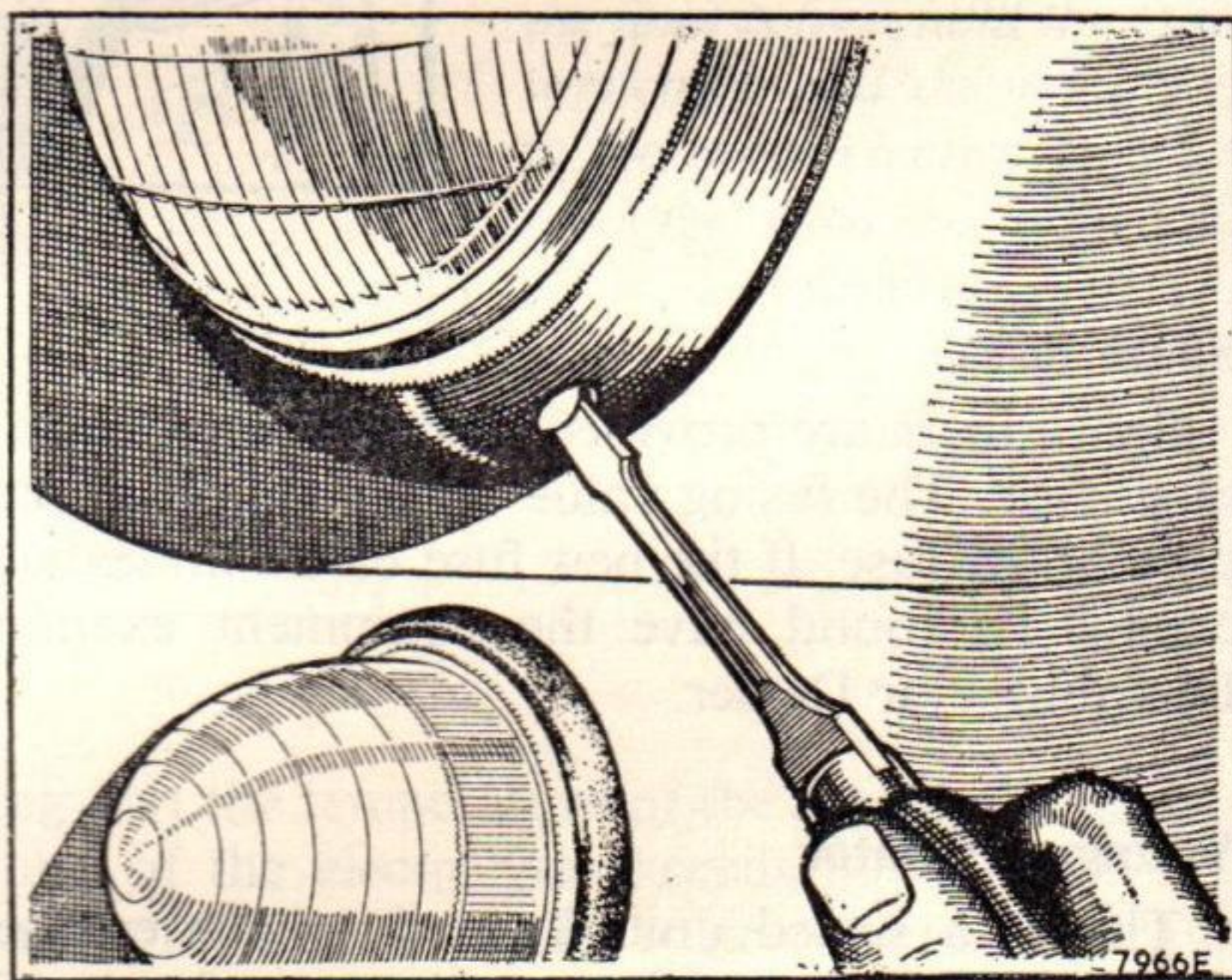
## HEADLAMPS

can be withdrawn by holding back the small retaining spring clip, which locates in a register in the spindle, and withdrawing the blade. Replace the blade on the required spline by pushing it hard down on the spindle until it is retained by the spring clip.



*Raise the retaining clip (1)  
and withdraw the arm from  
the splined spindle (2)*

*The headlamp rim securing  
screw is located at the  
bottom of the rim*



### **Headlamps (R.H.D. and L.H.D. except Europe)**

Unscrew the securing screw at the bottom of the lamp rim and lift off the rim. Remove the dust-excluding rubber, which will reveal three spring-loaded screws. Press the lamp unit inwards against the tension of the springs and turn it in an anti-clockwise direction until the heads of the screws can pass through the enlarged ends of the keyhole slots in the rim.

Withdrawal of the lamp unit gives immediate access to the bulb carrier for replacement. Twist the back-shell anti-clockwise and pull it off. The bulb can then be withdrawn from its holder.

Fit the replacement bulb in the holder with the slot in its disc in engagement with the projections in the holder. Engage the projections on the back-shell with the holder slots, press on, and twist to the right until its catch engages.

## Headlamps (European type)

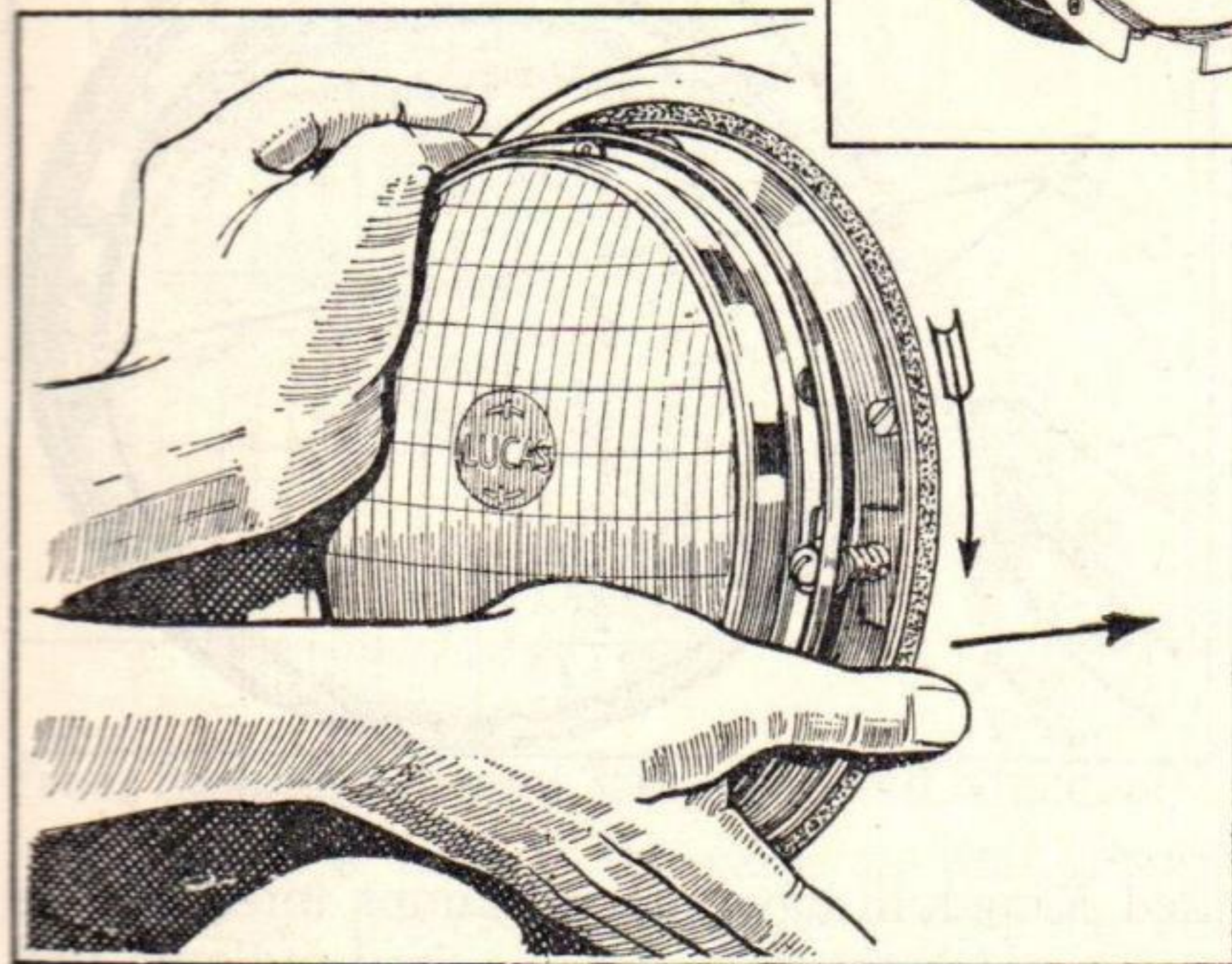
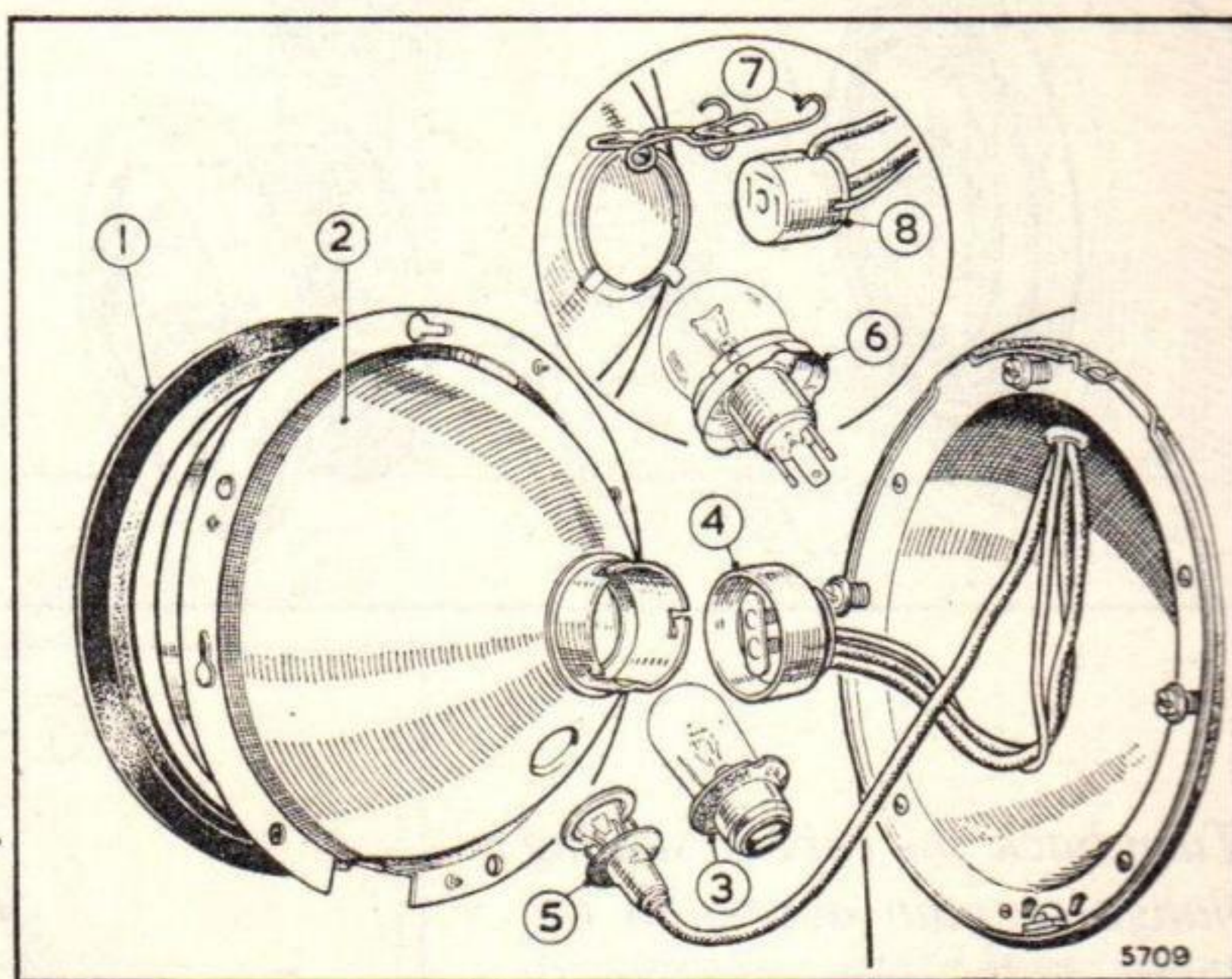
Access to the light unit is obtained in the same manner as that described for right-hand-drive cars, but the bulb is released from the reflector by withdrawing the three-pin socket and pinching the two ends of the wire retaining clip to clear the bulb flange. When replacing the bulb care must be taken to see that the rectangular pip on the bulb flange engages the slot in the reflector seating. Replace the spring clip with its coils resting in the base of the bulb flange and engaging the two retaining lugs on the reflector seating for the bulb.

## Headlamps (North America, sealed-beam)

To change a sealed-beam light unit remove the lamp shroud, slacken the three retaining screws securing the light rim, and rotate the rim anti-clockwise to disengage the slotted holes from the heads of the retaining screws. Pull the unit forward to release it from the back-shell.

### *The headlamp unit*

1. Rubber seal.
2. Reflector.
3. Bulb.
4. Back-shell.
5. Pilot lamp (U.K. only).
6. Bulb
7. Bulb retainer } European.
8. Socket.



*Replacing the lamp unit*

## Replacing the headlamp unit and lamp front

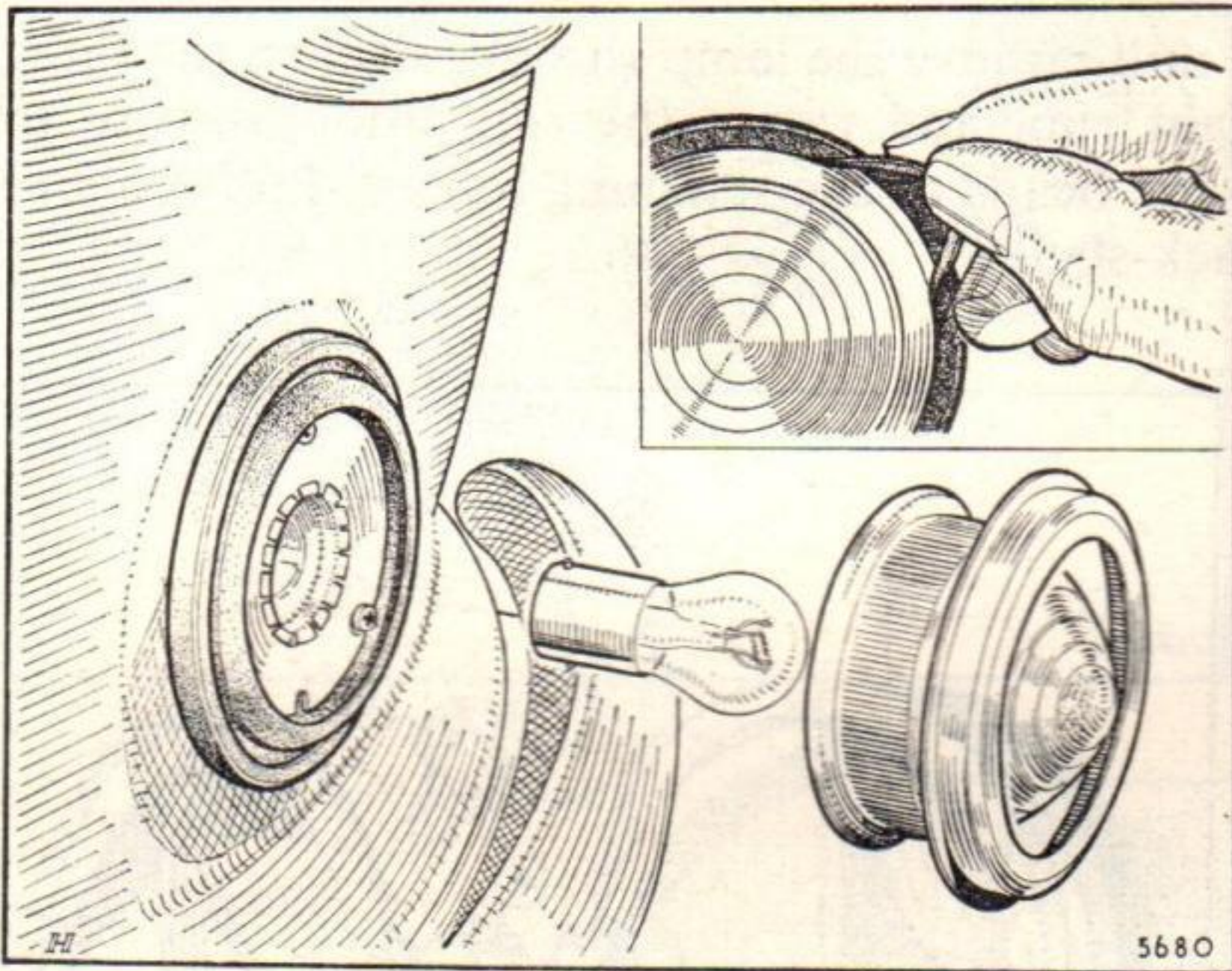
Position the lamp unit so that the heads of the adjusting screws pass through the slotted holes in the flange, press the unit inwards, and turn it in a clockwise direction as far as it will go. Replace the dust-excluding rubber and refit the front rim.

# PILOT LAMPS AND FLASHING INDICATORS

## Setting the headlamp beams

The lamps should be set so that the main driving beams are parallel with the road surface or in accordance with local regulations. If adjustment is required remove the rim as described on page 22. Vertical adjustment is made by turning the screw at the top of the lamp. Horizontal adjustment can be effected by using the adjustment screws on each side of the lamp unit. Only one horizontal adjustment screw is provided on the sealed-beam-type light unit.

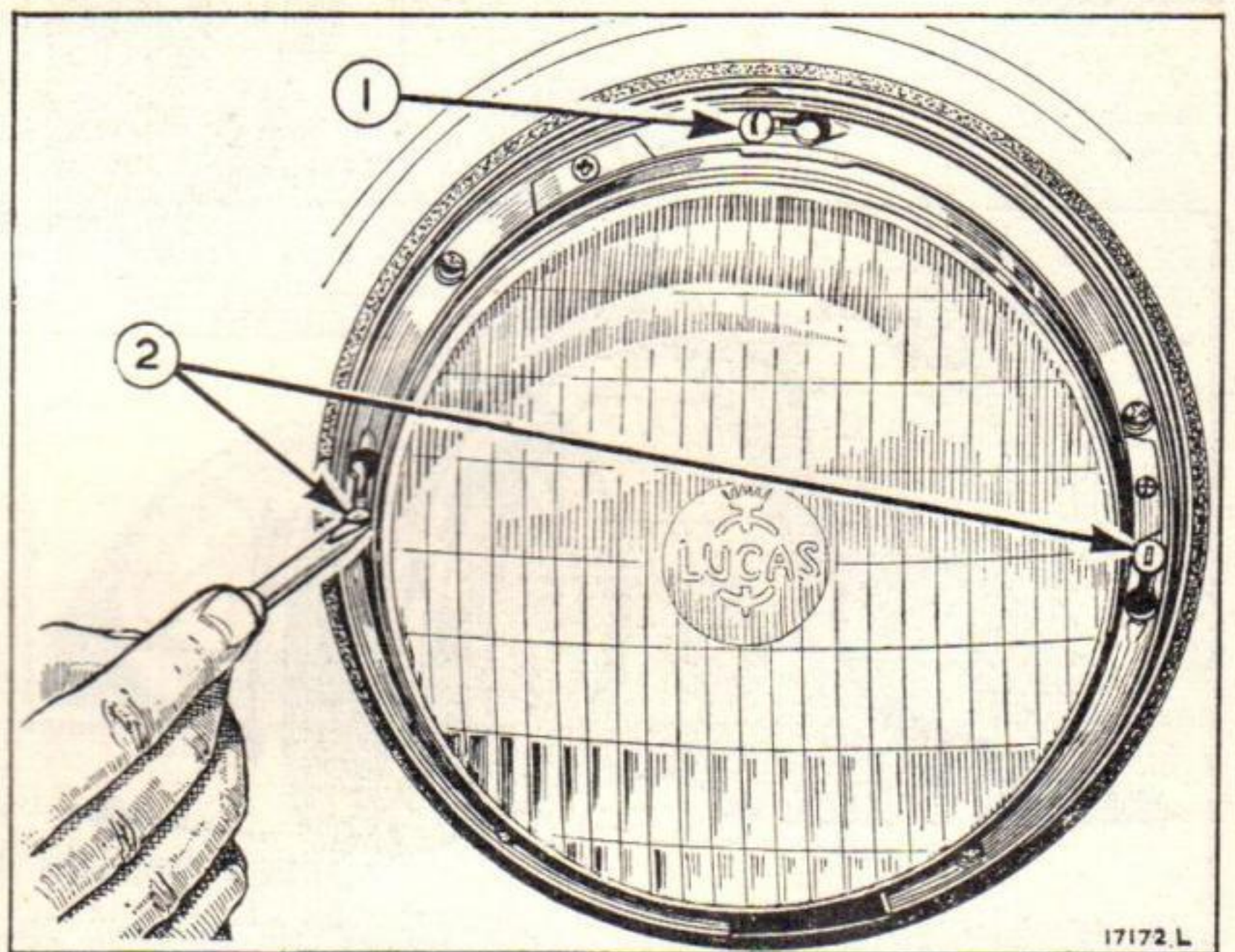
Checking and resetting of headlamp beams should be entrusted to an Authorized Dealer, who will have specialist equipment available for this purpose.



*The method of setting the headlamp beams*

1. Vertical setting adjusting screw.
2. Horizontal setting adjusting screw.

*Turn back the rubber sealing flange to gain access to the lamp bulb. On vehicles to be used other than in the United Kingdom this lamp serves the dual purpose of sidelamp and flashing direction indicator lamp. A double-filament bulb is fitted with offset locating pegs*



## Sidelamps (United Kingdom)

Cars built for use in the United Kingdom have the sidelamps integral with the headlamps. To gain access to a sidelamp bulb remove the headlamp unit as described on page 22. The bulb holder is of the push-in type, and after withdrawing the holder from the lamp unit the bulb may easily be removed or replaced.

## Side and flashing indicator lamps—front (Export)

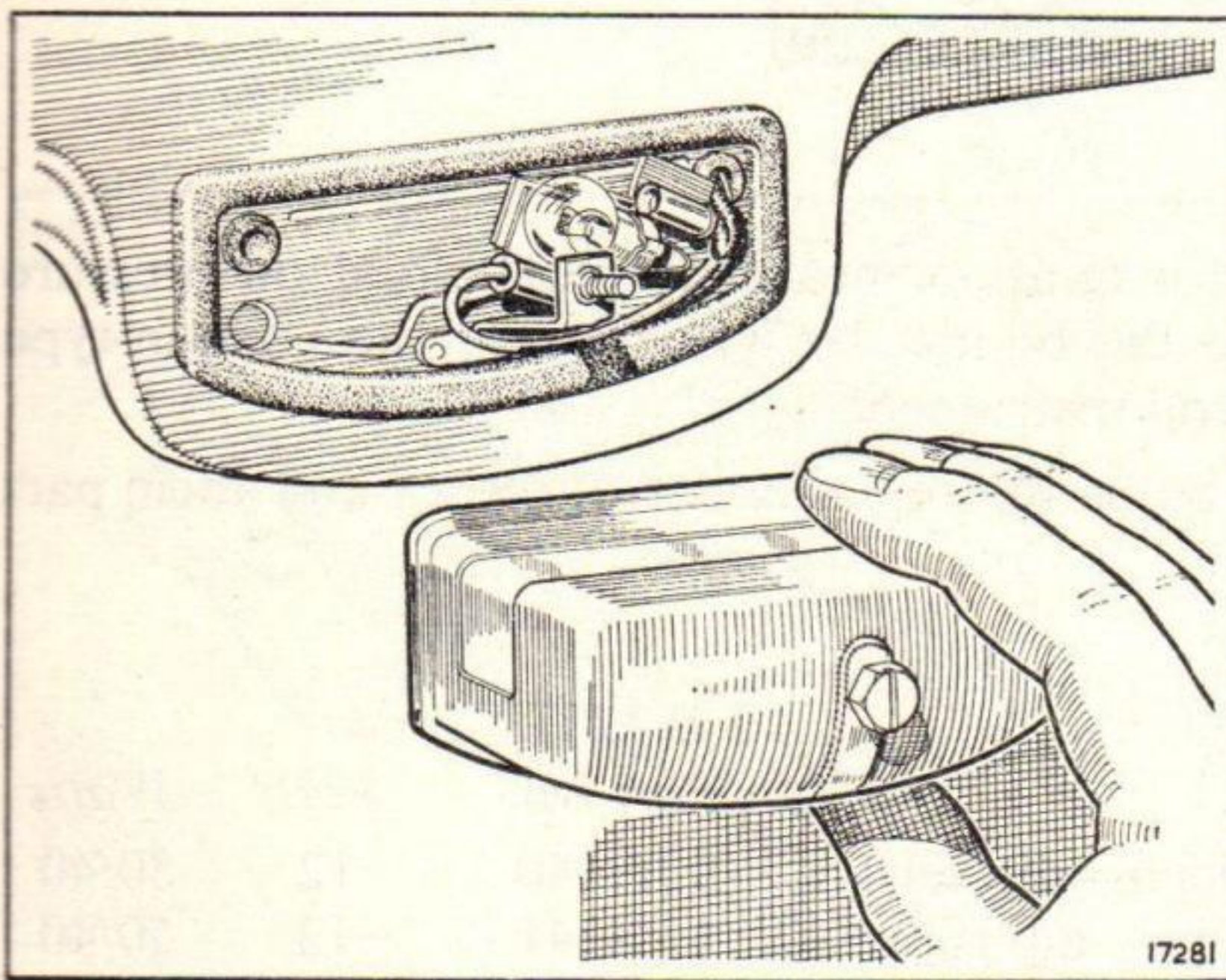
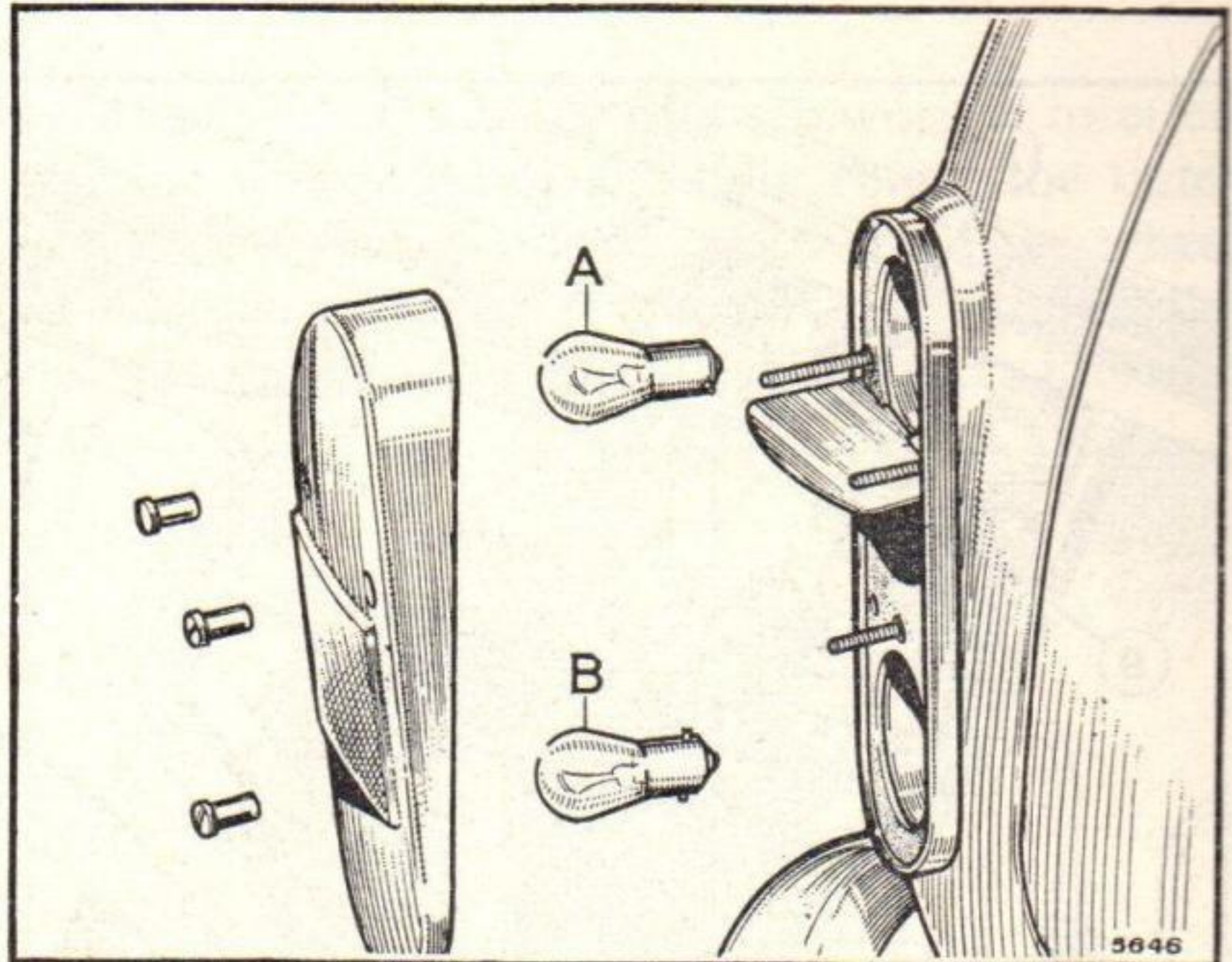
Cars built for use other than in the United Kingdom have combined side and flashing indicator lamps.

