

AKD 3888 C

WOLSELEY
HORNET

**Driver's
Handbook**



A BMC PUBLICATION

The
WOLSELEY
Hornet

Mk. II and Mk. III

DRIVER'S HANDBOOK

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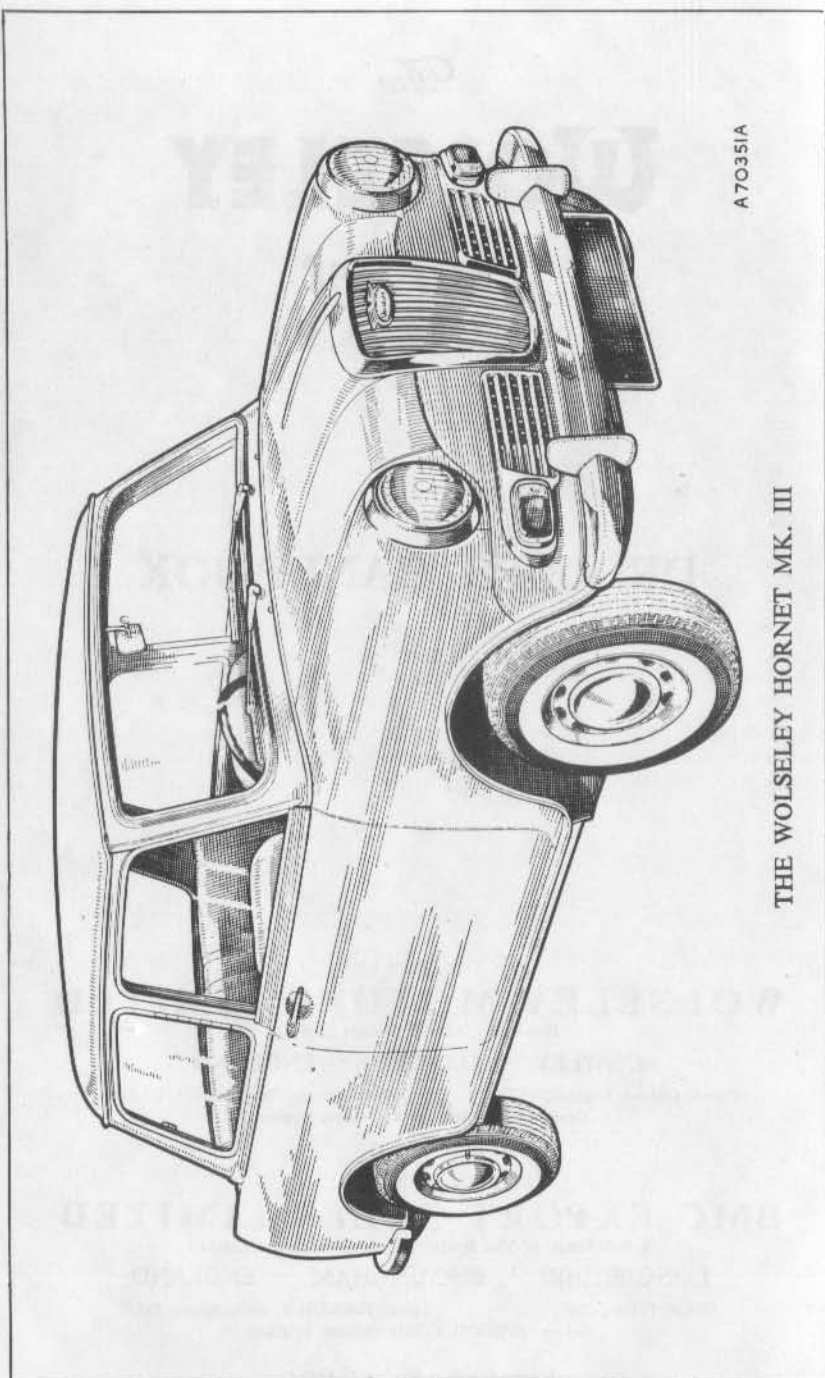
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THE WOLSELEY HORNET MK. III

FOREWORD

YOU will find in these pages an introduction to your vehicle and information essential to satisfactory use and maintenance.

A Passport to Service containing service vouchers is provided and the regular use of the vouchers in sequence is the best safeguard against the possibility of abnormal repair bills at a later date. Replacement Passport to Service books are obtainable free of charge from Distributors or Dealers. Prevent rather than cure.

Completed voucher counterfoils are proof of regular servicing and could well enhance the value of your vehicle in the eyes of a prospective buyer.

By keeping the Passport to Service, signed by the Distributor, Dealer, or vendor, in the vehicle you can quickly establish the date of purchase and provide the necessary details if adjustments are required to be carried out under warranty.

Claims for the replacement of parts under warranty must 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. Except in cases of emergency warranty work should always be carried out by a BMC appointed Distributor or Dealer.

When Service Parts are required insist on **BMC GENUINE PARTS** as these are designed and tested for your vehicle and in addition have the full backing of the BMC Factory Warranty. **ONLY WHEN GENUINE PARTS ARE USED CAN BMC ACCEPT RESPONSIBILITY.**

All **BMC GENUINE PARTS** and **APPROVED ACCESSORIES** can be identified by this label on the packing.