## FLASHING INDICATOR LAMPS AND REAR LAMPS

Access to a bulb for replacement is obtained by folding back the rubber flange and removing the plated rim and lamp glass. Only the fingers should be used to fold back the rubber flange.

When replacing a bulb, note that the locating pins are offset to ensure correct replacement. When replacing the lamp glass ensure that the chromium rim is secured all round by the rubber flange.

*The rear lamp unit cover removed, allowing access to the flashing direction indicator lamp bulb (A) and the stop/tail lamp bulb (B). The latter, being a double-filament type, has also offset locating pegs*



*The number-plate lamp cover removed, giving access to the bulb*

### Front flashing indicator lamps (United Kingdom)

Access to a bulb is the same as that described for flashing indicators on Export cars; the only difference is that the bulbs have a single filament and therefore the locating pegs are not offset.

### Stop, tail, and flashing indicator lamps

Access to the bulbs is obtained by withdrawing the three screws to release the lamp cover.

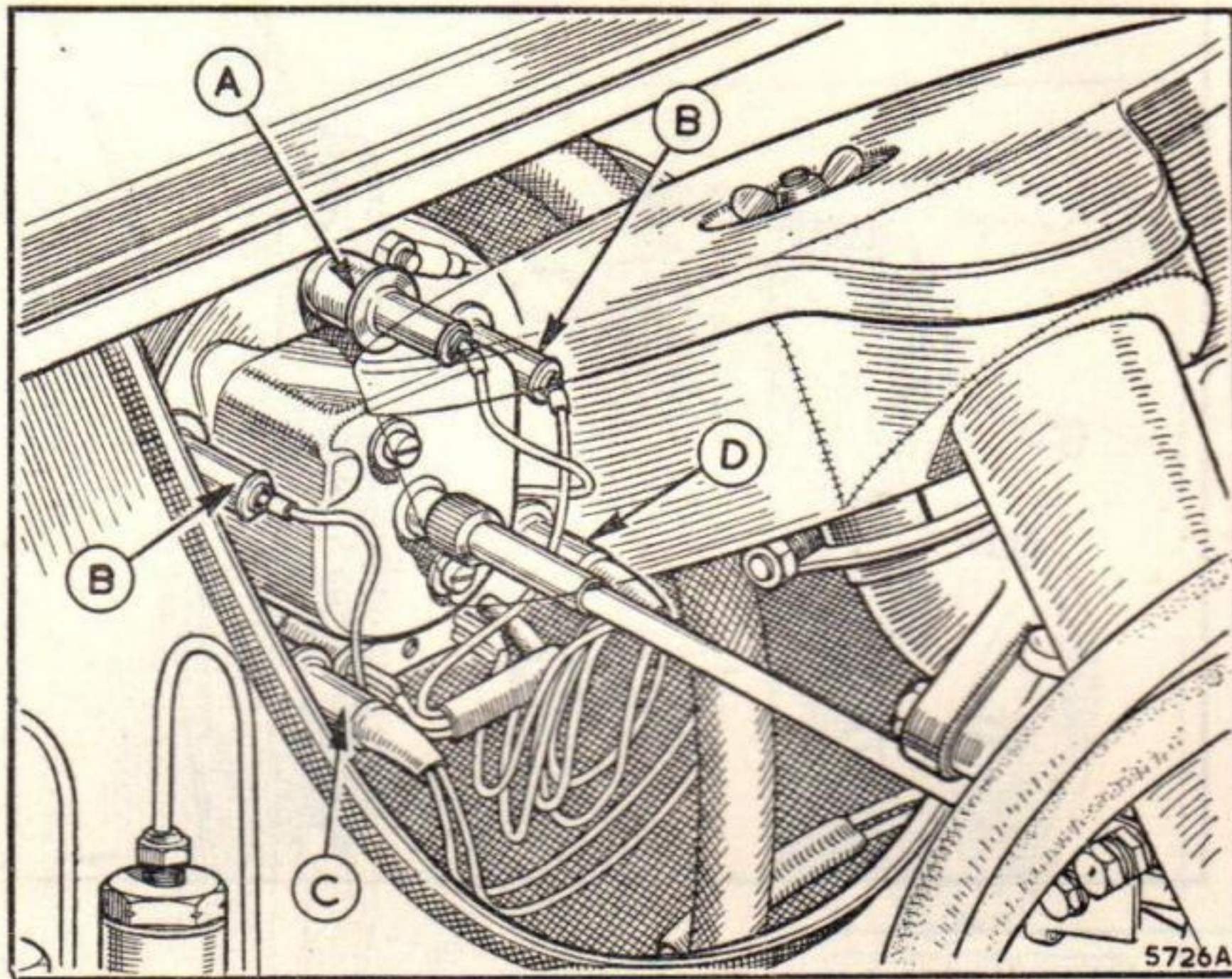
In the top compartment is fitted the flashing indicator bulb, beneath which is fitted the stop and tail lamp bulb. The latter is of the double-filament type,

## REPLACEMENT BULBS

giving a marked increase in illumination on brake application to provide a stop warning. This bulb also has offset locating pins to ensure correct replacement.

### Number-plate lamp

The number-plate lamp operates only when the sidelamps and tail lamps are switched on. Access to the bulb is obtained by unscrewing the slotted screw to release the domed cover.



*The panel and warning lamp bulb holders*

- A. Headlamp main beam warning lamp.
- B. Instrument illumination lamps.
- C. Ignition warning lamp.
- D. Oil pressure warning lamp.

### Panel and warning lamp bulbs

Access to the warning lamps for ignition, headlamp beam, and oil pressure indicators is effected from under the bonnet by withdrawing the push-in-type holders from the rear of the central instrument.

A list of the correct types of bulbs for replacement purposes and their part numbers appears below.

### Replacement bulbs

	<i>B.M.C.</i> <i>Part No.</i>	<i>Volts</i>	<i>Watts</i>
Headlamps, R.H.D. (except Sweden—dip left) ..	13H140	12	50/40
Headlamps, L.H.D. (except Europe—dip right) ..	13H141	12	50/40
Headlamps, Europe (except France—dip vertical)	13H138	12	45/40
Headlamps, France (dip vertical) .. .. .	13H139	12	45/40
Sidelamps .. .. .	2H4817	12	6
Sidelamps and front flashing direction indicators	1F9026	12	21/6
Flashing direction indicators—front .. ..	1F9012	12	21
Flashing direction indicators—rear .. ..	1F9012	12	21
Number-plate lamp .. .. .	2H4817	12	6
Panel and warning lamps .. .. .	2H4732	12	2·2
Direction indicator warning lamp (Liiliput bulb)	27H5388	12	·75
Tail and stop lamps .. .. .	1F9026	12	21/6
Parcel shelf lamps .. .. .	2H4732	12	2·2
Rear companion pocket lamps .. .. .	2H4732	12	2·2

# JACKING AND WHEEL REMOVAL

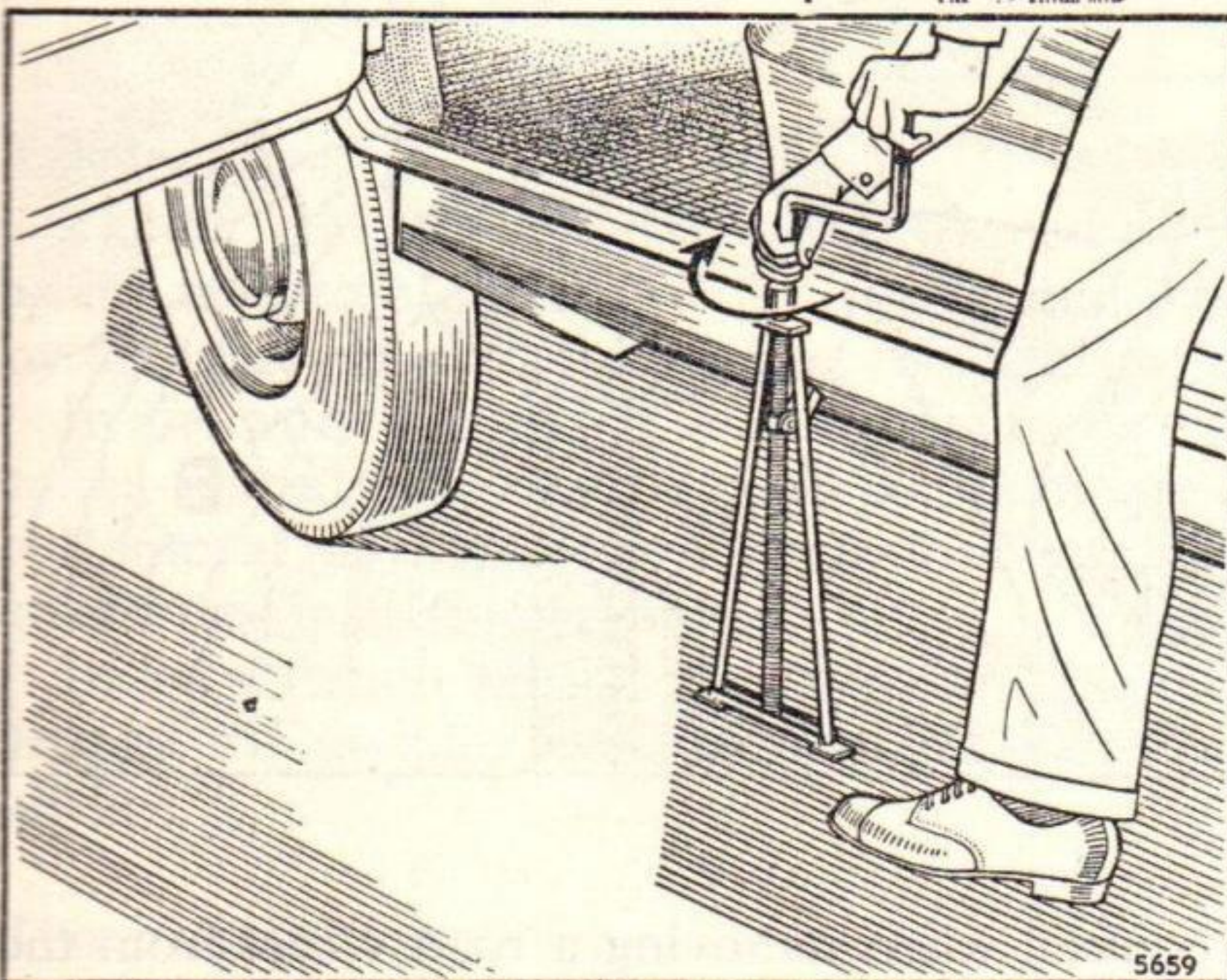
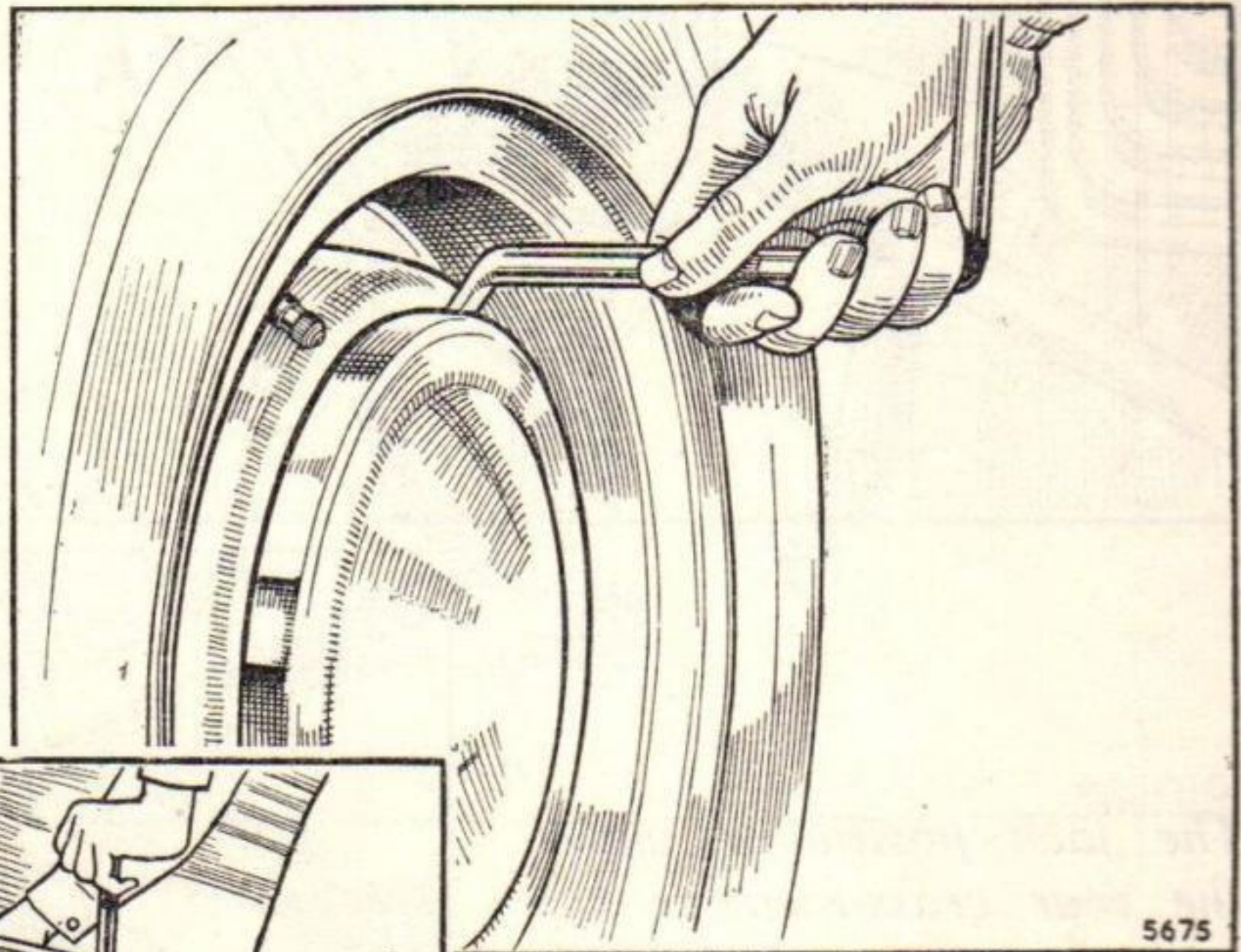
## Hub cover removal (standard model)

Insert the flattened end of the wheelbrace into one of the recesses between the edge of the cover and road wheel and remove the cover with a sideways motion of the wheelbrace. Do not attempt to remove the cover by an upwards levering motion. To refit the cover the outer rim should be placed over two of the protrusions on the wheel centre and the outer face given a sharp blow with the fist over the third protrusion.

## Hub cover removal (de-luxe model)

Lever the cover away from the wheel with the blade of a screwdriver inserted between the lip of the cover and the wheel. Work carefully round the outer circumference until the cover is free. To refit the cover place it on the wheel centre with the slot having the additional radius over the valve. Centralize the cover and give a sharp blow with the fist to force the cover retainers into the recess on the wheel.

*Use the end of the combined wheelbrace and jack handle to remove a hub disc from the road wheel of a standard model*



*Remove the rubber plug from the jacking socket and insert the lifting arm of the jack*

## Jacking (cars equipped for side-jacking)

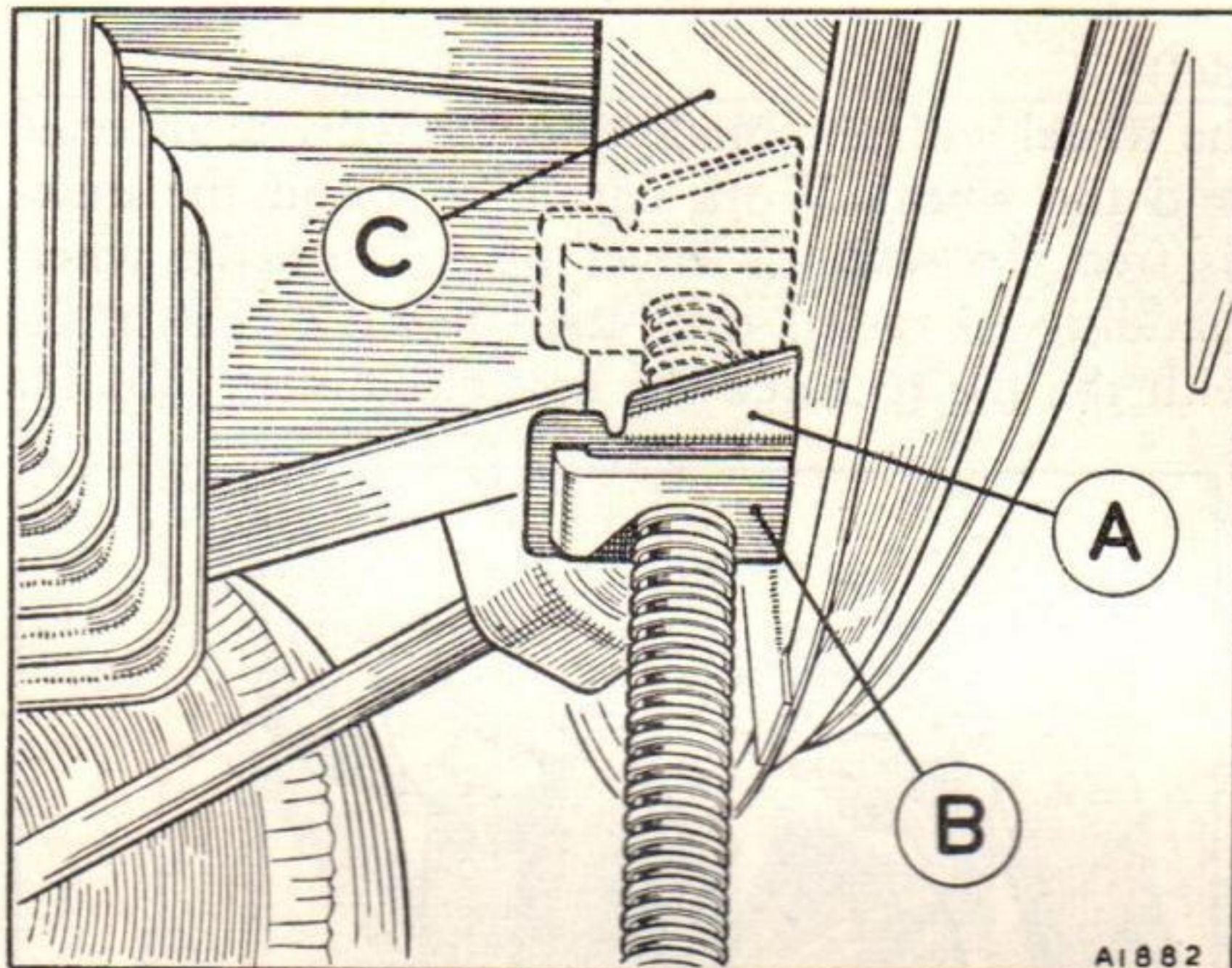
This jack is designed to lift one side of the car at a time. Remove the rubber plug from the socket below the door and insert the arm of the jack into it. The jack should lean slightly outwards at the top to allow for the radial movement of the car as it is raised. Hold the jacking bar up into the jacking bracket with one hand whilst turning the jack screw with the other hand until lifting begins. The bar must be fully inserted in the jacking bracket, otherwise the jack may become damaged and the bracket distorted.

## JACKING (vehicles equipped with Rollalift jacks)

### Front wheels

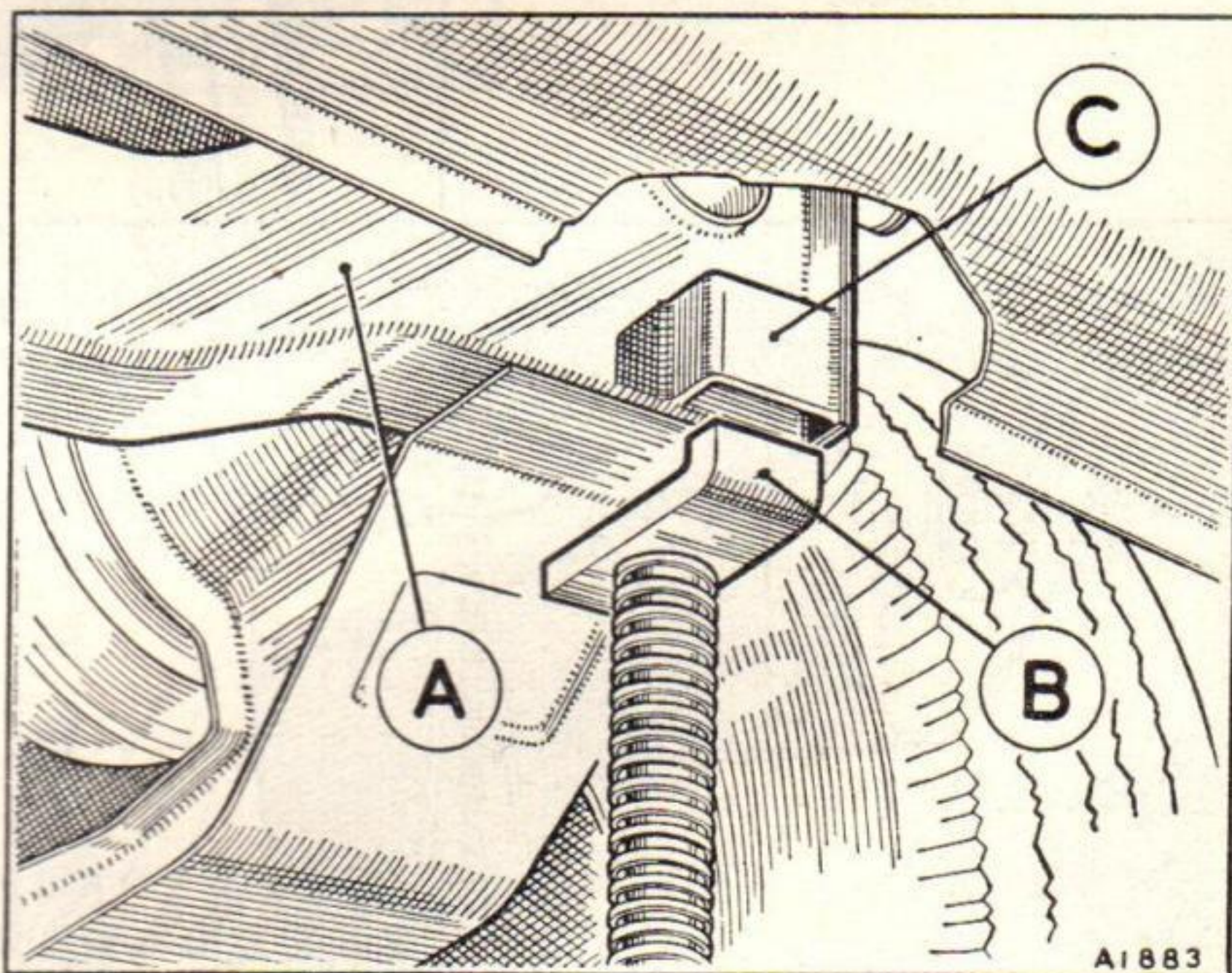
Assemble the levelling bracket to the jack pad with the flanges uppermost and with the tongue of the pad located in the slot provided.

Position the jack under the front cross-member as close as possible to the extension member and raise the vehicle by rotating the jack head ratchet with the tommy-bar.



*The levelling bracket (A) assembled to the jack pad (B) and positioned beneath the front cross-member (C)*

*The jack positioned under the rear cross-member (A) with the tongue of the jack pad (B) about to enter the socket (C) provided on the rear face of the cross-member*



### Rear wheels

The levelling bracket is not required when removing a road wheel from the rear of the vehicle.

Position the jack under the rear cross-member with the tongue of the jack pad locating in the socket provided on the rear face of the cross-member. Turn the jack head ratchet with a tommy-bar to raise the vehicle.

### Removing a road wheel

Apply the hand brake and slacken the road wheel nuts before commencing the jacking operation. If on a hill it is advisable to scotch one or even two of the road wheels.

# CARE OF TYRES

## Tyre pressures

The recommended tyre pressures under normal conditions are:

Front, 24 lb./sq. in. (1.7 kg./cm.<sup>2</sup>).

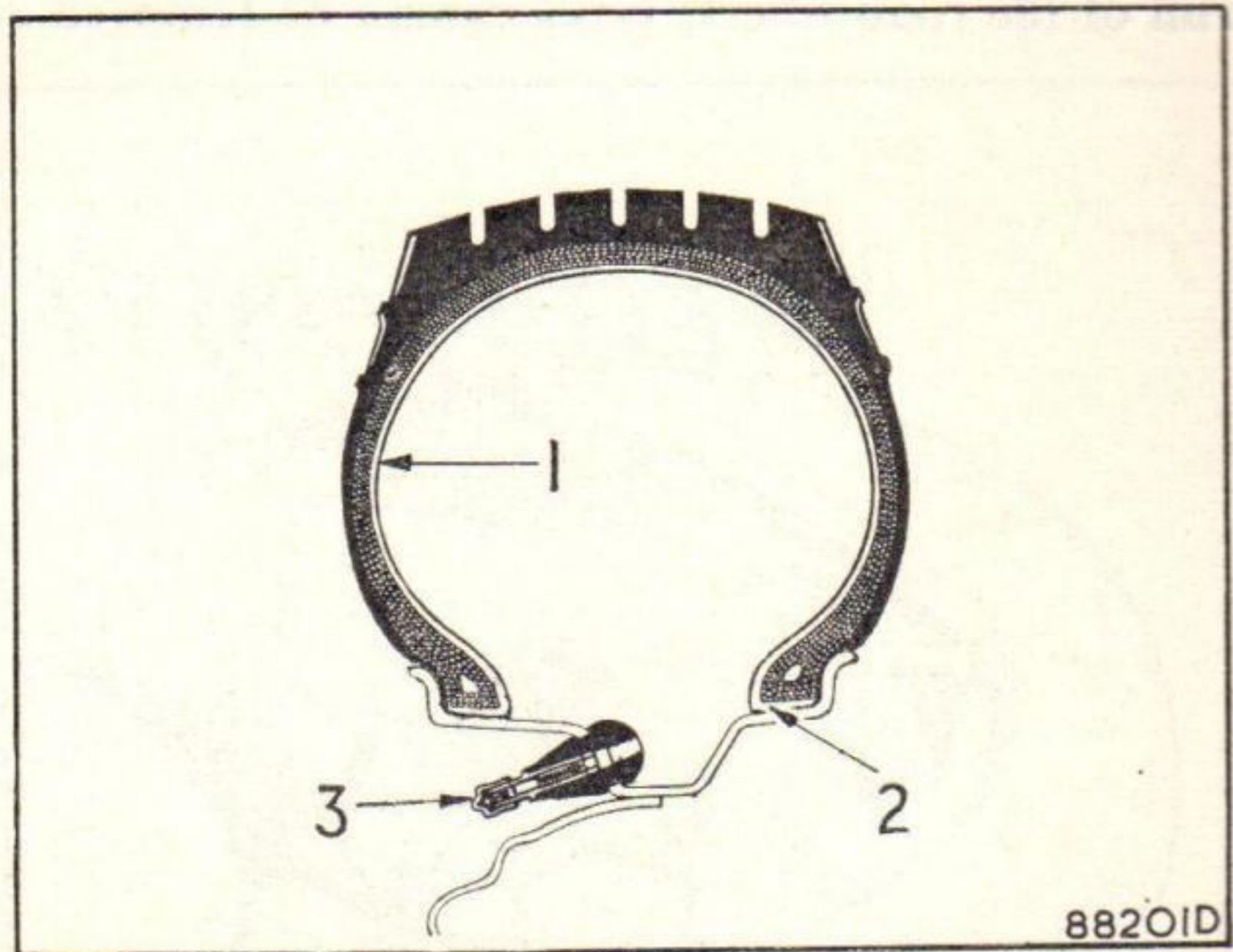
Rear, 22 lb./sq. in. (1.6 kg./cm.<sup>2</sup>).

When the car is fully laden the rear pressures should be increased to 24 lb./sq. in. (1.7 kg./cm.<sup>2</sup>).

Maintain the correct pressures by checking with an accurate tyre gauge at least once a week and inflating if necessary.

Any unusual pressure loss should be investigated. Underinflation causes rapid tyre wear, and even more serious is the possible damage to the cords of the fabric owing to excessive bending or flexing of the cover walls.

*A section through a tubeless tyre*



## Tubeless tyres

The air seal in a tubeless tyre is formed by the tyre bead on the wheel rim, as can be seen in the above illustration, and the valve is sealed against air leaks by the large 'mushroom' head on the inside of the rim.

In any work carried out great care must be used to avoid damage to the bead; spoon-shaped tyre levers in good condition are essential.

Removal and replacement procedure is similar to that used for conventional covers (see instructions on page 30).

Initial inflation can be carried out with a foot pump and a rope tourniquet around the periphery of the tyre, but it is more easily accomplished with an air-line.

## Tyre examination

Flints and other sharp objects should be removed with a penknife or similar tool; if neglected, they may work through the cover.

Penetration does not normally result in deflation and the tyres should be repaired when convenient. Penetrations by objects of small diameter can be repaired with the tyre manufacturer's plugging kit, while more extensive damage requires the removal of the tyre for vulcanizing.

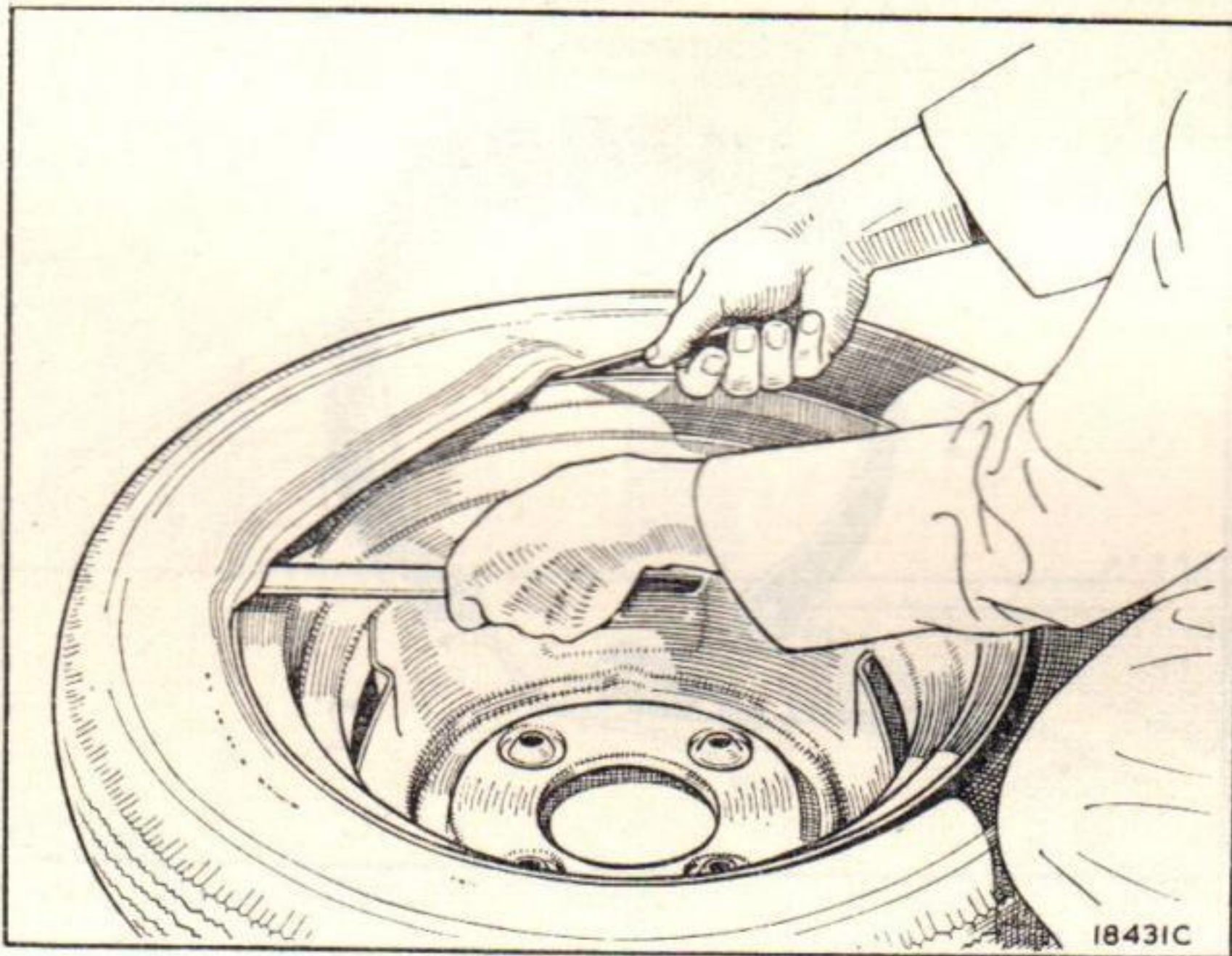
Any oil or grease which may get onto the tyres should be cleaned off by using petrol (gasoline) sparingly. Do not use paraffin (kerosene), which has a detrimental effect on rubber.

## TUBELESS TYRES

### Tyre removal and replacement

Remove the valve interior to deflate the tyre completely and push both cover edges into the base of the rim at the point diametrically opposite to the valve. Lubricate the tyre beads and the tyre fitting levers with Dunlop Tyre Bead Lubricant or a thin vegetable oil soap solution. Lever the cover edge over the back (inside) rim edge in the valve area. Take small bites with the tyre levers to avoid straining or damaging the tyre beads. Continue round the tyre until the bead on one side is completely free. Stand the tyre and wheel upright, keeping the remaining bead in the well-base of the wheel rim. Lever the tyre bead at the top of the wheel over the rim flange, and at the same time push the wheel away from the cover with the other hand.

**NOTE.**—Tyre removal and refitting must only be carried out over the inner rim of the road wheel; tyres cannot be removed or refitted over the outer rim.



*Lever the cover edge over the back (inside) rim in the valve area*

A similar technique must be employed when replacing the tyre. Use Dunlop Tyre Bead Lubricant on the rim beads and fit the tyre over the back rim of the wheel. A white or coloured spot in the neighbourhood of the bead will indicate the lightest point of the tyre. This spot should be fitted in line with the valve to ensure the best wheel balance and good steering. Keep the beaded edge in the well-base of the wheel rim and carefully lever the tyre edge over the wheel rim on the opposite side. Great care must be exercised to avoid damage to the tyre bead; the tyre levers used must be in good condition.

Initial inflation can be carried out with a foot pump, using a rope tourniquet around the periphery of the tyre to obtain a seal between the tyre edge and the wheel rim, but it is more easily accomplished with a compressed-air line.

### Changing positions of tyres

To obtain the best tyre mileage and to suppress the development of irregular wear on the front tyres it is essential that the wheels be interchanged diagonally with the rear wheels and the spare wheel at least every 2,000 miles (3200 km.) (see page 37).

### Impact fractures

Excessive local distortion as a result of striking a kerb, a loose brick, a deep pot-hole, etc., may cause the casing cords to fracture. Every effort should be made to avoid such obstacles.

# LUBRICATION CHART

## KEY TO LUBRICATION CHART

Lubricants to the letter references given in the following key will be found on page 60.

### DAILY

- (1) ENGINE. Inspect the oil level by the dipstick, and replenish if necessary with oil to Ref. A.

BODY. Lubricate door hinges, bonnet lock, and operating mechanism.

### AFTER THE FIRST 500 MILES (800 Km.)

- (2) ENGINE. Drain off the old oil and refill with fresh oil to Ref. A.

### EVERY 6,000 MILES (9600 Km.)

- (8) DISTRIBUTOR. Withdraw the rotor arm and add a few drops of oil to Ref. D to the cam bearing and to the advance mechanism through the gap around the cam spindle. Smear the distributor cam spindle and contact breaker pivot with grease to Ref. C.

### EVERY 1,000 MILES (1600 Km.)

- (3) STEERING JOINT NIPPLES.
  - (4) REAR SUSPENSION RADIUS ARMS.
- Give three or four strokes of a grease gun filled with grease to Ref. C.

- (9) OIL FILTER. Wash the bowl in fuel and fit a new element.

- (10) WATER PUMP. Remove the oiling plug from the water pump body and lubricate the pump sparingly with S.A.E. 140 oil.

- (5) HAND BRAKE CABLE GUIDE CHANNELS. Slacken off the cable and lubricate with grease to Ref. C.

- (11) REAR HUB. Remove each rear wheel hub disc, prise off the grease-retaining cap, refill the cap with grease to Ref. C, and replace securely.

- (6) CARBURETTER. Remove the cap from the top of the suction chamber and add a teaspoonful of oil to Ref. D.

### EVERY 12,000 MILES (19200 Km.)

- (12) DYNAMO. Add a few drops of oil to Ref. D through the oil hole in the commutator end bearing.

### EVERY 3,000 MILES (4800 Km.)

- (7) ENGINE. Drain off the old oil and refill with fresh oil to Ref. A.

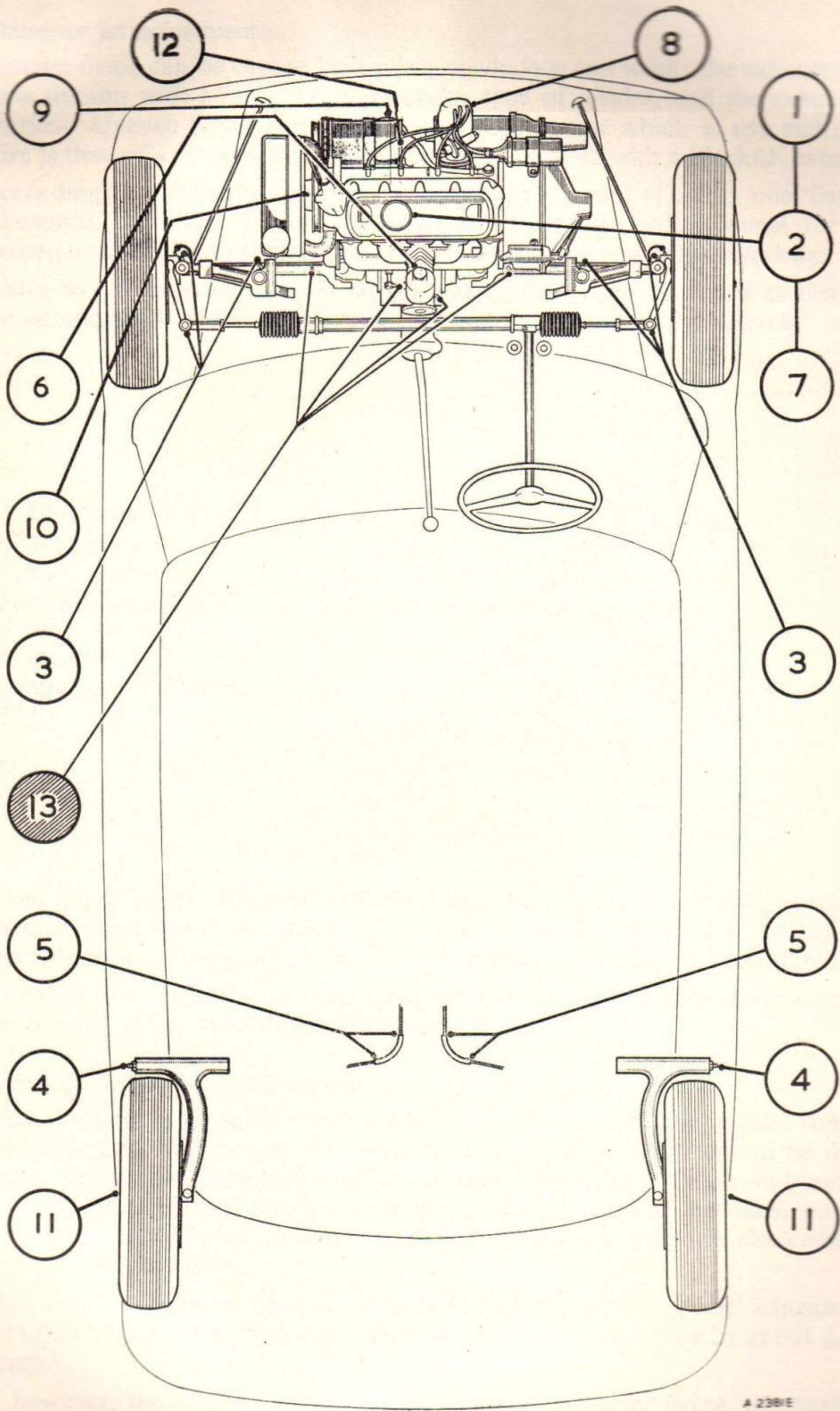
SPEEDOMETER CABLE. Withdraw and lubricate the inner cable with grease to Ref. C.

- (13) Every 1,000 miles (1600 km.) the lubricating nipples fitted to the drive shaft sliding joint on early models must be given three or four strokes of a grease gun filled with grease to Ref. C.

The two gear change shaft lubricating nipples (one only on later models) also shown on indicator 13 require attention at major overhaul periods only, when grease to Ref. C should be used.

Use the lubricating oils and greases to the letter references given above and shown in the recommended lubricants chart on page 60.

# ADJUSTMENTS





# ADJUSTMENTS

## Carburettor jet adjustment

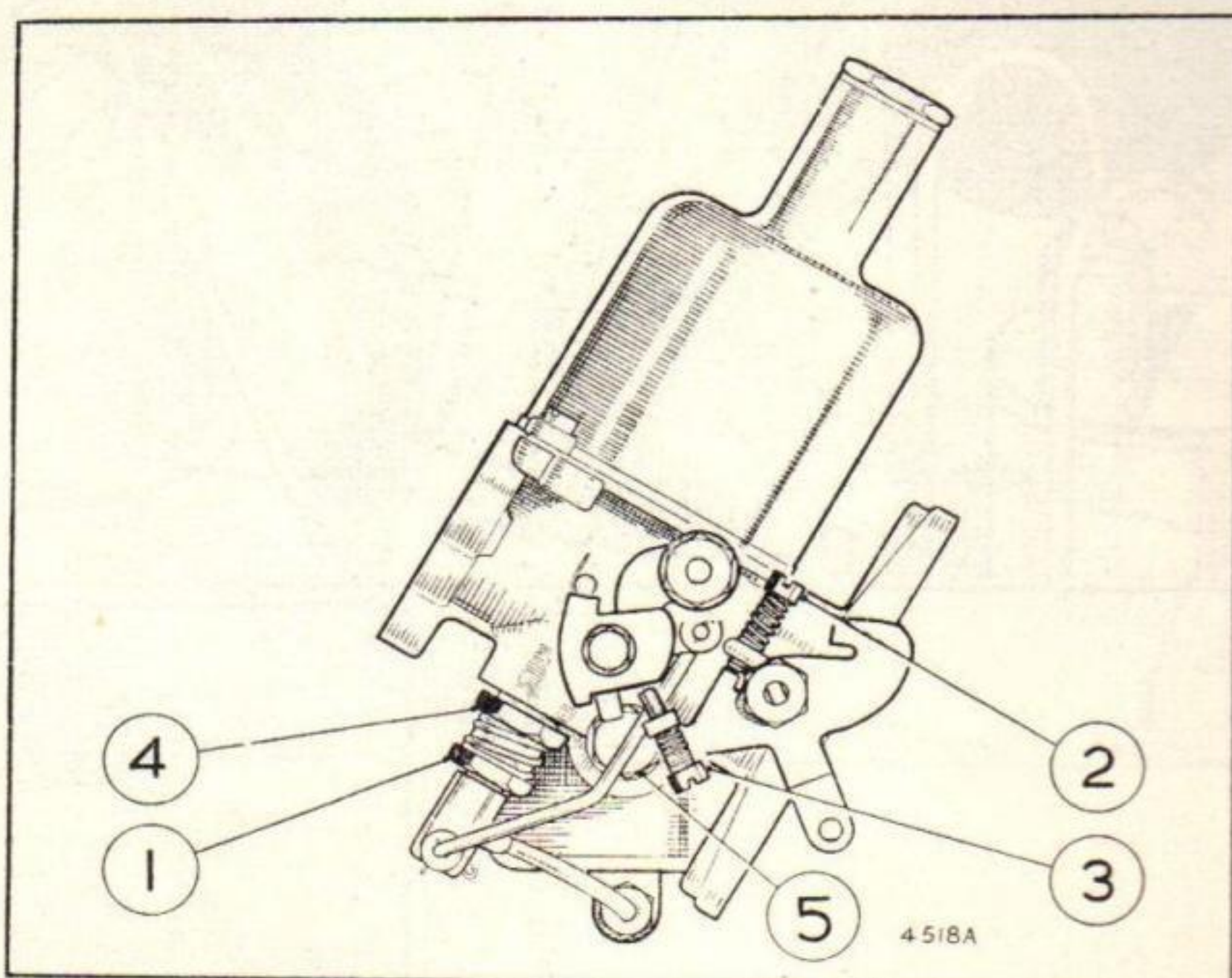
Uneven firing can be caused by a mixture which is too weak; the exhaust beat then is uneven with a 'splashy' or irregular type of misfire, and the exhaust is colourless. Uneven firing can be caused by a mixture which is too rich; the misfire is then of a 'rhythmical' or regular type, coupled with a blackish exhaust.

According to the symptoms, screw the jet adjusting nut (1), only one 'flat' of the hexagon at a time, either upwards for weakening or downwards for enrichening until the **fastest idling speed is obtained consistent with even firing.**

**Under no circumstances should the jet locking nut (4) be slackened as this will cause misalignment of the main jet, resulting in the jamming of the piston.**

### *The carburettor*

1. Jet adjusting nut.
2. Throttle stop screw.
3. 'Fast-idle' adjustment screw.
4. Jet locknut.
5. Float-chamber securing bolt.



When adjusting the mixture strength it may be helpful if the idling speed of the engine is increased by about half a turn of the throttle stop screw (2)—to be suitably reduced later when the correct mixture strength has been obtained.

When the mixture and slow-running speed are satisfactory, then the remainder of the throttle range should also be correct.

## Carburettor slow-running adjustment

After the first 1,000 miles (1600 km.) or so, when the engine is fully run in, the slow-running adjustment may need a little attention—this should be done when the engine has attained its normal running temperature. If the slow-running speed only (not mixture strength) needs correction, this can be made on the throttle stop screw (2) by turning it clockwise to increase and anti-clockwise to decrease the engine speed.

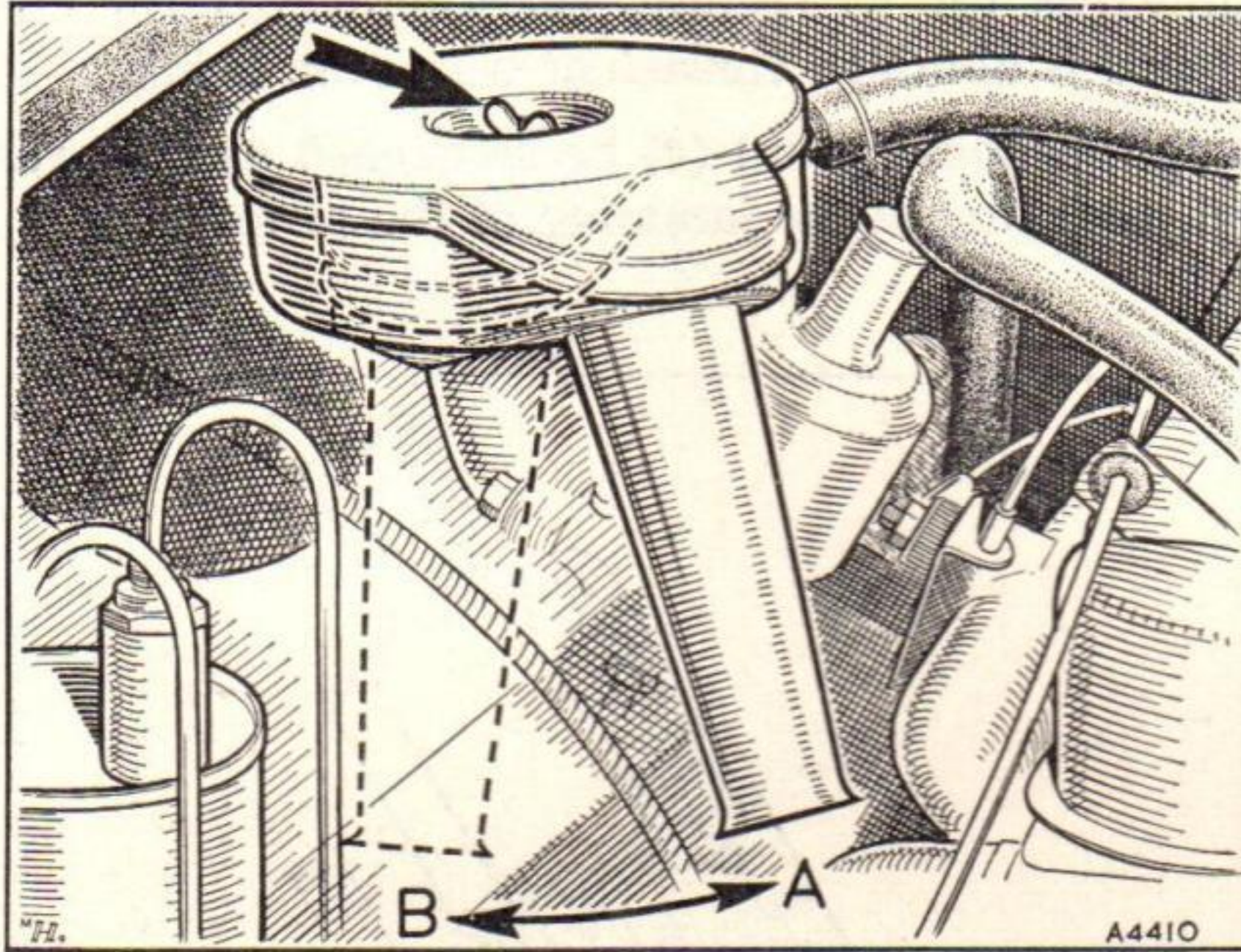
After the slow-running has been adjusted check that the 'fast-idle' adjustment screw (3), which impacts on a cam, is just clear of the impact face by about  $\frac{1}{8}$  in. (.40 mm.).

If, however, the engine beat is uneven, denoting irregular firing, the mixture strength may need adjustment—but remember that defective compression, a faulty valve, or faulty ignition may also cause misfiring.

## ADJUSTMENTS

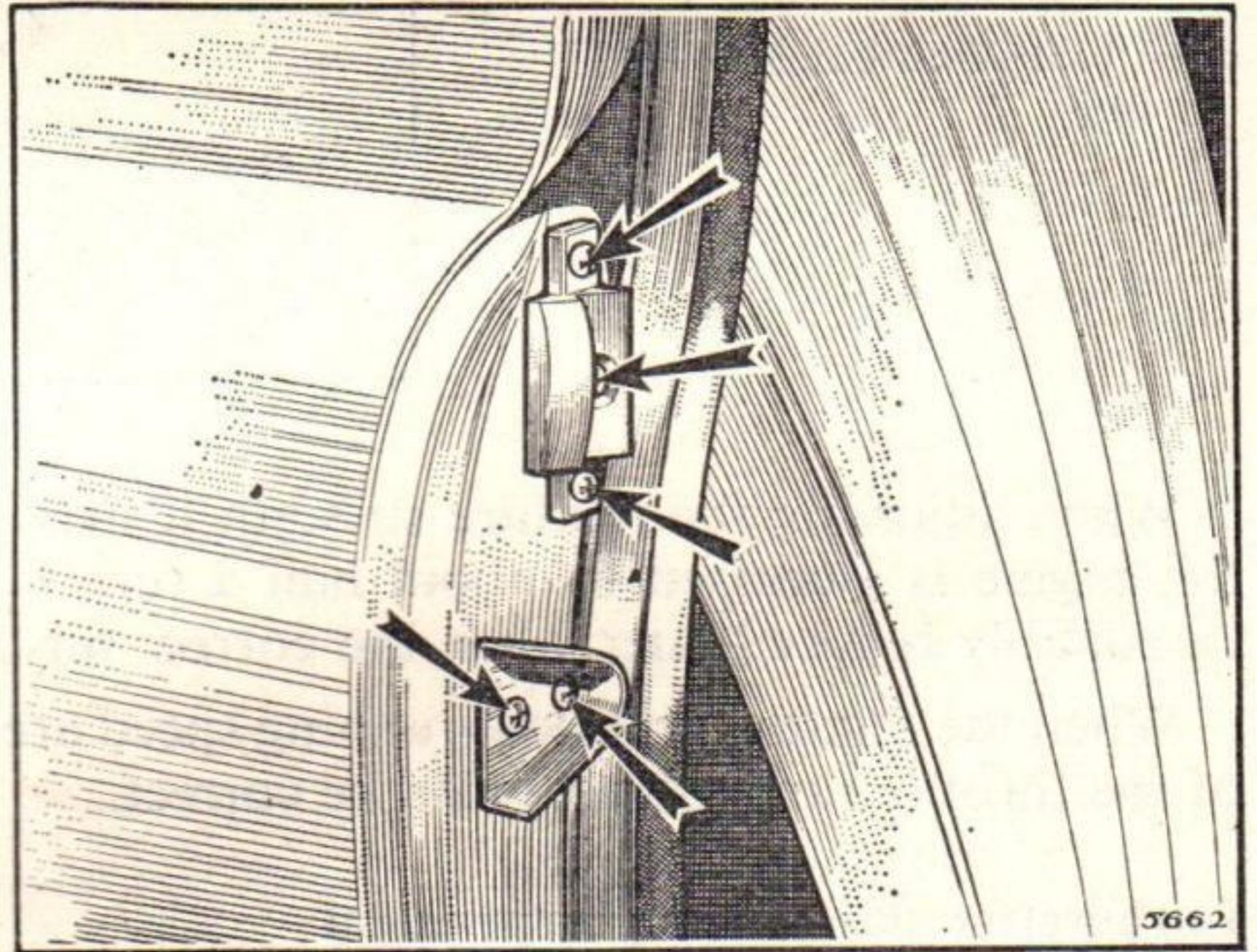
### Air cleaner intake positions

In order to obviate the possibility of the carburettor icing up, the air cleaner intake should be positioned adjacent to the exhaust manifold when the vehicle is operating in cold and winter conditions. During the summer and in countries where the climatic conditions are tropical or temperate it is advisable to move the intake away from the manifold to the position (B) shown in the illustration.



*Slacken the wing nut and turn the air cleaner intake to position (A) for winter operating conditions and to (B) for summer conditions and in warm climates*

*The door striker plate and buffer plate securing screws*



### Door catch adjustment

The door catch is provided with adjustment to compensate for any slight wear which may take place. To adjust slacken the two Phillips screws locating the striker plate to the door pillar and move the plate in the required direction. Do not forget to tighten up the screws firmly after adjustment.

Similar adjustment is provided on the buffer plate to enable the door-shut position to be adjusted in relation to the weather seal.

# MAINTENANCE ATTENTION

## DAILY

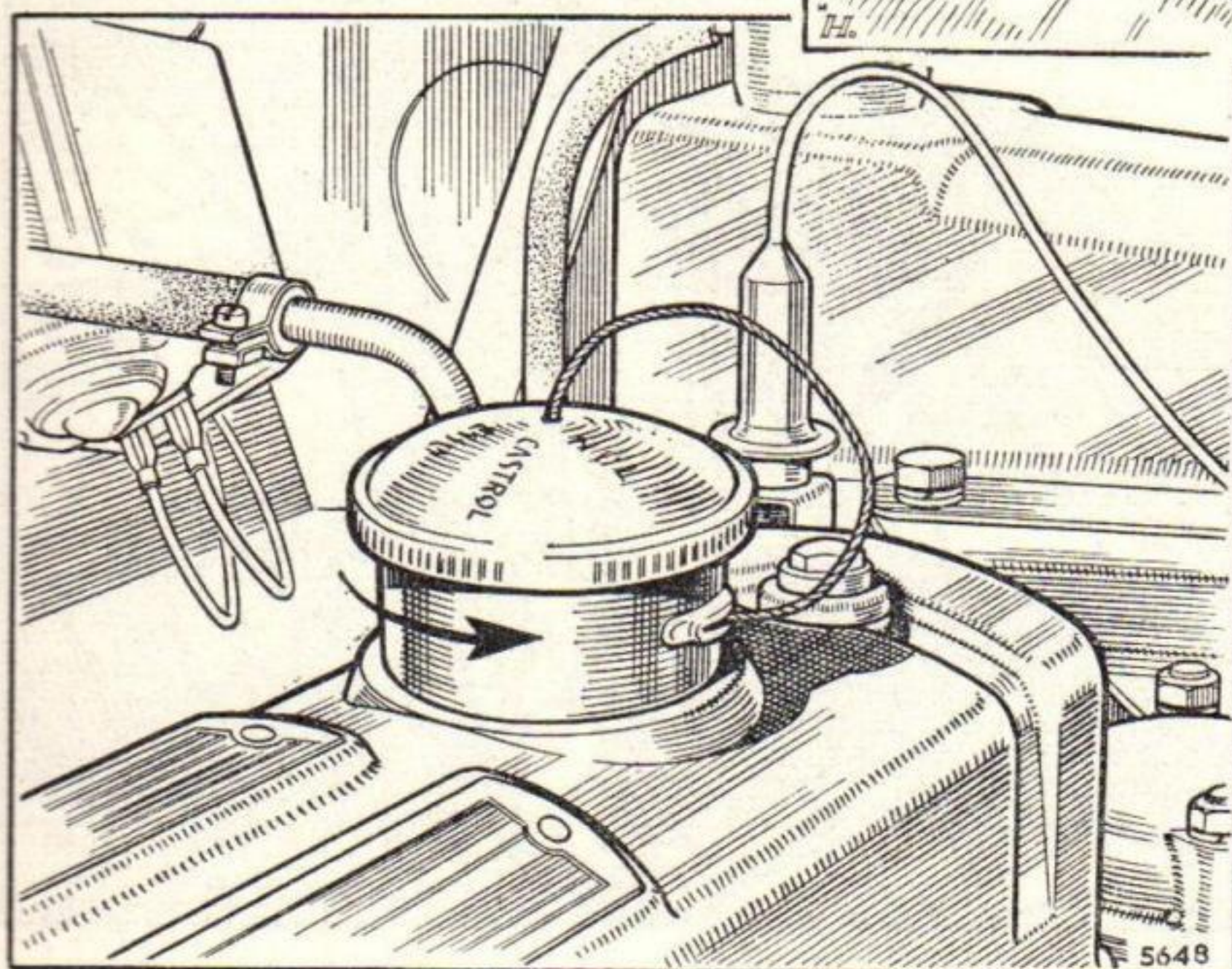
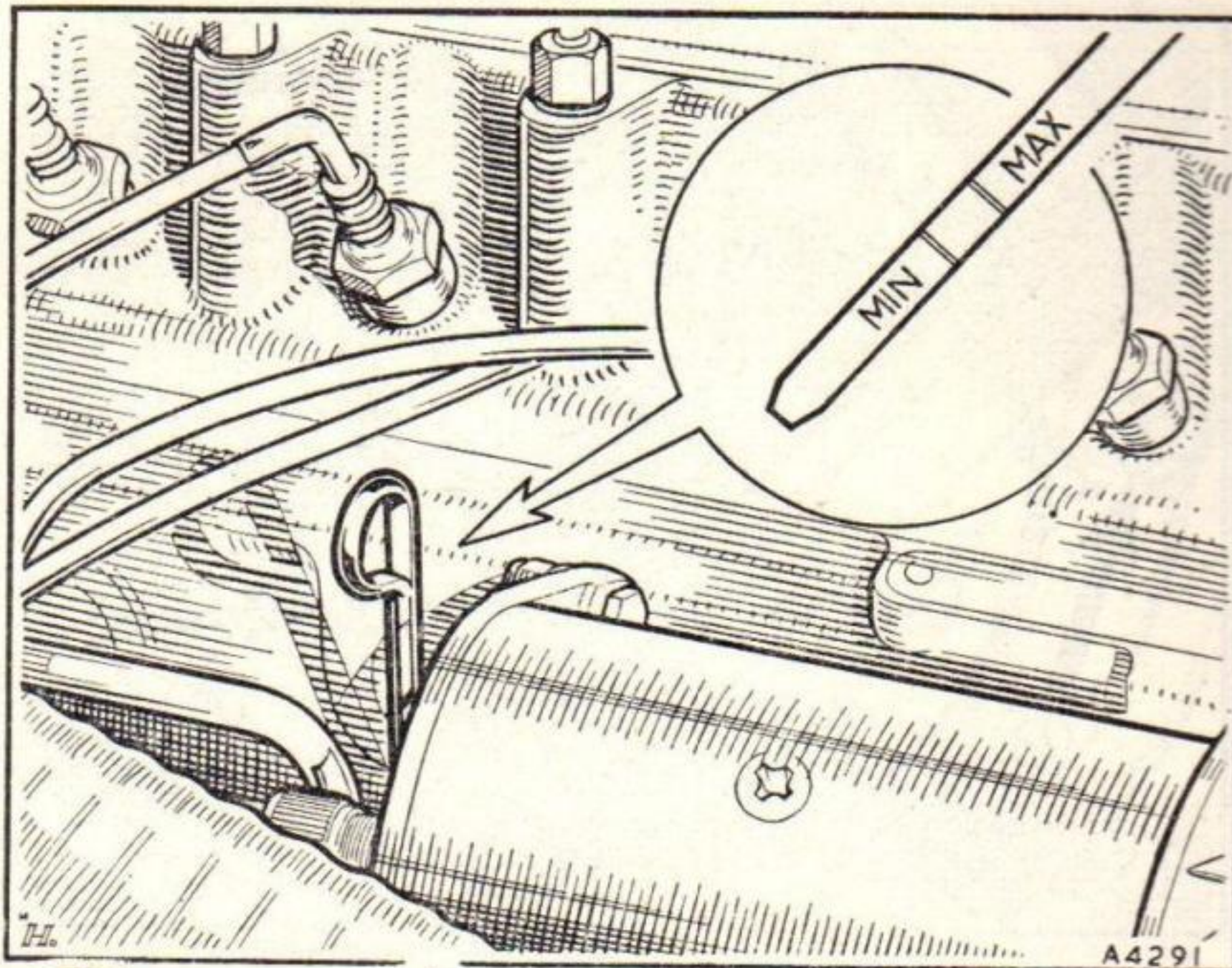
### Radiator

Check the level of water in the radiator, and top up if necessary.

### Checking engine and transmission oil level

The engine and transmission oil is contained in a common sump. The correct oil level is indicated by the 'FULL' mark on the dipstick, which is to be found on the forward side of the engine, and the level of oil should be maintained to this mark.

*The engine/transmission oil level dipstick is located on the forward side of the cylinder block*



*The oil filler cap must be turned anti-clockwise to release it*

### Filling up with oil

The filling orifice is situated on top of the rocker cover, and it is provided with a quick-action cap. Clean, fresh oil is essential. The use of an engine oil to Ref. A, page 60, is recommended.

## WEEKLY

### Tyre pressures

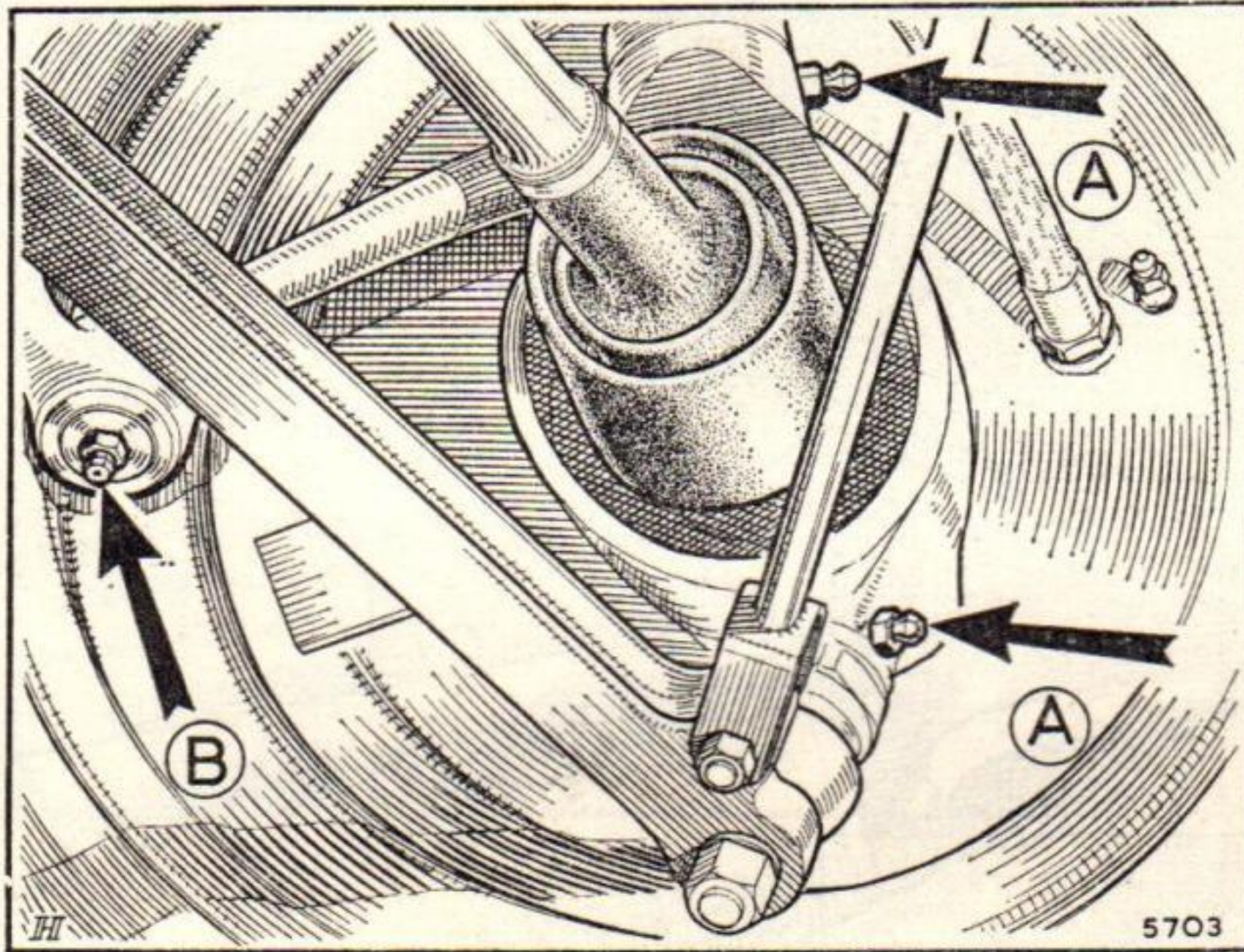
Check all tyre pressures, using a tyre gauge, and inflate, if necessary, to the recommended pressures. Ensure that the valves are fitted with screw caps, inspect the tyres for possible damage, and wipe off any oil or grease.

## EVERY 1,000 MILES (1600 Km.)

### Grease points

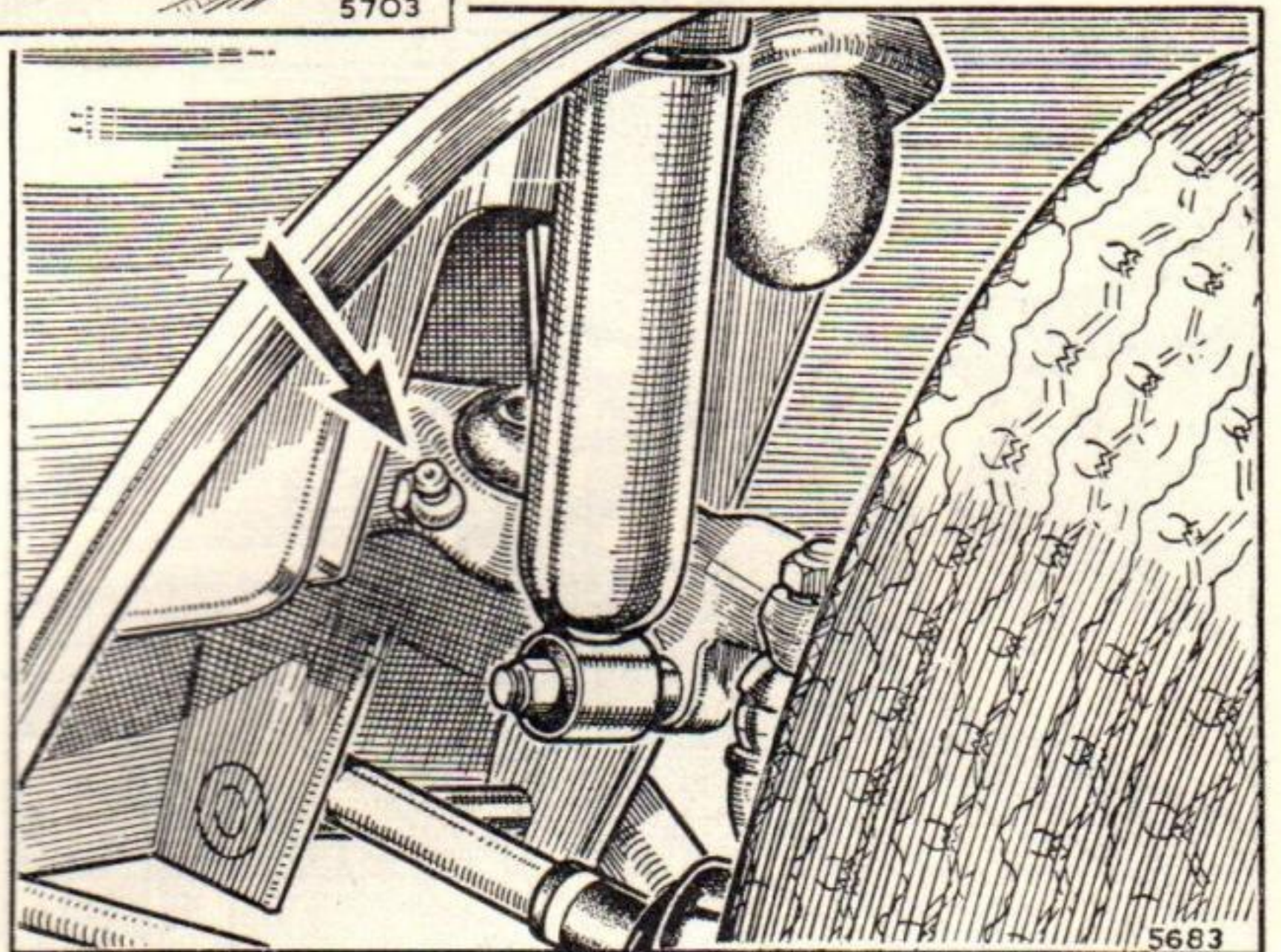
Grease nipples are situated at the points listed below, and several strokes from a grease gun filled with grease to Ref. C, page 60, should be given at each point:

- (1) Upper and lower steering swivel knuckles. Two nipples each side. Jack up the front of the vehicle to take the load off the swivel knuckles and make certain that the lubricating nipples are clean and not blocked with road dirt. If the nipples are already filled with grease no further grease can usually be forced in.
- (2) Upper support arm, inner pivot. One nipple each side.



*The arrows (A) show the lubricating nipples on the upper and lower steering swivel knuckles. Each steering ball end is provided with one lubricating nipple, shown by arrow (B)*

*The inner pivot of the upper support arm is lubricated through the grease nipple provided on each side*



- (3) Steering tie-rod ball ends. One nipple each side.
- (4) Rear suspension radius arms. One nipple each side. The grease gun must be applied to the nipple and remain there until the grease exudes from the inner bush.

### Battery

Remove the filler plug from each of the cells and examine the level of the electrolyte in each. If necessary, add sufficient distilled water to bring the electrolyte **just above the top of the separators**. Do not use tap-water and do not use a naked light when examining the conditions of the cells. Do not overfill. Wipe away all dirt and moisture from the top of the battery.

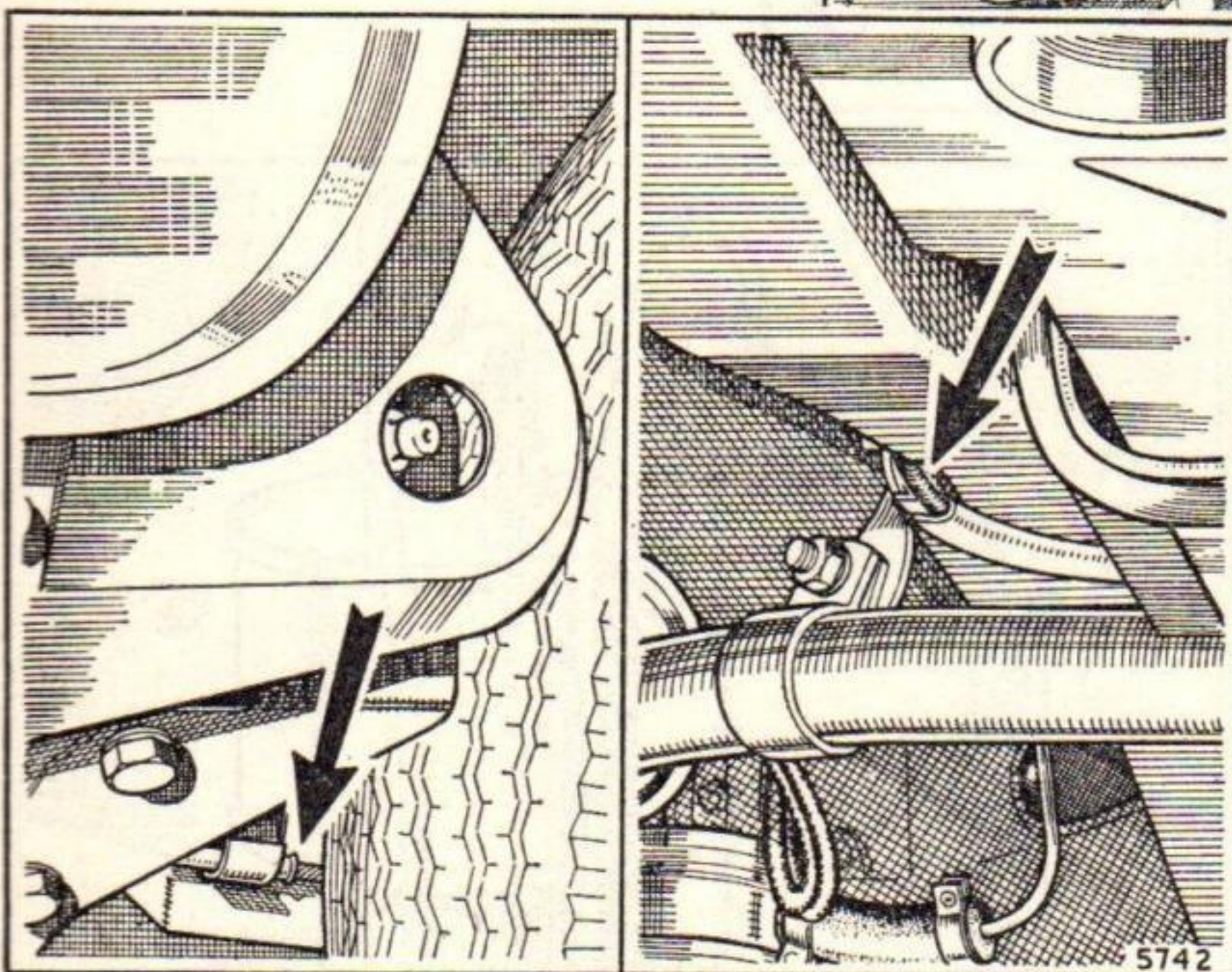
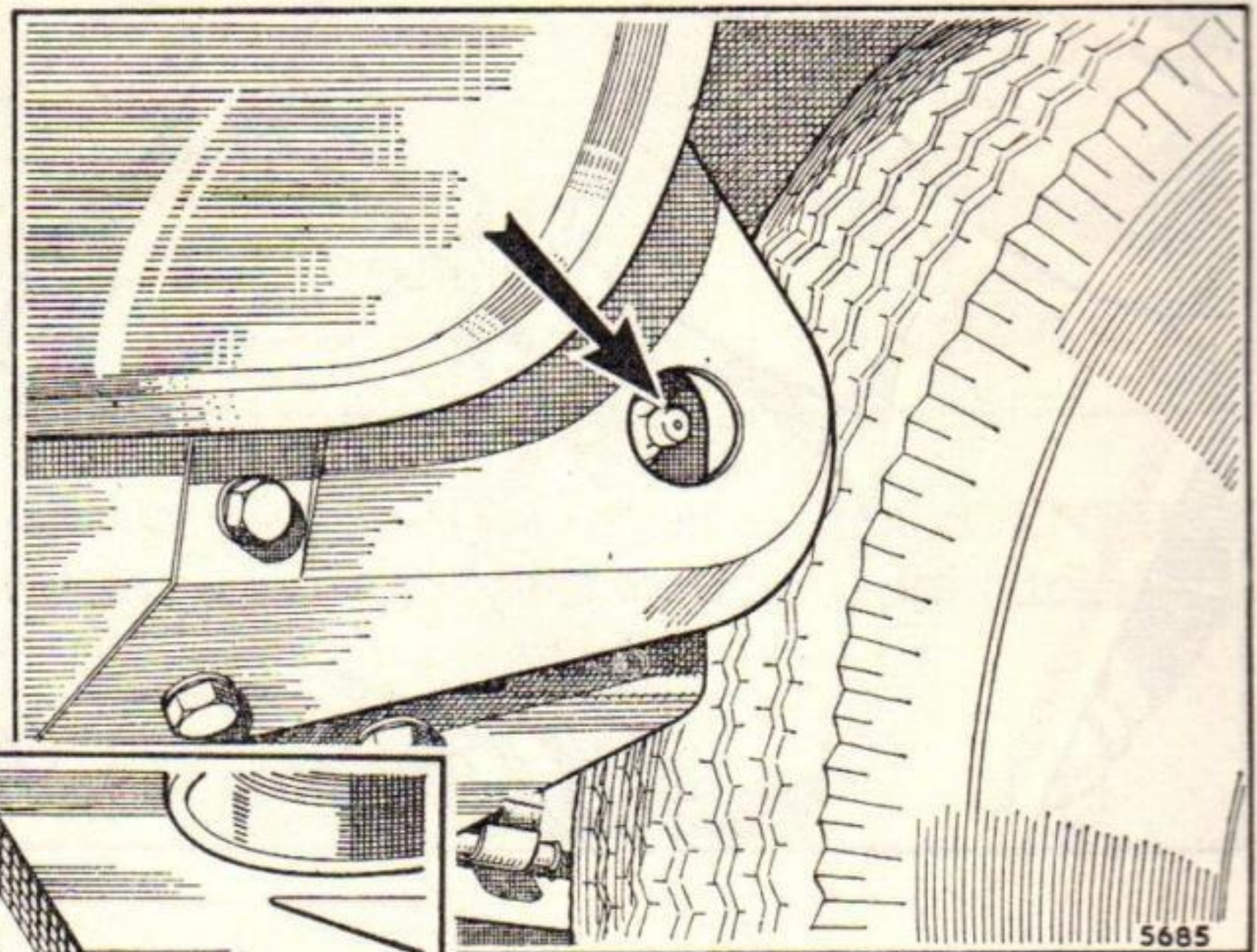
## EVERY 1,000 MILES (1600 Km.)

The battery is located in the well of the luggage compartment of the Saloon model, beneath the hinged loading platform of the Traveller, and behind the passenger's seat of the Van.

### Hand brake cable guides

Apply a liberal smear of grease to the hand brake cables where they pass through the cable guide channels located on the rear sub-frame cross-member, and to the guide tubes fitted to the radius arms of early models. The cables should be slackened at the hand brake lever trunnion to ensure that the greasing is made as effective as possible. Readjust the cables. Apply the hand brake until the pawl

*One nipple is provided each side to lubricate the rear suspension radius arms*



*The hand brake cable guide channels on the rear sub-frame, and the guide tube fitted to the radius arms of early models*

engages the fifth notch on the ratchet, and adjust the nuts at the trunnion until it is just possible to rotate the road wheels by hand. Return the lever to the off position and check that the wheels are perfectly free.

### Carburettor damper (D)

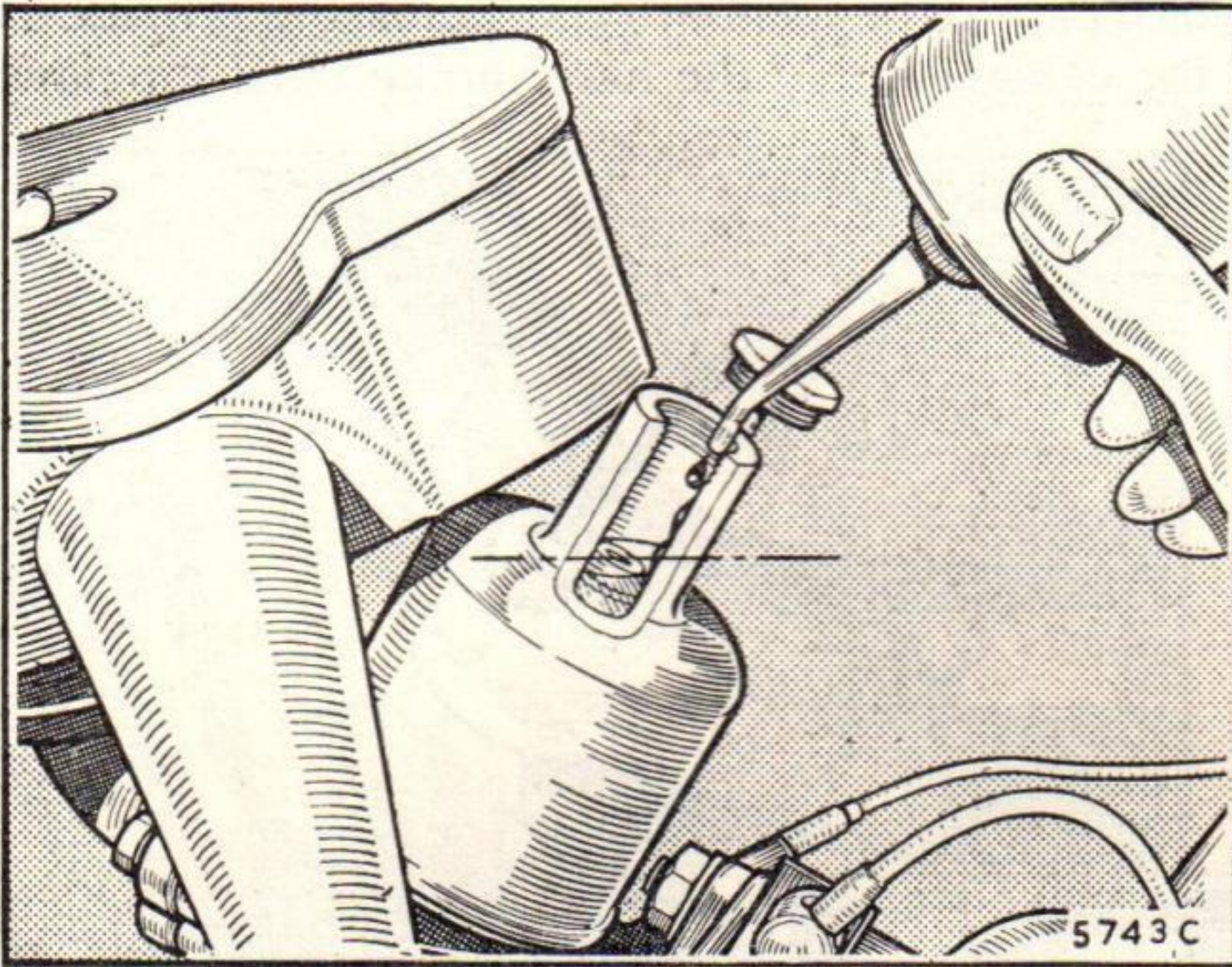
The reservoir needs topping up periodically with thin engine oil to Ref. D, page 60. Unscrew and remove the damper unit and pour oil into the hollow piston rod until the level is  $\frac{1}{2}$  in. (13 mm.) from the top of the rod, then screw the damper back into position. It is sufficient to withdraw the damper unit far enough to insert the nozzle of an oilcan. The function of this piston damper unit is to provide an appropriate degree of enrichment for acceleration, and also to improve cold starting.

## EVERY 1,000 MILES (1600 Km.)

### Brake and clutch master cylinders

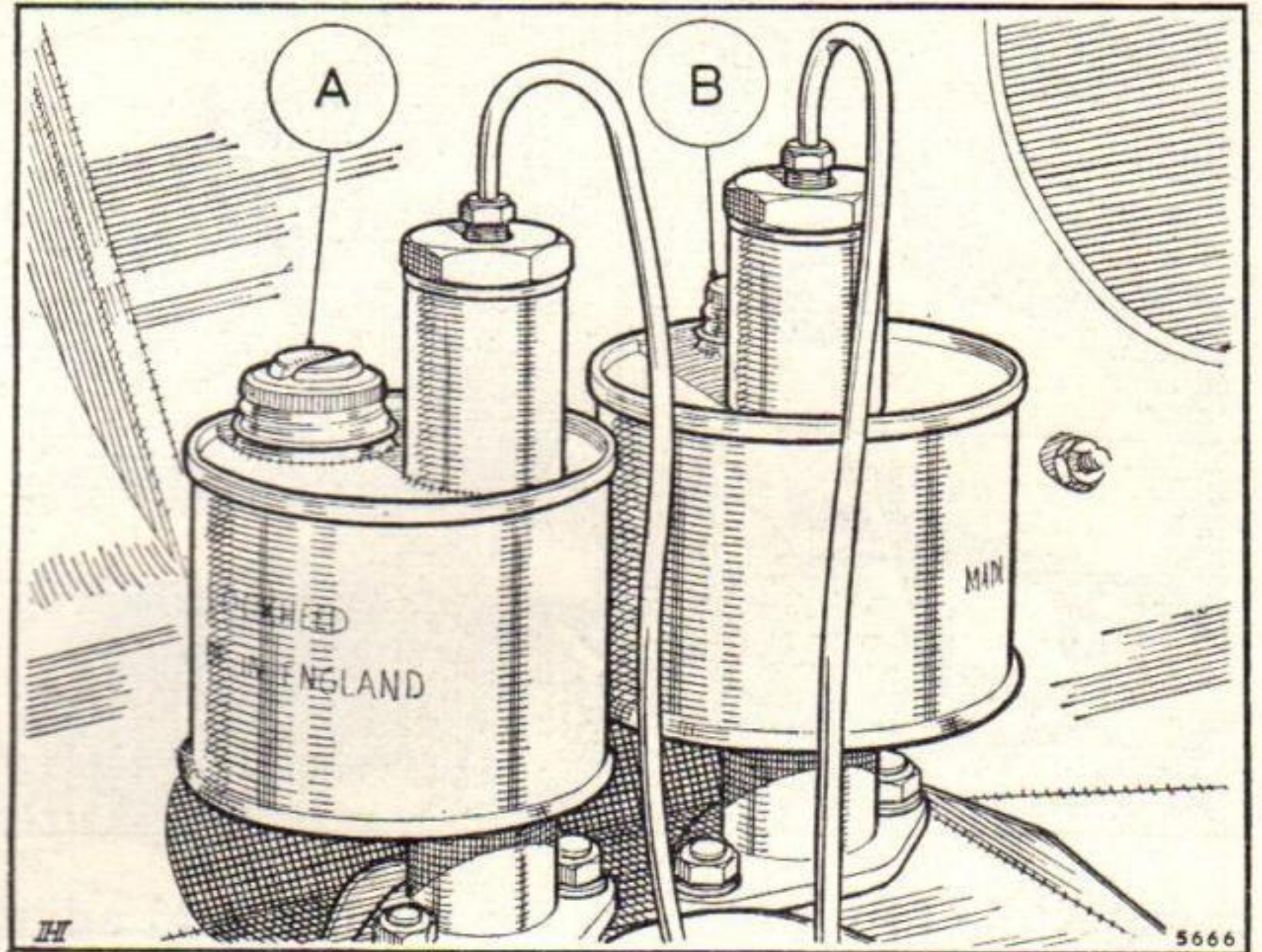
Check the level of fluid in the hydraulic brake and clutch master cylinders, and replenish if necessary with Lockheed Genuine Brake Fluid. If this is not available a fluid conforming to Specification S.A.E. 70.R1 should be used.

Maintain the level of fluid at  $\frac{1}{2}$  in. (13 mm.) below the bottom of the filler neck in each cylinder.



*Lubricating the carburetter piston dampers. Top up to the level indicated*

*The level of the fluid in the hydraulic brake (A) and clutch (B) master cylinder reservoirs should be maintained at  $\frac{1}{2}$  in. (13 mm.) below the bottom of the filler neck*



After topping up the reservoirs apply a normal working load to the brake pedal for a period of two or three minutes and then examine the entire system for leaks. Should any leaks be found, they must be rectified immediately. Repeat the procedure with the clutch system.

**NOTE.**—When bleeding the brake or clutch systems hydraulic fluid bled from the systems must be allowed to stand until it is clear of air bubbles before it is used again. Dirty fluid should be discarded.

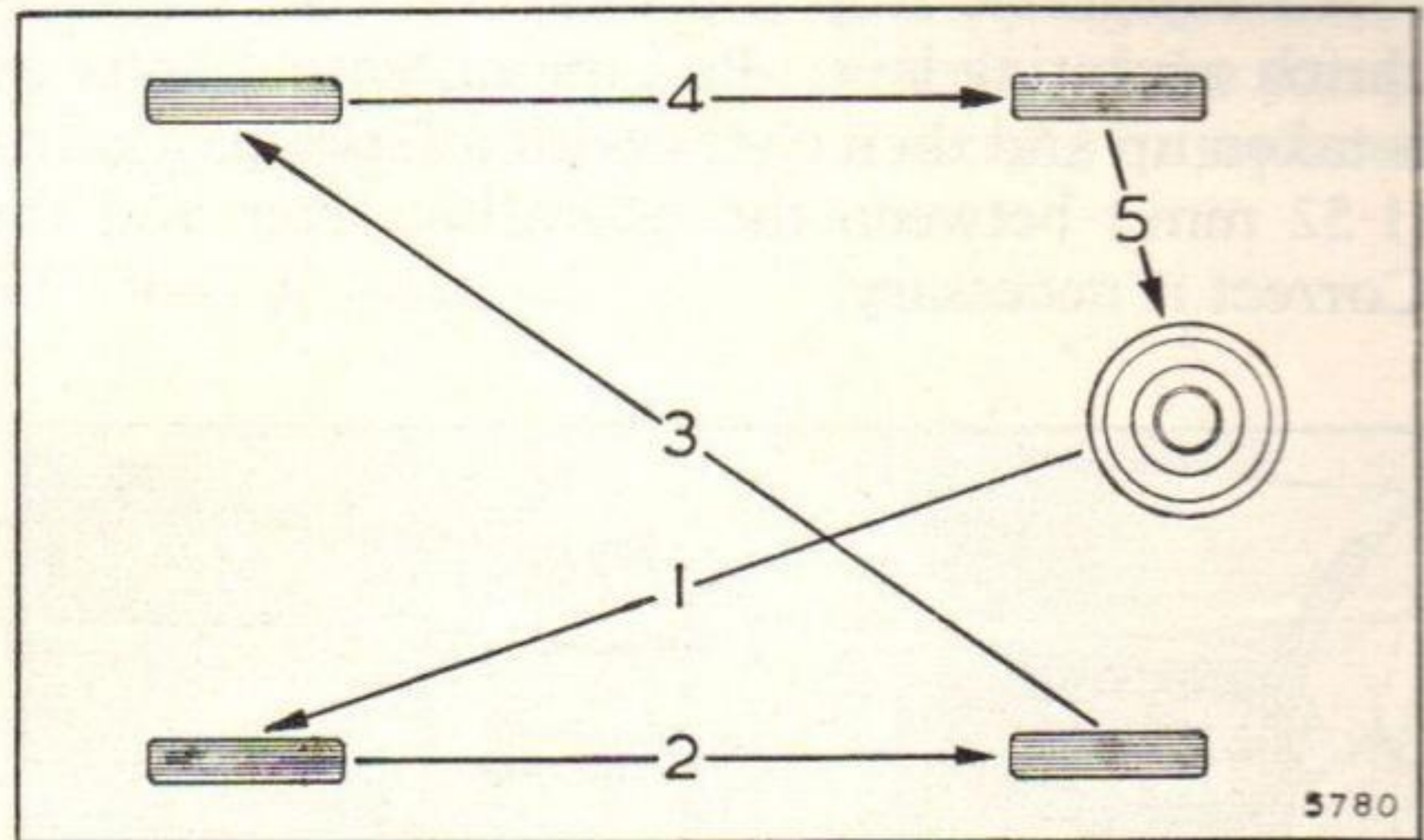
For the complete summary of attention to be given every 1,000 miles (1600 km.) refer to page 50.

## EVERY 2,000 MILES (3200 Km.)

In order to get the longest possible life from the tyres the road wheels must be changed round and the spare wheel brought into use every 2,000 miles (3200 km.).

Follow the order given in the diagram; this will equalize the wear and prolong the life of the tyres.

*Change the wheels round diagonally and bring the spare into use as shown in this illustration*



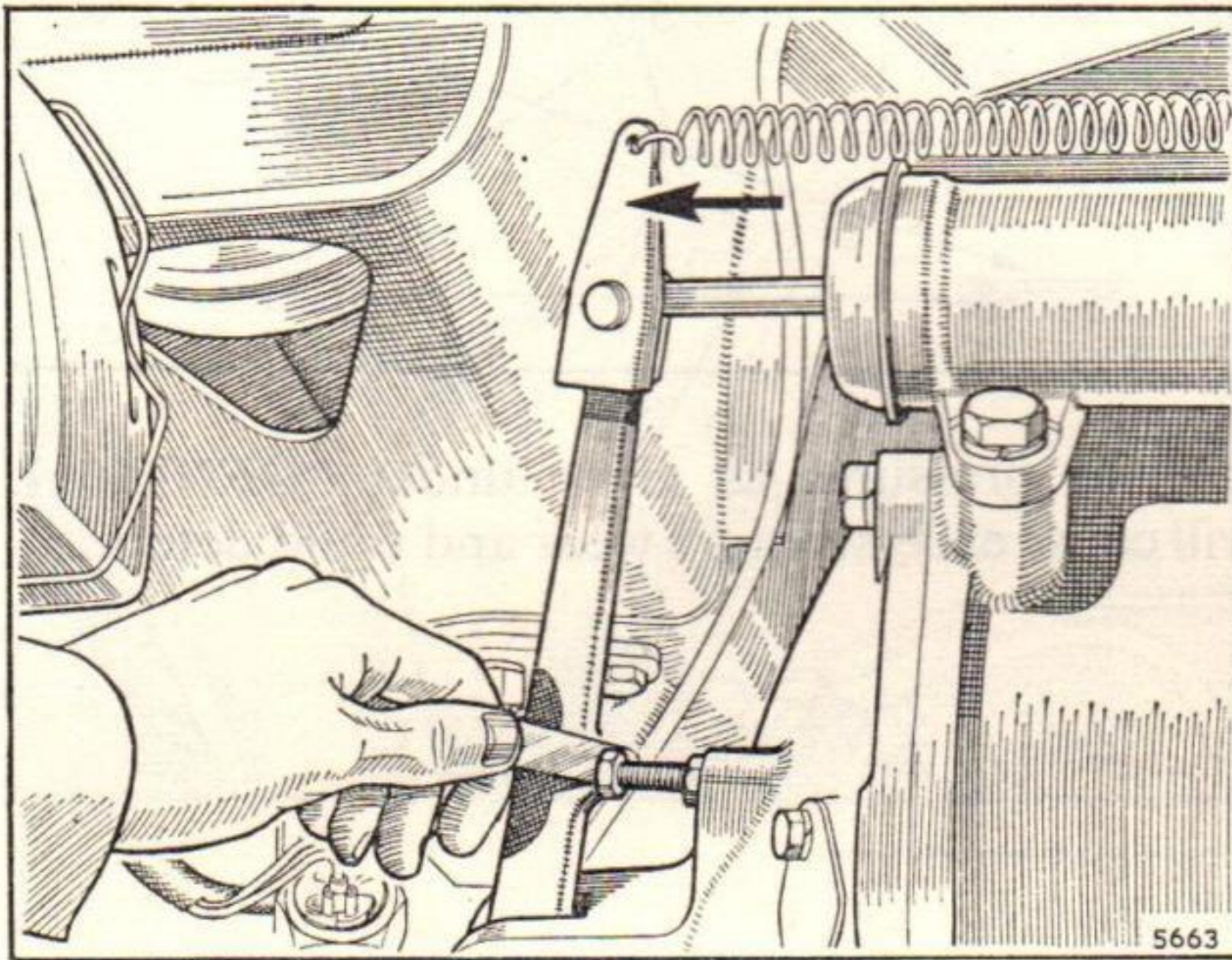
Maintain the tyres at their correct pressures as given under 'GENERAL DATA', page 4. Underinflation will cause excessive tyre wear and rapid deterioration of the tyre walls.

## EVERY 3,000 MILES (4800 Km.)

### Clutch adjustment

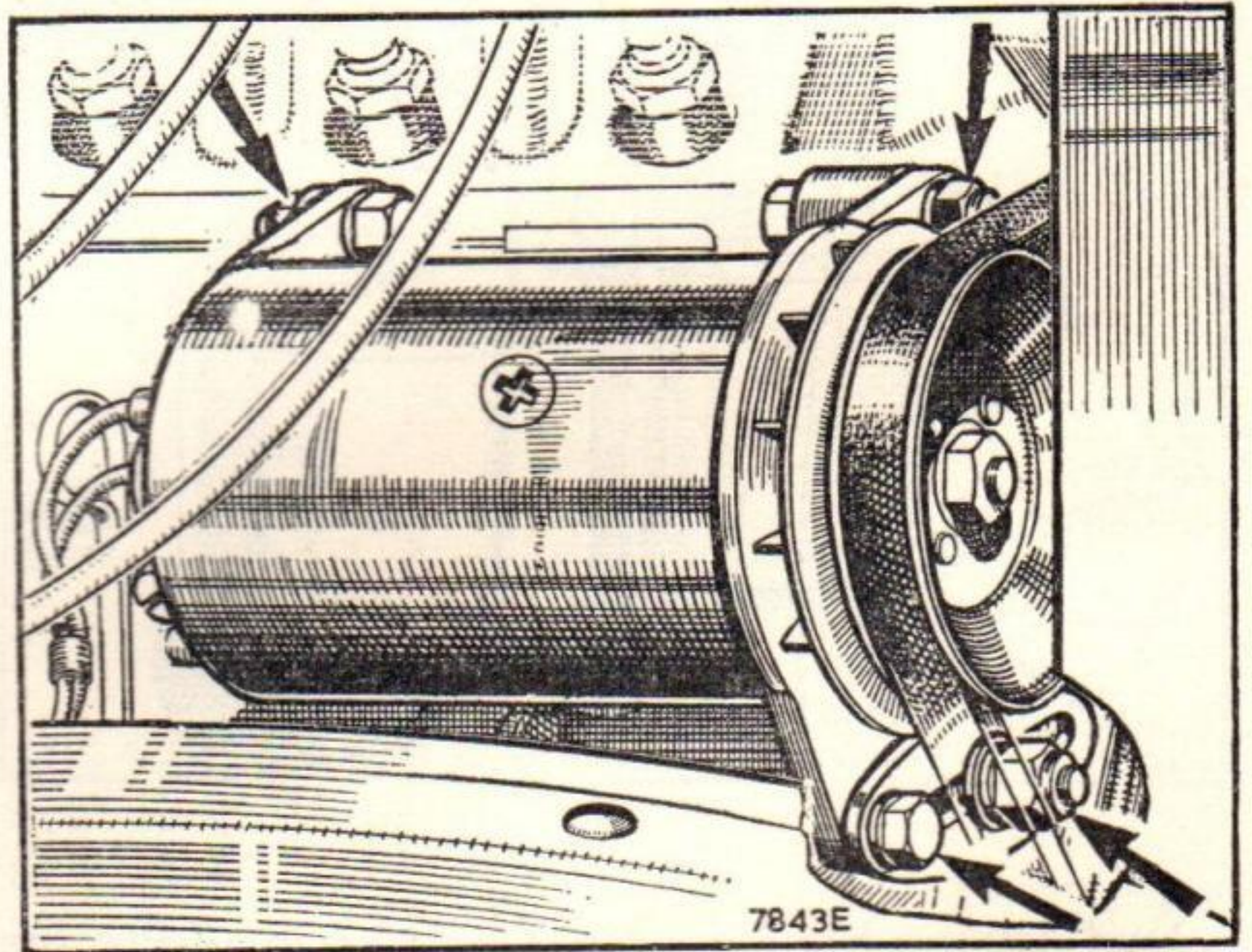
It is important that a clearance exists between the clutch thrust race and the thrust ring. All cars have this clearance carefully set before dispatch. Gradually, as wear takes place, however, this clearance will diminish, and if neglected clutch slip will result.

An adjustable stop is provided on the transmission casing just forward of the clutch operating lever. Pull the operating lever outwards until all free movement is taken up and then check with a feeler gauge that there is a clearance of .060 in. (1.52 mm.) between the operating lever and the head of the adjustment bolt. Correct if necessary.



*A clearance of .060 in. (1.52 mm.) must exist between the adjustable clutch return stop and the operating lever. Pull the lever in the direction indicated by the arrow and check the clearance with a feeler gauge*

*The dynamo attachment points to be slackened for belt adjustment*



### Dynamo driving belt

Inspect the dynamo driving belt, and adjust if necessary to take up any slackness. Care should be taken to avoid overtightening the belt, otherwise undue strain will be thrown on the dynamo bearings.

The belt tension is adjusted by slackening the bolts of the dynamo cradle and moving the dynamo the required amount by hand. Tighten up the bolts thoroughly.

## EVERY 3,000 MILES (4800 Km.)

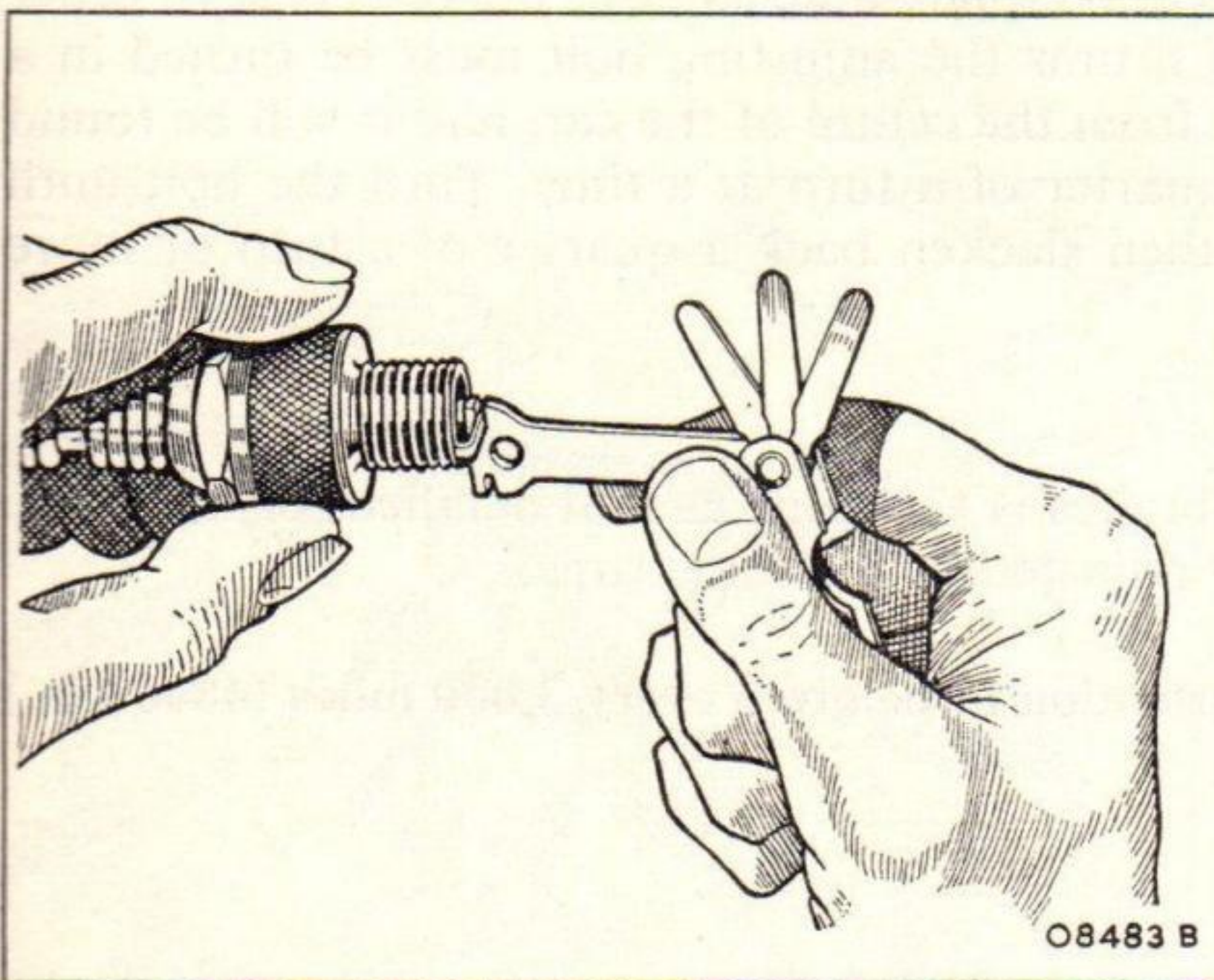
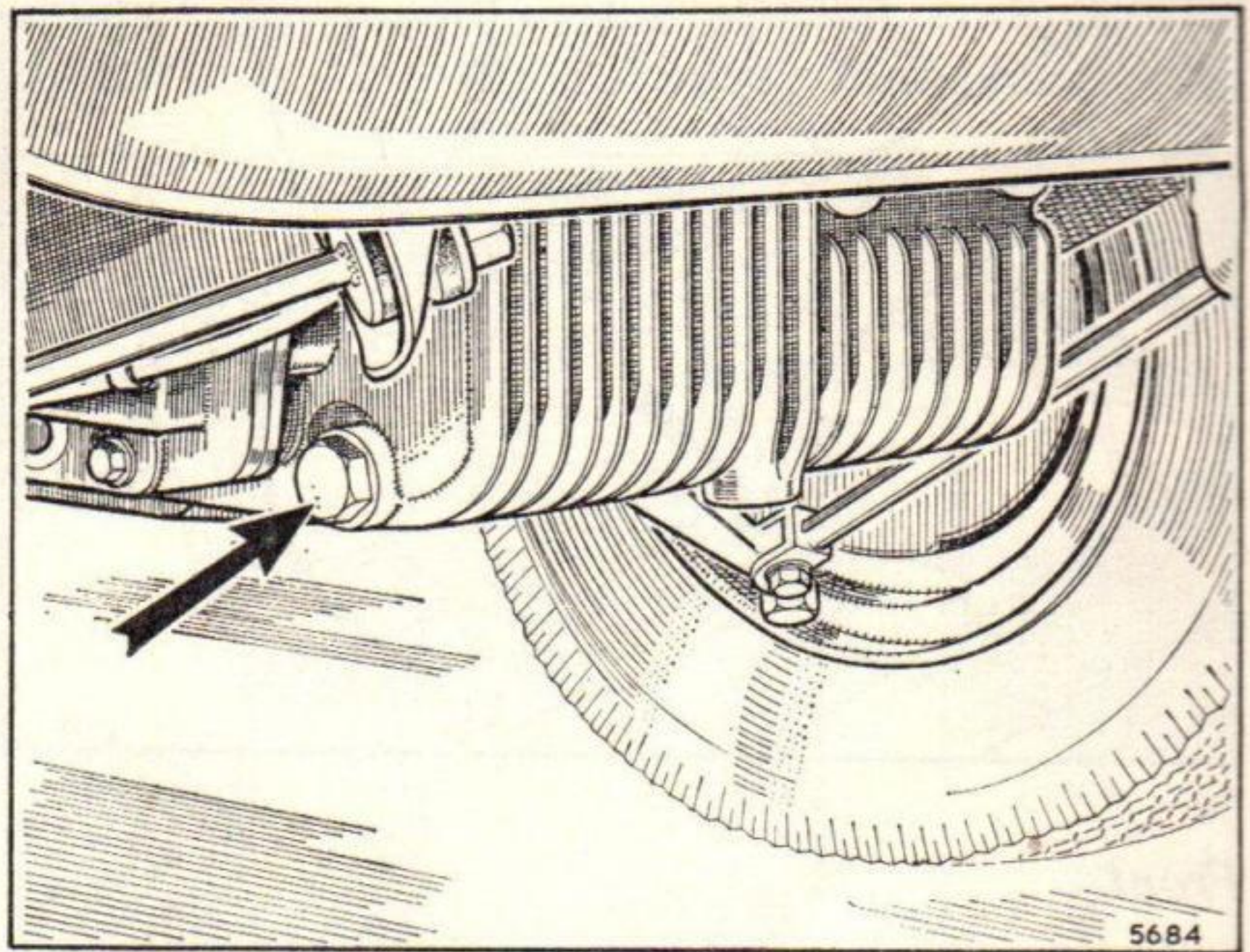
### Draining the sump

The oil in the sump should be drained to clear any impurities that may have accumulated and then refilled with the appropriate grade of lubricant. This operation is best carried out immediately the car returns from a journey, while the oil is warm and more fluid.

On the right-hand side of the engine sump will be found a hexagon-headed drain plug. Removal of this magnetic plug will release the contents of the sump. After carefully cleaning the drain plug (using non-fluffy rag) it should be replaced and screwed up tightly.

Refill the sump with fresh oil to Ref. A, page 60.

*The sump drain plug is located on the right-hand side of the engine*



*The Champion sparking plug gauge and setting tool*

### Sparkling plugs

The sparking plugs should be cleaned, preferably by a garage with a special air-blast service unit, and the gaps reset to the dimensions given under 'GENERAL DATA', page 4.

Use the special Champion sparking plug gauge and setting tool, and move the side wire on the plug only, never the centre one.

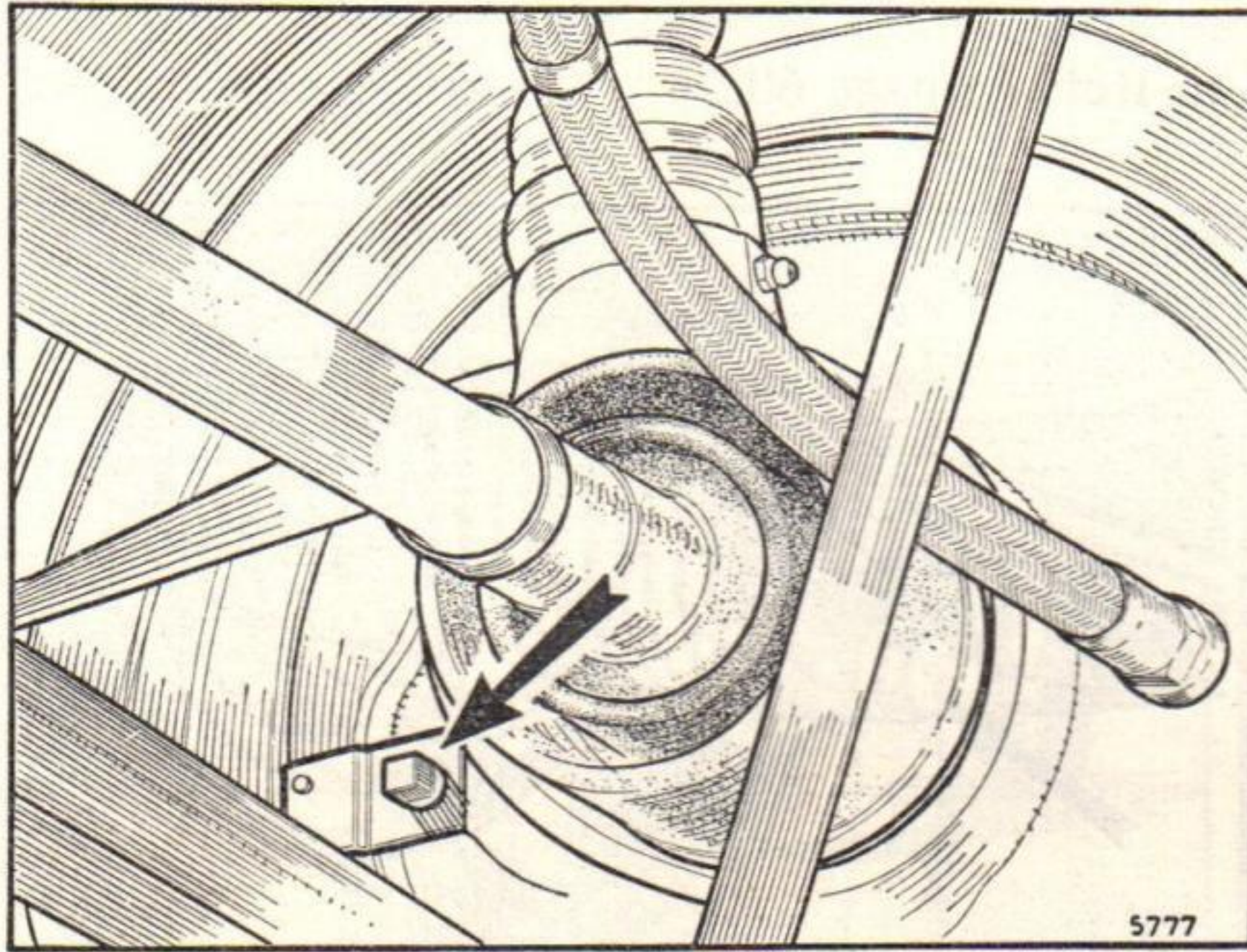
Oily, dirty, or corroded plugs cannot give good results.

## EVERY 3,000 MILES (4800 Km.)

### Brake adjustment

Adjustment is required when excessive travel of the brake pedal is necessary to operate the brakes.

Chock the wheels remaining in contact with the ground to prevent the car rolling when the hand brake is released for rear brake adjustment. Use the special jack provided in the tool kit to raise each wheel in turn (see page 27).



*One square-headed brake adjusting bolt is provided on each brake-plate*

### *Front*

The square-headed bolt on the brake-plate adjusts both brake-shoes. In order to move the shoes nearer to the drums the adjusting bolt must be turned in a clockwise direction when viewed from the centre of the car, and it will be found that each bolt can be turned a quarter of a turn at a time. Turn the bolt until a definite resistance is felt, and then slacken back a quarter of a turn or more until no binding is experienced.

### *Rear*

Adjustment to the rear wheel brakes is the same as that detailed for the front. The hand brake is automatically adjusted at the same time.

**For the complete summary of attention to be given every 3,000 miles (4800 km.) refer to pages 50 and 51.**

## EVERY 6,000 MILES (9600 Km.)

### Oil filter

The engine oil filter element must be renewed. Unscrew the central retaining bolt to release the filter bowl and element.

Clean the filter bowl thoroughly and make certain that the correct replacement element is obtained for the make of filter fitted. Use element to B.M.C. Part No. 8G706.

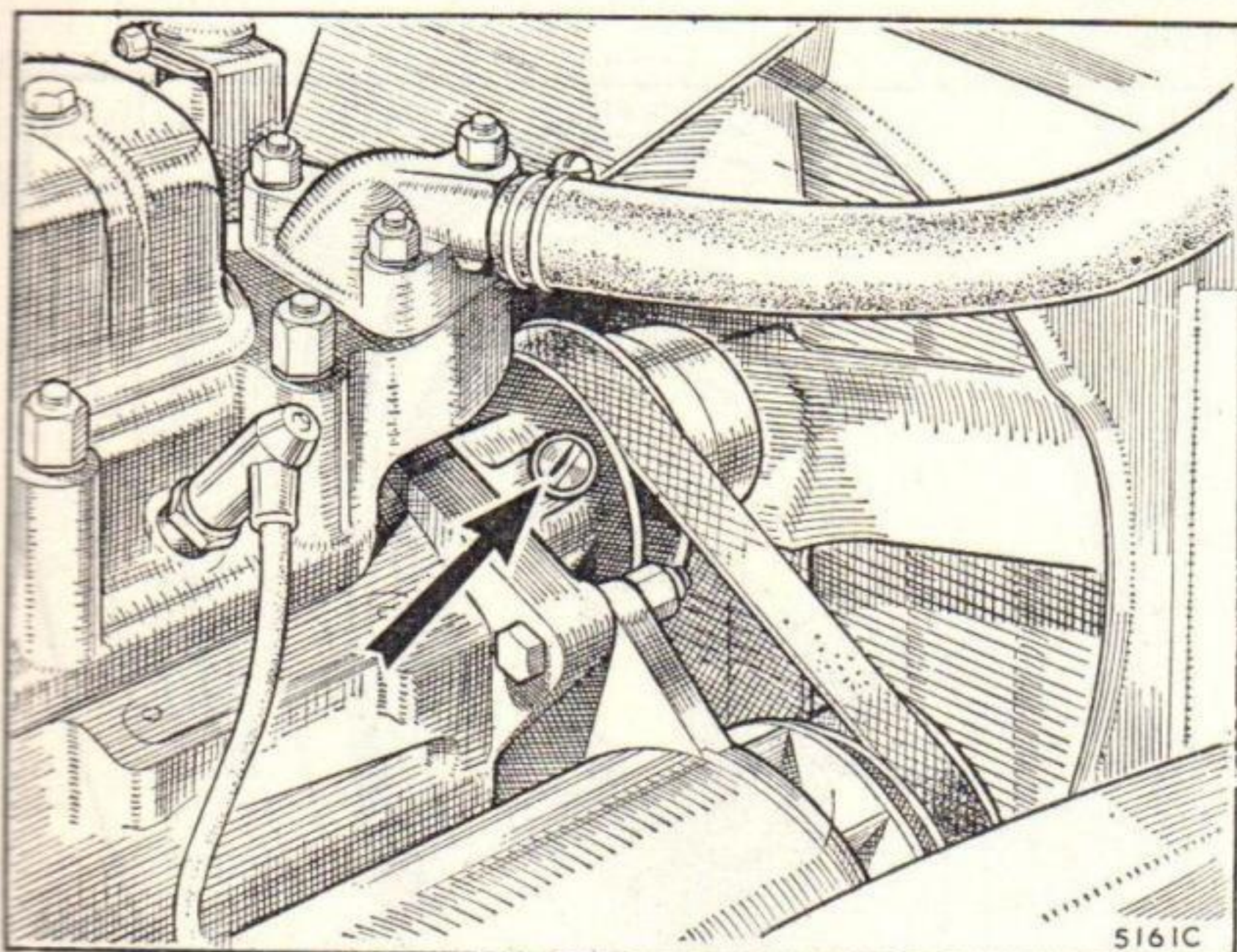
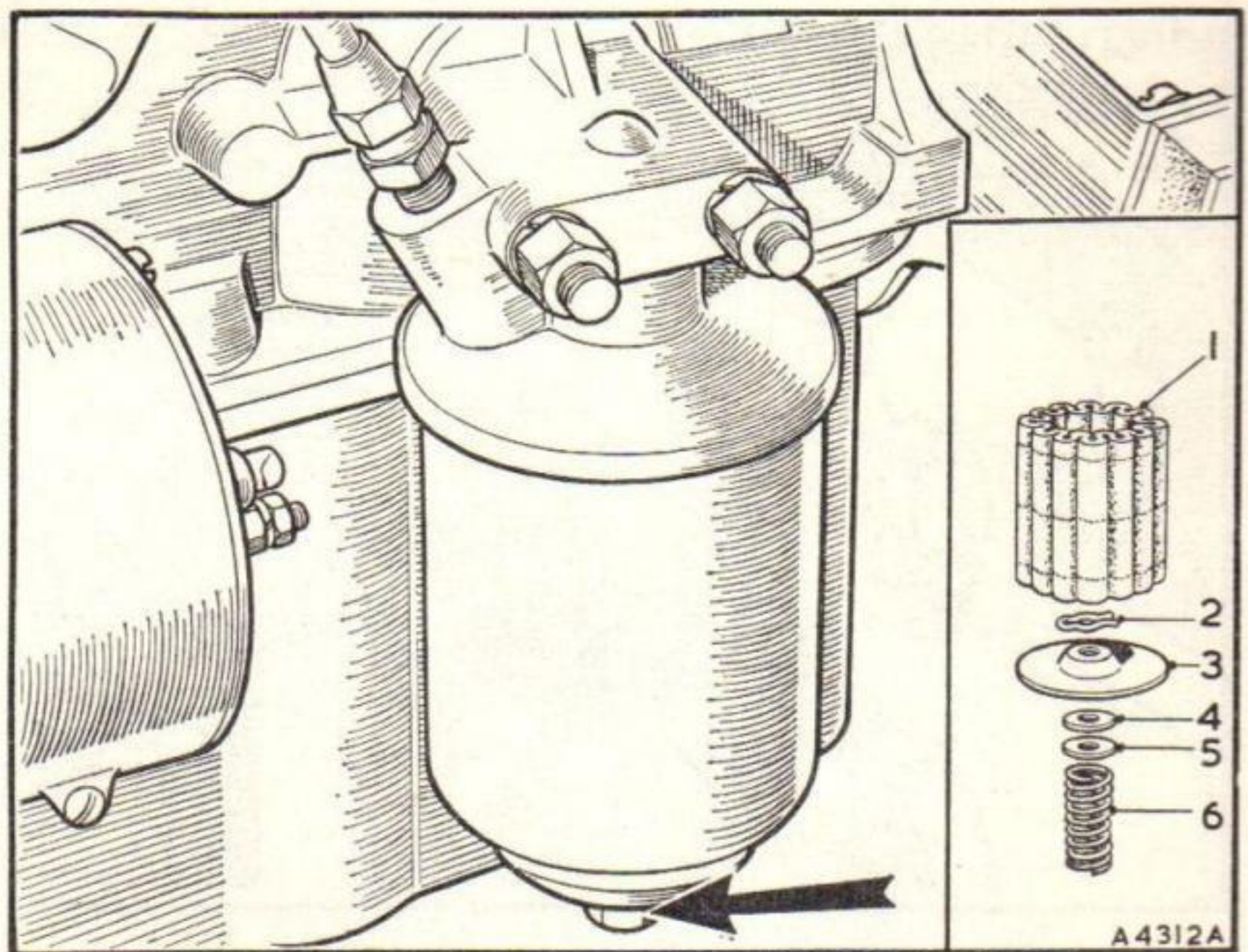
Make certain that the seating washer is in good order; it must be renewed should there be any doubt as to its condition.

Should the internal seating be removed, it must be refitted in the order shown in the illustration. The felt or rubber sealing washer must be a good fit on the bolt.

Insert the new element into the bowl, fill up with new engine oil, and refit the assembly to the filter head. Check the filter for signs of leakage immediately the engine is started.

*The engine oil filter retaining bolt, with the internal washers, etc., shown inset*

1. Filter element.
2. Retaining clip.
3. Seating plate.
4. Sealing washer.
5. Steel washer.
6. Spring.



*Unscrew the plug from the water pump body and lubricate the pump sparingly*

### Water pump

Remove the oil plug from the water pump casing and add a small quantity of S.A.E. 140 oil.

The oiling of the water pump must be done very sparingly, otherwise oil will flow past the bearings onto the face of the carbon sealing ring and impair its efficiency.

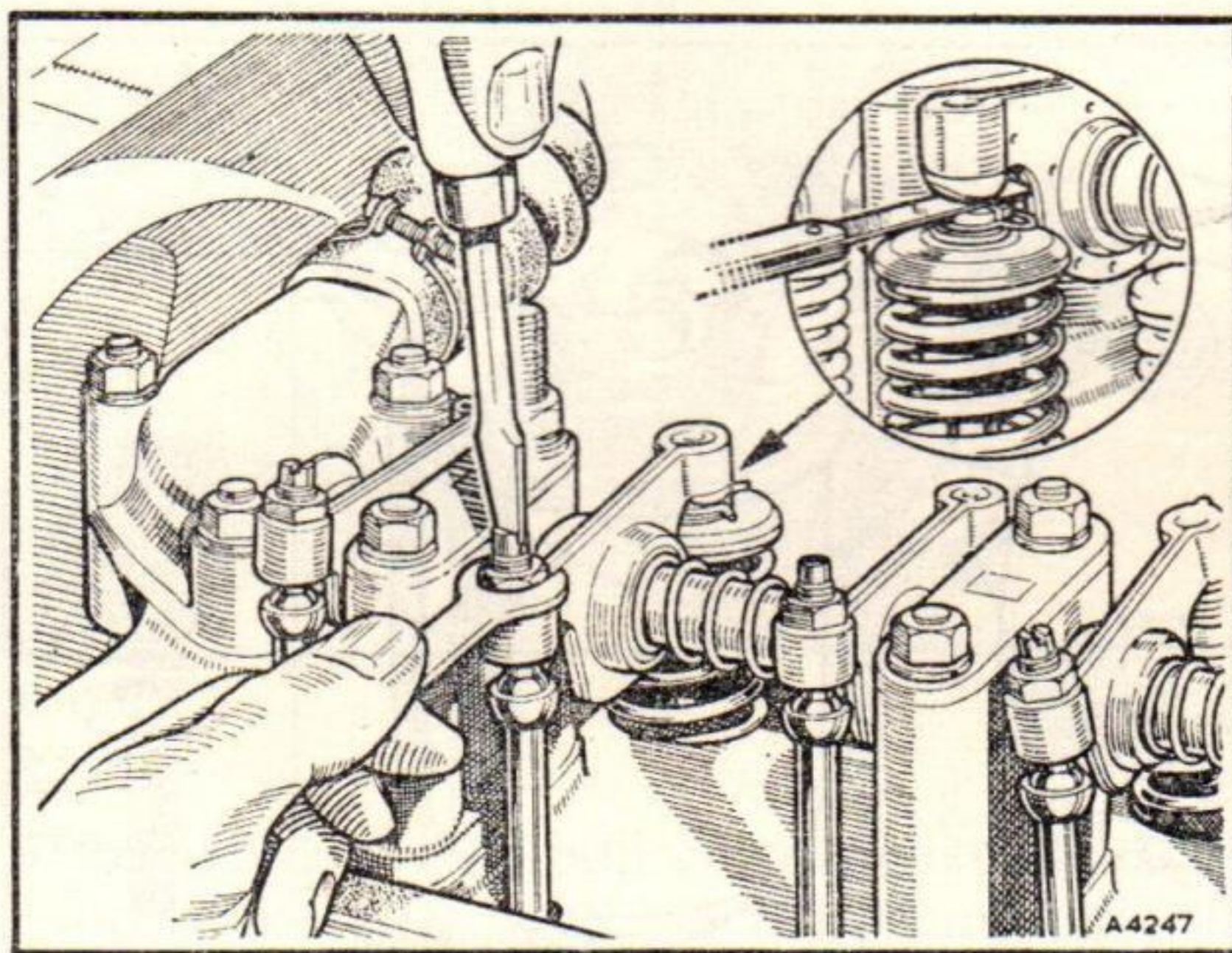
## EVERY 6,000 MILES (9600 Km.)

### Valve rockers

The valve rocker clearances should be checked, and adjusted where necessary to have a clearance between the rocker arm and the valve stem of at least .012 in. (.30 mm.) when cold.

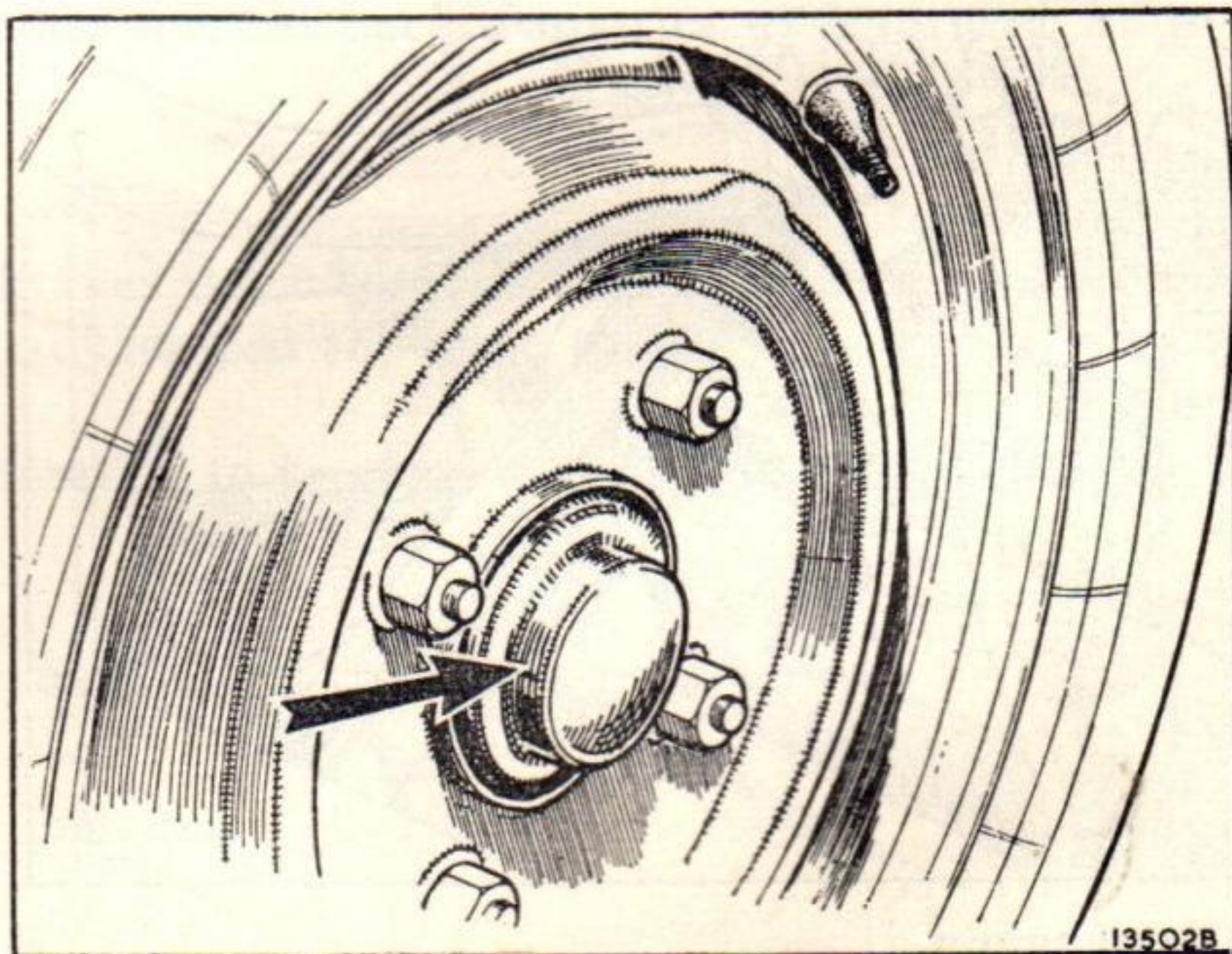
Adjustment must be made with the tappet on the back of the cam. Testing and adjustments should be carried out in the following order:

No. 1 valve with No. 8 fully open	No. 8 valve with No. 1 fully open
No. 3 " " No. 6 " "	No. 6 " " No. 3 " "
No. 5 " " No. 4 " "	No. 4 " " No. 5 " "
No. 2 " " No. 7 " "	No. 7 " " No. 2 " "



*Slacken the locknut and rotate the screw clockwise to reduce and anti-clockwise to increase the valve rocker clearance*

*Remove the hub cover, prise out the grease cap from the hub, refill the cap with grease, and replace*



### Rear wheel hubs

Remove the hub discs and prise off the grease-retaining cap from the end of each hub. Fill the cap with grease to Ref. C (page 60) and replace.

## EVERY 6,000 MILES (9600 Km.)

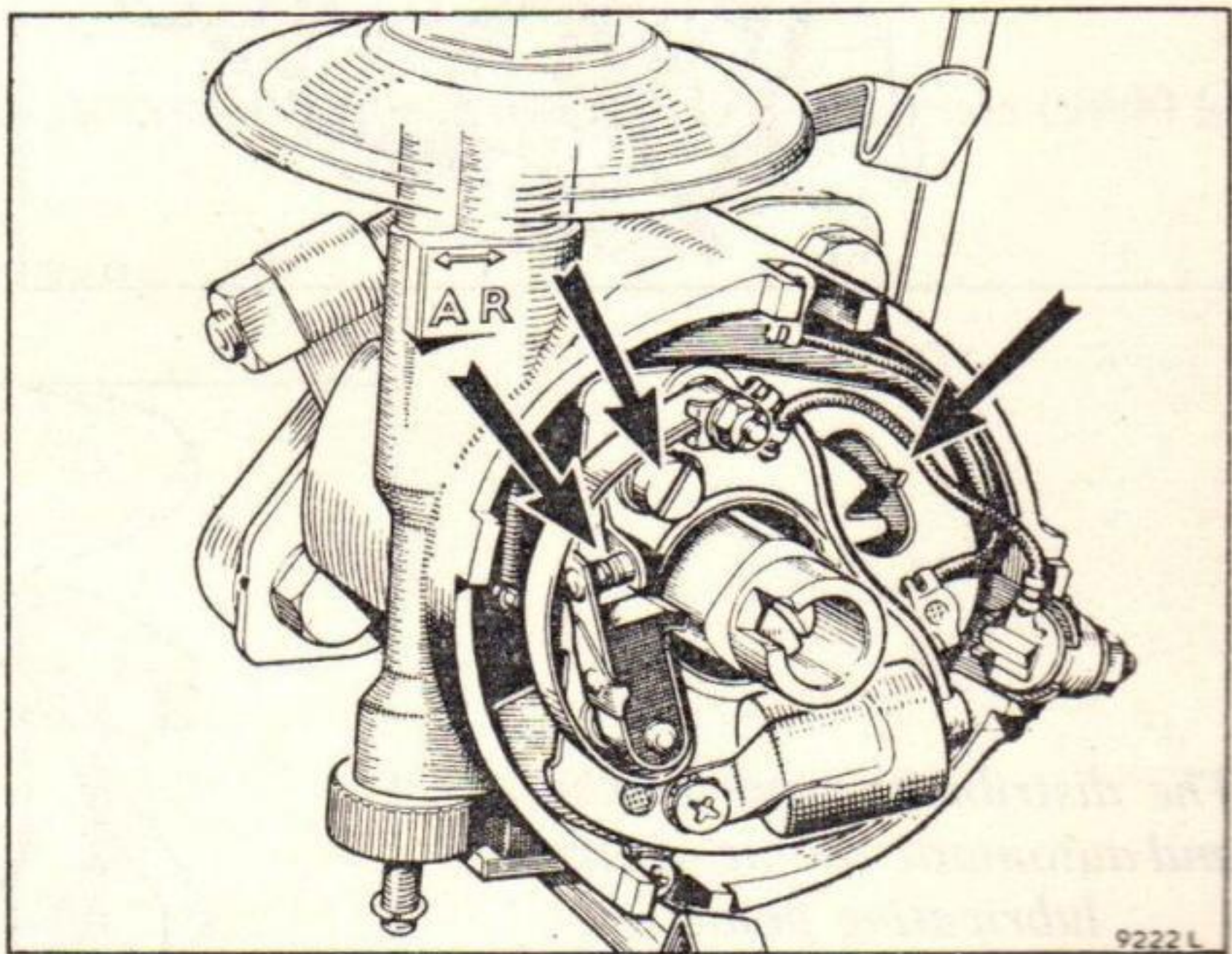
### Checking the distributor contact breaker

Remove the distributor cap and turn the engine until the contacts are fully opened. To rotate the engine and open the contacts to the desired position engage top gear and gently rock the car forward. Make sure that the ignition is switched off. Check the gap with the .016 in. (.40 mm.) gauge on the screwdriver supplied in the tool kit: the gauge should be a sliding fit in the gap. If the gap varies appreciably from the gauge slacken the contact plate securing screw and adjust the contact gap by inserting a screwdriver in the notched hole at the end of the plate, turning clockwise to decrease and anti-clockwise to increase the gap. Tighten the securing screw.

If the contact breaker points are burned or blackened clean them with a fine carborundum stone or with very fine emery-cloth.

Cleaning of the contacts is made easier if the contact breaker lever carrying the moving contact is removed. To do this unscrew the nut securing the end of the spring, remove the spring washer, flat washer, and both wire terminals, and lift off the lever complete with spring. After cleaning check the contact breaker setting on replacement.

*The contact breaker points, contact plate securing screw, and the screwdriver adjusting slots are here indicated by the arrows*



Wipe the inside and outside of the moulded distributor cap with a soft dry cloth, paying particular attention to the space between the terminals, taking care not to remove the water repellent silicone grease around the lip of the cap.

Renew the coating of silicone grease on the lip of the cap and where the leads enter the cap should it be inadvertently removed.

See that the small carbon brush on the moulding works freely in its holder.

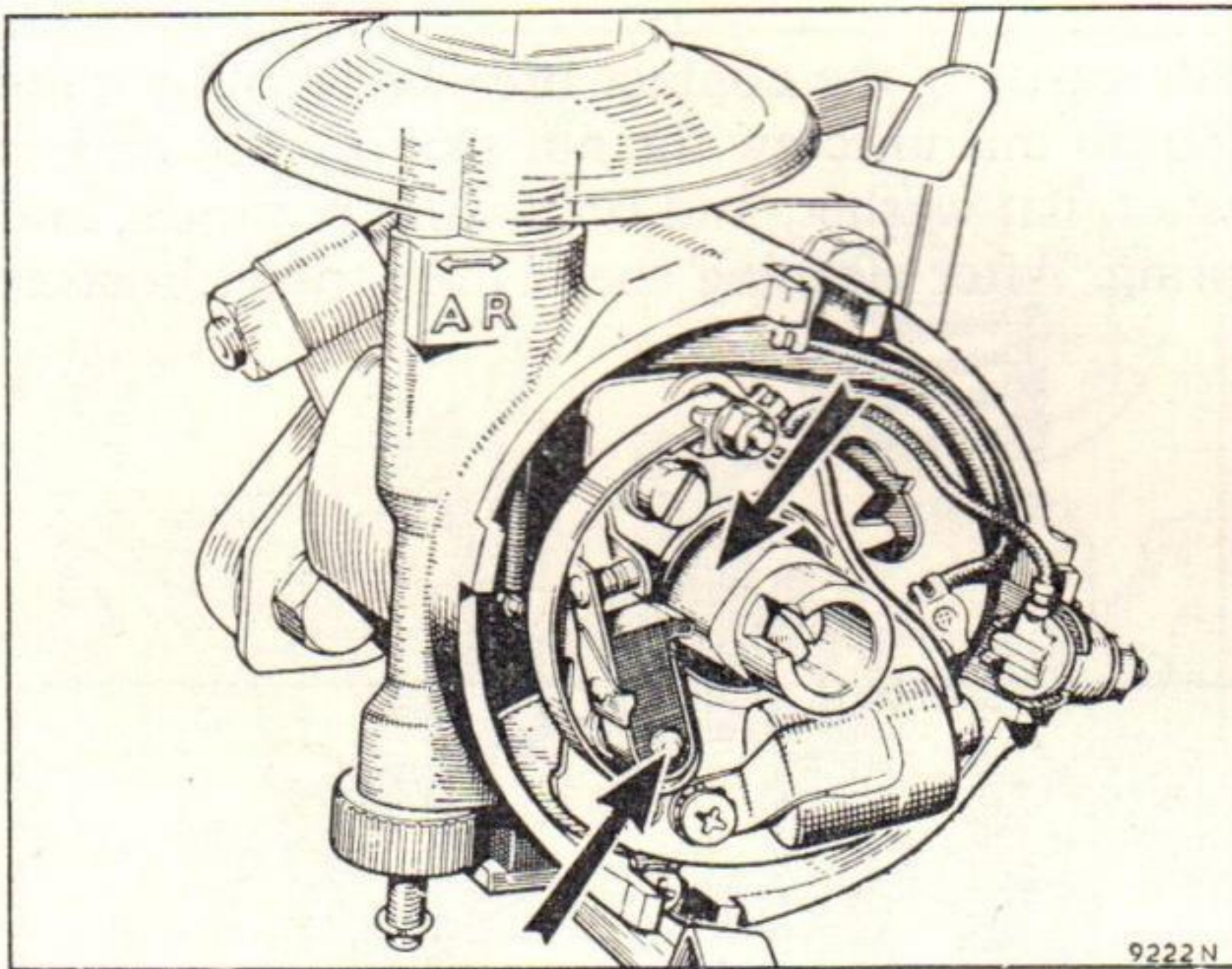
## EVERY 6,000 MILES (9600 Km.)

### Distributor lubrication

Lightly smear the cam with a very small amount of grease to Ref. C, page 60, or clean engine oil can be used.

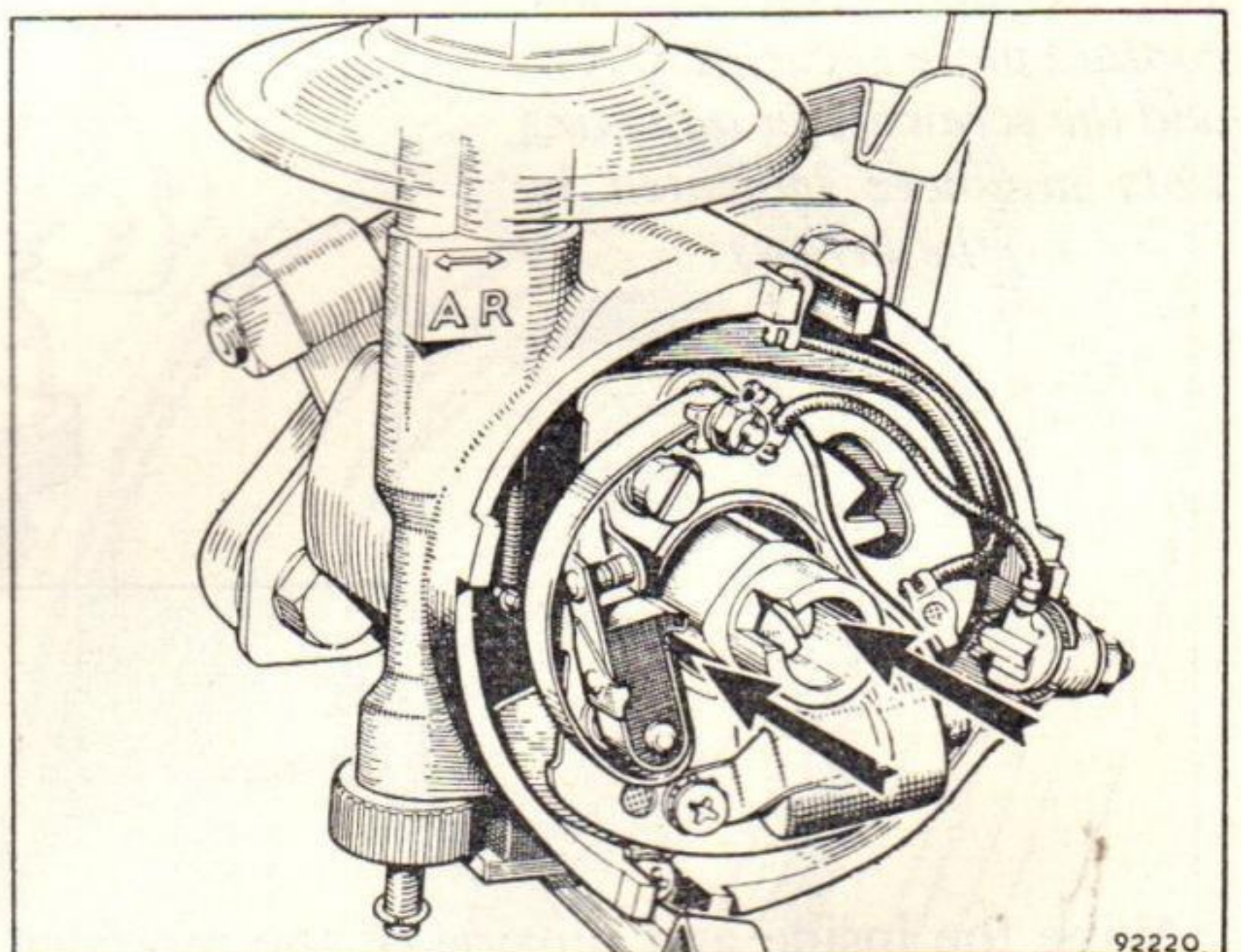
Place a small amount of grease to Ref. C or clean engine oil on the pivot on which the contact breaker lever works. Do not allow oil or grease to get on the contacts. Use lubricant sparingly.

Lift the rotor off the top of the distributor drive spindle by pulling it off in line with the spindle axis, and add a few drops of thin engine oil to the cam bearing. Do not remove the screw which is exposed to view; there is a clearance between the screw and the inner face of the cam spindle for the oil to pass.



*A slight trace of grease or engine oil should be applied to the rotating cam. The contact breaker lever pivot should also receive a drop of oil*

*The distributor cam bearing and automatic timing control lubricating points*



Replace the rotor with its drive lug correctly engaging the spindle slot and push it on the shaft as far as it will go.

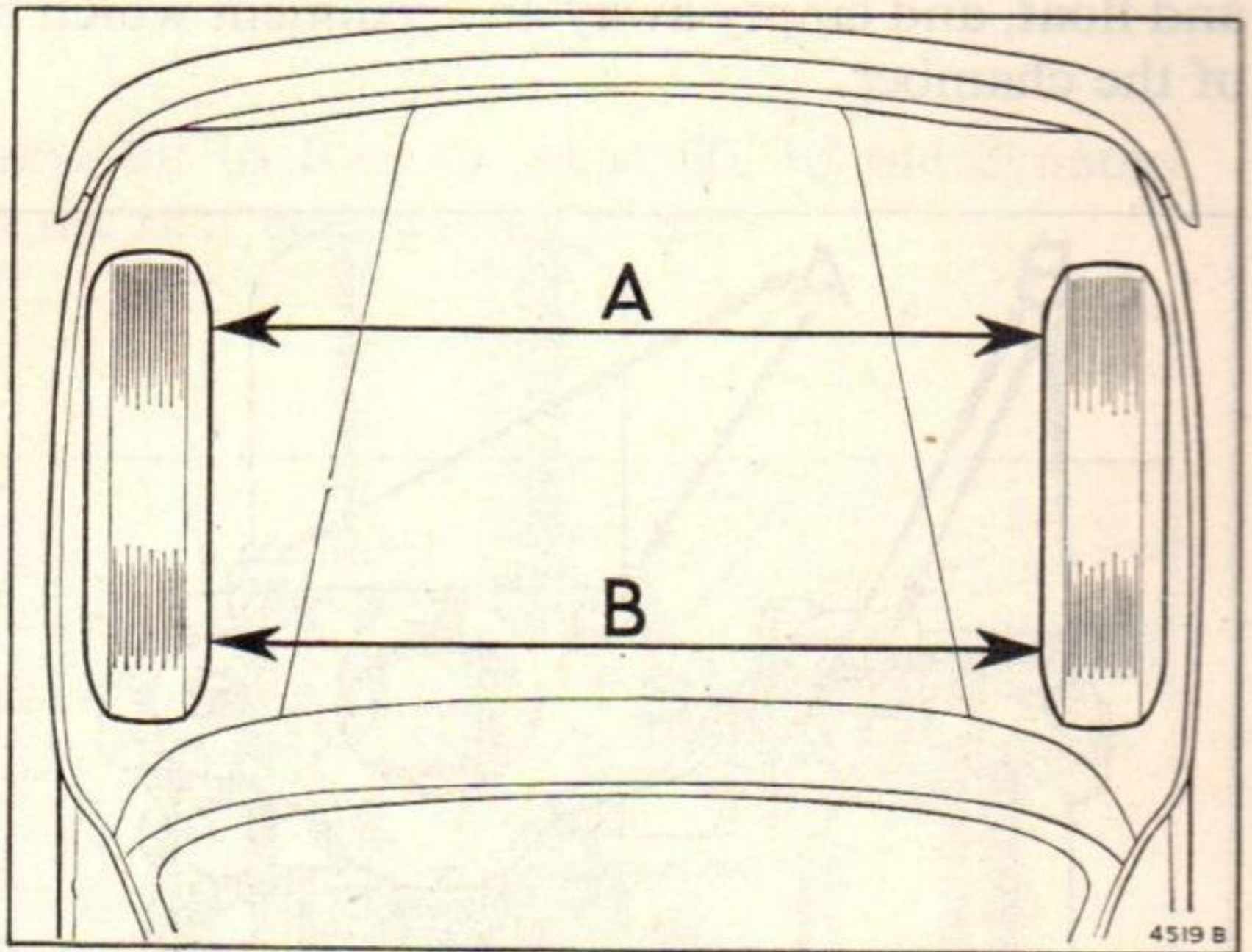
Add a few drops of oil to Ref. D, page 60, through the hole in the contact breaker base plate through which the cam passes.

## EVERY 6,000 MILES (9600 Km.)

### Tracking up the wheels

Excessive and uneven tyre wear is usually caused by faulty wheel tracking. The wheels must toe out  $0-\frac{1}{16}$  in. (1.59 mm.), or  $7\frac{1}{2}$  minutes per wheel, but ensure that the measurements are taken at axle level and that the rims run true. Correct setting of the front wheels entails the use of a wheel alignment gauge, and the owner is advised to **entrust this work to his Dealer or Distributor.**

*The front wheel alignment check must be taken with the wheels in the straight-ahead position. Dimension (A) must be  $\frac{1}{16}$  in. (1.59 mm.) greater than (B)*



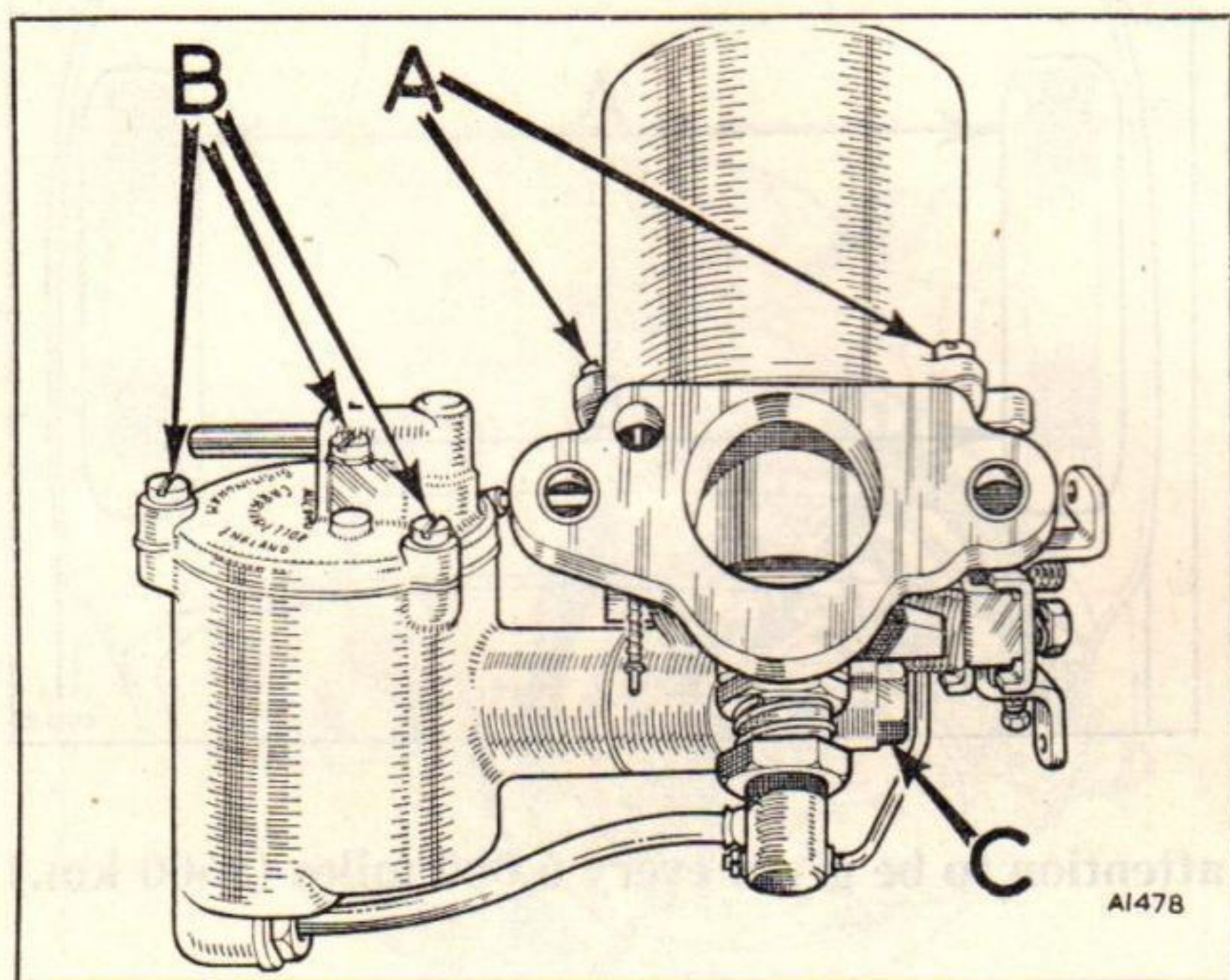
**For the complete summary of attention to be given every 6,000 miles (9600 km.) refer to pages 51 and 52.**

## EVERY 12,000 MILES (19200 Km.)

### Carburettor piston

The carburettor suction chamber and piston must be cleaned. After detaching the unit clean the main inside bore of the suction chamber and the outside diameter of the piston with a clean rag moistened in petrol. Reassemble in a dry and clean condition with a few spots of thin oil (Ref. D, page 60) on the piston rod **only**. Don't forget to refill the damper reservoir (see page 36).

Detach the float-chamber by unscrewing the attachment bolt, remove the lid and float, and empty away any sediment which may have collected in the bottom of the chamber.



*Release the carburettor float and suction chambers by removing the bolt and screws indicated*

- A. Suction chamber screws.
- B. Float-chamber lid screws.
- C. Float-chamber attachment bolt.

### Air filter (dry type)

The air cleaner element must be replaced with a new element every 12,000 miles (19200 km.), or earlier in dusty operating conditions.

Remove the air filter from the vehicle by slackening the clamp bolt securing the filter to the carburettor. Unscrew the wing nut from the top of the filter, withdraw the cover and filter element, and discard the element. Thoroughly clean the container, fit a new element, replace the cover and wing nut, and refit the assembly to the vehicle.

Do not disturb the cover or the element at any other time.

### Sparking plugs

Fit new sparking plugs.

### Radiator

Open both drain taps on the engine and radiator and allow the coolant to drain. Remove the radiator filler cap and insert a water hose in the top of the radiator. Allow the water to run for several minutes to swill out the radiator and cylinder block passages.

Refill the system with water (preferably soft) or one of the recommended anti-freeze solutions (see page 16).

## PEMOL EVERY 12,000 MILES (19200 Km.)

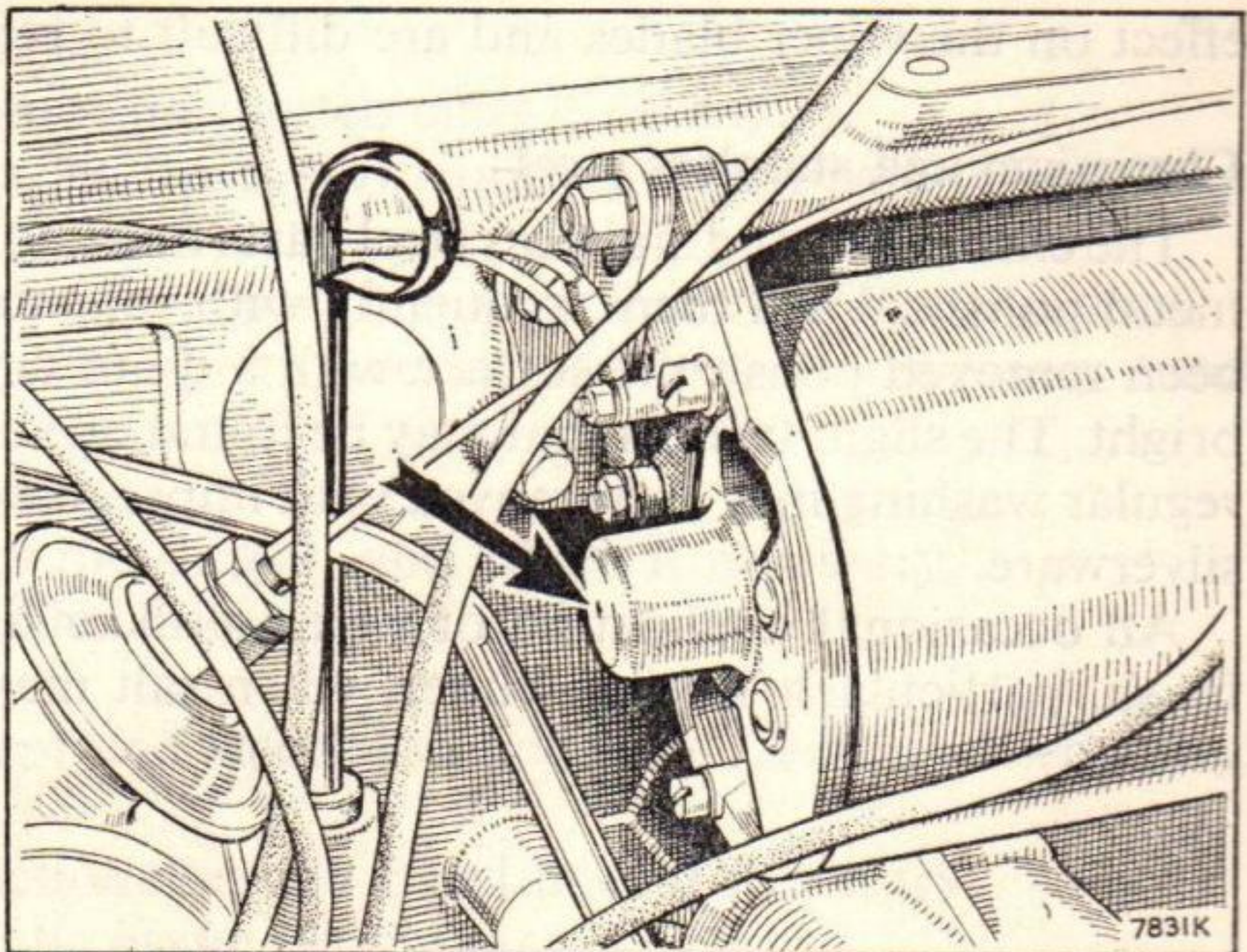
### Speedometer cables

Every 12,000 miles (19200 km.) the speedometer outer casing should be unscrewed from the speedometer head and the inner cable extracted and lubricated sparingly with grease to Ref. C, page 60; oil must not be used. After returning the inner cable into its outer casing the upper end should be withdrawn approximately 8 in. (203 mm.) and the surface grease wiped off before reconnecting it to the speedometer head.

### Dynamo bearing

Add two or three drops of engine oil to Ref. D, page 60, to the dynamo bearing through the central hole in the rear end bearing plate.

Do not over-oil.



*The lubricating hole for the dynamo end bearing*

### Headlamp beam setting

The headlamp beam settings should be checked, and reset if necessary, every 12,000 miles (19200 km.), or at least once a year. Checking and adjustment (page 24) may well be undertaken when the thinner engine oil and anti-freeze are introduced in preparation for winter service.

For a complete summary of the attention to be given every 12,000 miles (19200 km.) see also pages 52 and 53.

# BODY ATTENTION

## Coachwork, wings, and windshield

Regular attention and care to the body finish are necessary if the new appearance of the car exterior is to be maintained against the effect of air pollution, rain, and mud. Frequent washing of bodywork is recommended. Large deposits of mud must be softened with water before using a sponge. When clean, dry the surface of the car with a damp chamois-leather. Any damaged parts should immediately be covered with paint and a complete repair effected as soon as possible. When 'touching-in' light scratches and abrasions with paint ensure that all traces of wax polish are removed from the affected area beforehand.

Methylated spirits (denatured alcohol) should be used to remove spots of grease or tar from the bodywork, windshield, and bright parts of the car.

The application of a good-quality liquid polish is recommended to give added lustre to the paintwork. Do not allow silicon- or wax-based polishes to come into contact with the windshield; they have been known to have a detrimental effect on the wiper blades and are difficult to remove.

## Chromium and stainless steel

The chromium and stainless steel parts must not on any account be cleaned with metal polish. Wash them frequently with soap and water, and when the dirt has been removed polish the surface with a clean dry cloth or chamois-leather until bright. The slight tarnish that may be found on stainless steel that has not received regular washing may be removed with impregnated wadding such as that used on silverware.

An occasional application of wax polish or light oil will help to preserve the finish, particularly during winter, when salt may be used on the road.

# PERIODICAL ATTENTION

Regular servicing, as proven by presentation of completed voucher counterfoils, could well enhance the value of your vehicle in the eyes of a prospective purchaser.

During the early life of the car, soon after it has completed 500 miles (800 km.), you are entitled to have it inspected free of charge by the Morris Dealer from whom you purchased it, or, if this should not be convenient, by any other Morris Dealer by arrangement. This attention given during the critical period in the life of the car makes all the difference to its subsequent life and performance.

This service includes:

1. *Engine*
  - Tighten cylinder head and manifold nuts to recommended pressures (see Workshop Manual).
  - Check tightness of valve rocker shaft brackets to recommended pressures (see Workshop Manual).
  - Check valve rocker clearances, and reset if necessary.
  - Tighten fan belt if necessary.
  - Check all water connections, and tighten clips if necessary.
  - Examine and clean carburetter; reset slow-running adjustment if necessary.
2. *Ignition*
  - Examine, and adjust if necessary, sparking plugs and distributor points.
  - Check working of automatic ignition controls, and if necessary reset ignition timing.
3. *Clutch*
  - Check clutch pedal for free movement, and adjust if necessary.
  - Check fluid level in hydraulic clutch supply tank.
4. *Steering*
  - Check front wheel alignment and steering connections. Adjust if necessary.
5. *Brakes*
  - Check braking system functionally, and bleed lines if necessary.
  - Check fluid level in hydraulic brake supply tank.
6. *Hydraulic dampers*
  - Inspect hydraulic dampers for leaks.
  - Check hydraulic damper bolts for tightness.
7. *Body*
  - Check doors for ease in opening and closing.
  - If necessary, lightly smear with a suitable lubricating agent all dovetails and striking plates.
8. *Electrical*
  - Check electrical system functionally.
  - Examine battery; top up to correct level with distilled water as required.
  - Clean and tighten terminals.
9. *General*
  - Check tightness of universal joint clamp nuts and suspension nuts and bolts.
10. *Lubrication*
  - Drain oil from engine transmission unit, wipe magnetic drain plug, and refill.
  - Oil and grease all points of the car.
11. *Wheels and tyres*
  - Test tyres for correct pressures.
  - Check tightness of wheel nuts.

ALL MATERIALS CHARGEABLE TO THE CUSTOMER.

# PERIODICAL ATTENTION

## Daily

- Check oil level in crankcase. Top up if necessary.
- Check water level in radiator. Top up if necessary.

## Weekly

- Test tyre pressures, and regulate if necessary.

## 1,000 miles (1600 km.) service

- 1. Engine**
  - Top up carburetter damper.
  - Lubricate carburetter controls.
  - Top up radiator.
- 2. Clutch**
  - Check level of fluid in the hydraulic clutch supply tank, and top up if necessary.
- 3. Brakes**
  - Check brake pedal free travel and report if adjustment is required.
  - Make visual inspection of brake lines and pipes.
  - Check level of fluid in the hydraulic brake supply tank, and top up if necessary.
- 4. Hydraulic dampers**
  - Examine all hydraulic dampers for leaks.
- 5. Electrical**
  - Check battery cell specific gravity readings and top up to correct level.
- 6. Lubrication**
  - Top up engine transmission oil level if necessary.
  - Grease hand brake cable guide channels.
  - Lubricate all nipples.
- 7. Wheels and tyres**
  - Check tyre pressures.
  - Check wheel nuts for tightness.

## 2,000 miles (3200 km.) service

Carry out the 1,000 miles (1600 km.) service, with the following addition:

- 1. Wheels and tyres**
  - Change wheels round diagonally, including spare, to regularize tyre wear.

## 3,000 miles (4800 km.) service

- 1. Engine**
  - Top up carburetter piston damper.
  - Lubricate carburetter controls.
  - Top up radiator.
  - Check dynamo drive belt tension.
- 2. Ignition**
  - Clean and adjust sparking plugs.
- 3. Clutch**
  - Check level of fluid in the hydraulic clutch master cylinder, and top up if necessary.
  - Check free clearance at return stop, and adjust if necessary.

## PERIODICAL ATTENTION

### 4. *Brakes*

Check brakes, and adjust if necessary.

Make visual inspection of brake lines and pipes.

Check level of fluid in the hydraulic brake master cylinder, and top up if necessary.

### 5. *Hydraulic dampers*

Examine all hydraulic dampers for leaks.

### 6. *Body*

Lubricate door hinges, bonnet lock, and operating mechanism.

### 7. *Electrical*

Check battery cell specific gravity readings and top up to correct level.

### 8. *Lubrication*

Change engine transmission oil.

Lubricate all nipples.

### 9. *Wheels and tyres*

Check tyre pressures.

Check wheel nuts for tightness.

## 4,000 miles (6400 km.) service

Carry out the 1,000 miles (1600 km.) service, with the following addition:

### 1. *Wheels and tyres*

Change wheels round diagonally, including spare, to regularize tyre wear.

## 5,000 miles (8000 km.) service

Carry out the 1,000 miles (1600 km.) service

## 6,000 miles (9600 km.) service

### 1. *Engine*

Top up carburettor piston damper.

Lubricate carburettor controls.

Top up radiator.

Check dynamo drive belt tension.

Lubricate water pump sparingly.

Check valve rocker clearances, and adjust if necessary.

### 2. *Ignition*

Check automatic ignition control, lubricating drive shaft, cam, and advance mechanism.

Clean and adjust sparking plugs.

### 3. *Clutch*

Check level of fluid in the hydraulic clutch master cylinder.

Check clearance at return stop, and adjust if necessary.

### 4. *Brakes*

Check brakes, and adjust if necessary.

Make visual inspection of brake lines and pipes.

Check level of fluid in the hydraulic brake master cylinder, and top up if necessary.

## PERIODICAL ATTENTION

### 5. *Hydraulic dampers*

Examine all hydraulic dampers for leaks and check securing nuts for tightness.

### 6. *General*

Check tightness of universal joint clamp nuts and suspension nuts and bolts.

### 7. *Body*

Check, and tighten if necessary, door hinges and striker plate securing screws.

Lubricate door hinges, bonnet lock, and operating mechanism.

### 8. *Electrical*

Check battery cell specific gravity readings and top up to correct level.

### 9. *Lubrication*

Change oil in engine transmission unit.

Fit new oil filter element.

Lubricate all nipples.

Repack rear hub caps with grease.

### 10. *Wheels and tyres*

Change wheels round diagonally, including spare, to regularize tyre wear.

Check tyre pressures.

Check wheel alignment.

### **7,000 miles (11200 km.) service**

Carry out the 1,000 miles (1600 km.) service.

### **8,000 miles (12800 km.) service**

Carry out the 1,000 miles (1600 km.) service, with the following addition:

#### 1. *Wheels and tyres*

Change wheels round diagonally, including spare, to regularize tyre wear.

### **9,000 miles (14400 km.) service**

Carry out the 3,000 miles (4800 km.) service.

### **10,000 miles (16000 km.) service**

Carry out the 1,000 miles (1600 km.) service, with the following addition:

#### 1. *Wheels and tyres*

Change wheels round diagonally, including spare, to regularize tyre wear.

### **11,000 miles (17600 km.) service**

Carry out the 1,000 miles (1600 km.) service.

### **12,000 miles (19200 km.) service**

#### 1. *Engine*

Remove carburetter suction chamber and piston, clean, reassemble, and top up.

Remove carburetter float-chamber, empty sediment, and refit.

Lubricate carburetter controls.

Check valve rocker clearances, and adjust if necessary.

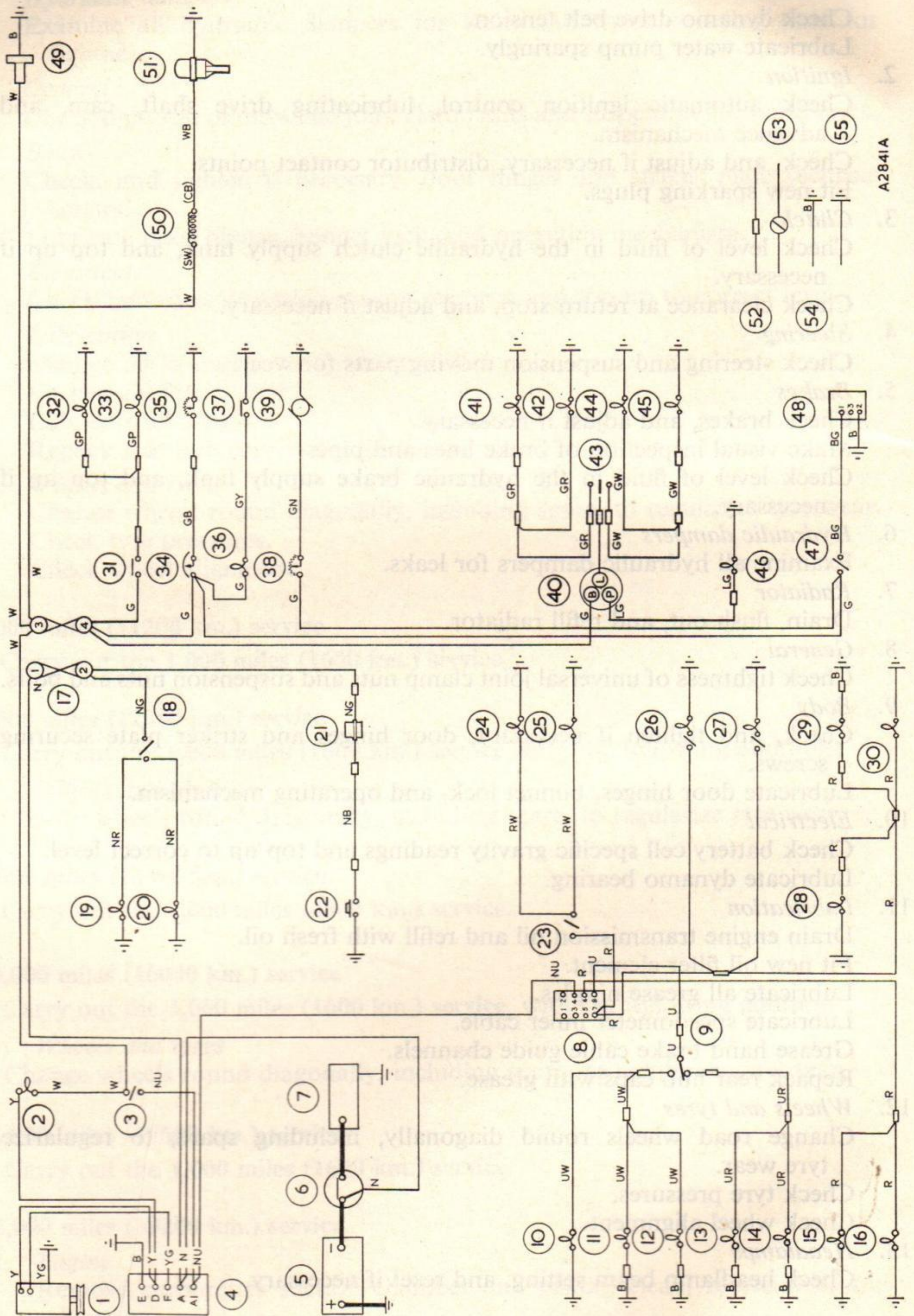
## PERIODICAL ATTENTION

- Fit new air filter element.  
Check dynamo drive belt tension.  
Lubricate water pump sparingly.
2. *Ignition*  
Check automatic ignition control, lubricating drive shaft, cam, and advance mechanism.  
Check, and adjust if necessary, distributor contact points.  
Fit new sparking plugs.
  3. *Clutch*  
Check level of fluid in the hydraulic clutch supply tank, and top up if necessary.  
Check clearance at return stop, and adjust if necessary.
  4. *Steering*  
Check steering and suspension moving parts for wear.
  5. *Brakes*  
Check brakes, and adjust if necessary.  
Make visual inspection of brake lines and pipes.  
Check level of fluid in the hydraulic brake supply tank, and top up if necessary.
  6. *Hydraulic dampers*  
Examine all hydraulic dampers for leaks.
  7. *Radiator*  
Drain, flush out, and refill radiator.
  8. *General*  
Check tightness of universal joint clamp nuts and suspension nuts and bolts.
  9. *Body*  
Check, and tighten if necessary, door hinges and striker plate securing screws.  
Lubricate door hinges, bonnet lock, and operating mechanism.
  10. *Electrical*  
Check battery cell specific gravity readings and top up to correct level.  
Lubricate dynamo bearing.
  11. *Lubrication*  
Drain engine transmission oil and refill with fresh oil.  
Fit new oil filter element.  
Lubricate all grease nipples.  
Lubricate speedometer inner cable.  
Grease hand brake cable guide channels.  
Repack rear hub caps with grease.
  12. *Wheels and tyres*  
Change road wheels round diagonally, including spare, to regularize tyre wear.  
Check tyre pressures.  
Check wheel alignment.
  13. *Headlamps*  
Check headlamp beam setting, and reset if necessary.

**24,000 miles (38400 km.) service**

Carry out the 12,000 miles (19200 km.) service.

# WIRING DIAGRAM



## KEY TO WIRING DIAGRAM

1. Dynamo.
2. Ignition warning light.
3. Ignition switch.
4. Control box.
5. 12-volt battery.
6. Starter switch.
7. Starter motor.
8. Lighting switch.
9. Main beam dipping switch.
10. Main beam warning light.
11. R.H. headlamp main beam.
12. L.H. headlamp main beam.
13. R.H. headlamp dip beam.
14. L.H. headlamp dip beam.
15. L.H. sidelamp.\*
16. R.H. sidelamp.\*
17. Fuse unit.
18. Parcel shelf lamp switch.
19. R.H. parcel shelf lamp.
20. L.H. parcel shelf lamp.

21. Horn.
22. Horn-push.
23. Panel light switch.
24. Panel light.
25. Panel light.
26. R.H. companion pocket lamp and switch.
27. L.H. companion pocket lamp and switch.
28. R.H. tail lamp.
29. Number-plate lamp.
30. L.H. tail lamp.
31. Stop lamp switch.
32. R.H. stop lamp.
33. L.H. stop lamp.
34. Fuel gauge.
35. Fuel gauge tank unit.
36. Oil pressure warning light.
37. Oil pressure light switch.
38. Heater rheostat.

39. Heater motor.
40. Flasher unit.
41. L.H. rear flasher.
42. L.H. front flasher.
43. Flasher switch.
44. R.H. front flasher.
45. R.H. rear flasher.
46. Flasher warning light.
47. Windshield wiper switch.
48. Windshield wiper motor.
49. Fuel pump.
50. Coil.
51. Distributor.
52. Snap connectors.
53. Terminal blocks or junction box.
53. Earth made via cable.
55. Earth made via fixing bolts.

\*On Export models sidelamps are fed from terminal 7.

### CABLE COLOUR CODE

B. Black	P. Purple	Y. Yellow
U. Blue	R. Red	L. Light
N. Brown	S. Slate	D. Dark
G. Green	W. White	M. Medium

When a cable has two colour code letters the first denotes the main colour and the second denotes the tracer colour.

# IMPORTANT

Your attention is drawn to the following points, compliance with which, we suggest, will prove mutually beneficial.

## 1. WARRANTY CERTIFICATE

- (a) Completion of the Warranty Certificate 'tear-off' slip at the time of vehicle purchase when sent to the Factory will ensure registration of ownership by the British Motor Corporation.
- (b) Retention of the Owner's portion of the Certificate, signed by the Distributor and Owner, in a safe place **in the vehicle** (by quickly establishing ownership) will help to expedite any adjustments under Warranty if such adjustments are required to be carried out by a B.M.C. Distributor or Dealer other than the supplier of your vehicle.

## 2. CLAIMS UNDER WARRANTY

Claims for the replacement of material or parts under Warranty must always be submitted to the supplying Distributor or Dealer or, when this is not possible, to the nearest Distributor or Dealer, informing them of the Vendor's name and address.

## 3. PREVENTIVE MAINTENANCE

Service vouchers (applicable in the United Kingdom only) are produced for your convenience, and the use of these is the best safeguard against the possibility of abnormal repair bills at a later date.

**Prevent rather than Cure.**

## 4. REPLACEMENT PARTS

When Service Parts are required insist on **B.M.C. GENUINE PARTS** as these are designed and tested for your vehicle and in addition are warranted for 12 months by the British Motor Corporation. **ONLY WHEN GENUINE PARTS ARE USED CAN B.M.C. ACCEPT RESPONSIBILITY.**



When purchasing replacement parts or having repairs done owners are requested to see that a label similar to the one illustrated here is attached to the invoice rendered. These labels are issued by B.M.C. Service Limited and constitute a guarantee that B.M.C. genuine parts are supplied.

Our world-wide network of Distributors and Dealers is at your service.

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## KEY TO RECOMMENDED LUBRICANTS

Component	A Engine Transmission Unit			C Wheel Hubs and all Grease Points	D Oilcan and Carburetter	E Upper Cylinder Lubrication
	Tropical and temperate down to 32° F. (0° C.)	Extreme cold down to 10° F. (-12° C.)	Arctic consistently below 10° F. (-12° C.)			
CASTROL	Castrol X.L.	Castrolite	Castrol Z	Castrolase L.M.	Castrolite	Castrolite
ESSO	Esso Extra Motor Oil 20W/30	Esso Extra Motor Oil 20W/30	Esso Motor Oil 10	Esso Multipurpose Grease H	Esso Extra Motor Oil 20W/30	Esso Upper Cylinder Lubricant
MOBIL	Mobiloil A	Mobiloil Arctic	Mobiloil 10W	Mobilgrease M.P.	Mobiloil Arctic	Mobil Upperlube
BP ENERGOL	Energol S.A.E. 30	Energol S.A.E. 20W	Energol S.A.E. 10W	Energrease L. 2	Energol S.A.E. 20W	Energol U.C.L.
SHELL	Shell X-100 30	Shell X-100 20/20W	Shell X-100 10W	Shell Retinax A	Shell X-100 20/20W	Shell Upper Cylinder Lubricant
FILTRATE	Medium Filtrate 30	Zero Filtrate 20	Sub-Zero Filtrate 10W	Super Lithium Filtrate Grease	Zero Filtrate 20	Filtrate Petroyle
STERNOL	Sternol W.W. 30	Sternol W.W. 20	Sternol W.W. 10	Ambroline L.H.T.	Sternol W.W. 20	Sternol Magikoyl
DUCKHAM'S	Duckham's NOL Thirty	Duckham's NOL Twenty	Duckham's NOL Ten	Duckham's L.B. 10 Grease	Duckham's NOL Twenty	Duckham's Adcoid Liquid