BMC SERVICE LTD.

a Subsidiary of The British Motor Corporation Limited

COWLEY · OXFORD · ENGLAND

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GENERAL DATA

| | |
|---------------------------------------|-----------------------------|
| Engine | 4-cylinder, overhead valves |
| Bore | 2.543 in. (64.58 mm.) |
| Stroke | 3.00 in. (76.2 mm.) |
| Cubic capacity | 60.96 cu. in. (998 c.c.) |
| Compression ratio | 8.3 : 1 |
| Firing order | 1, 3, 4, 2 |
| Valve rocker clearance (cold) | .012 in. (.30 mm.) |

Ignition

| | |
|--------------------------------------|-----------------------------------|
| Static ignition timing | 5° B.T.D.C. |
| Stroboscopic ignition timing | 7½° B.T.D.C. at 600 r.p.m. |
| Contact breaker gap | .014 to .016 in. (.36 to .40 mm.) |
| Sparking plugs | N5, 14 mm. |
| Sparking plug gap | .025 in. (.64 mm.) |

Fuel System

| | |
|---------------------|---------------|
| Carburettor | S.U. HS2 |
| Needle | GX (Standard) |
| Spring | Red |
| Pump | S.U. electric |

Transmission

| | | |
|----------------------|-----------------|--------|
| Overall gear ratios: | First | 13.657 |
| With synchromesh | Second | 8.176 |
| | Third | 5.317 |
| | Fourth | 3.765 |
| | Reverse | 13.657 |

Tyres

| | |
|-----------------------------------|---------------------------------------------|
| Tyre size | 5.20—10 tubeless |
| Tyre pressures: | |
| Normal conditions: Front | 24 lb./sq. in. (1.68 kg./cm. ²) |
| Rear | 22 lb./sq. in. (1.55 kg./cm. ²) |
| Full load: Front and rear | 24 lb./sq. in. (1.68 kg./cm. ²) |
| SP41 Radial-ply tyres: | |
| Tyre size | 145—10 tubeless |
| Tyre pressures: | |
| All conditions: Front | 28 lb./sq. in. (1.97 kg./cm. ²) |
| Rear | 26 lb./sq. in. (1.83 kg./cm. ²) |

GENERAL DATA

Dimensions

| | |
|-------------------------------|--------------------------|
| Track: Front | 47 ⅞ in. (1.205 m.) |
| Rear | 45 ⅞ in. (1.164 m.) |
| Turning circle | 31 ft. 7 in. (9.63 m.) |
| Front wheel alignment | ⅛ in. (1.6 mm.) toe-out |
| Wheelbase | 6 ft. 8 ⅝ in. (2.036 m.) |
| Overall length | 10 ft. 10 ⅝ in. (3.3 m.) |
| Overall width | 4 ft. 7 ½ in. (1.41 m.) |
| Overall height | 4 ft. 5 in. (1.35 m.) |

Capacities

| | |
|----------------------------------------------------------------|-----------------------------------------|
| Fuel tank capacity | 5½ gal. (25 litres, 6.6 U.S. gal.) |
| Engine and transmission oil capacity (includes filter) | 8½ pints (4.83 litres, 10.2 U.S. pints) |
| Water capacity (with heater) | 6½ pints (3.55 litres, 7.5 U.S. pints) |
| Heater capacity | 1 pint (.57 litre, 1.2 U.S. pints) |

Weights

| | |
|-------------------------------|-----------------------------|
| Weight (kerbside) | 1,449 lb. (657 kg.) approx. |
| Maximum towing weight | 8 cwt. (406.5 kg.) |

IDENTIFICATION

When communicating with your Distributor or Dealer, always quote the commission, car, and engine numbers. When the communication concerns the transmission units or body details, it is necessary to quote also the transmission casing and body numbers.

Commission number. Stamped on a plate fixed to the right-hand wing valance.

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 number. Stamped on a facing provided on the casing just below the starter motor.

Ignition key number. To reduce the possibility of theft, ignition switches are not marked with a number. Owners are advised to make a note of the number stamped on their ignition key in case of future loss.

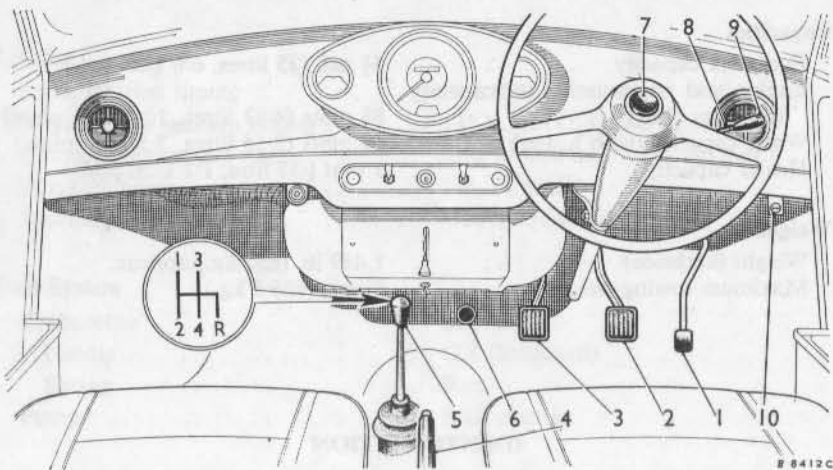
NOTE.—References to right- or left-hand in this Handbook are made when viewing the car from the rear.

CONTROLS AND INSTRUMENTS

Gear lever

The gear lever is centrally situated: 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 until 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 backwards to engage the gear.



The controls

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

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. Release the brake by pulling on the lever to take the load and then pressing on the ratchet release button with the thumb before pushing the handle downwards into the 'off' position.

Ignition and starter switch

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

To switch on the ignition insert the key and turn it in a clockwise direction until a slight resistance is felt. Further movement in the same direction will operate the starter motor. Release the key immediately the engine starts. If

CONTROLS AND INSTRUMENTS

the engine fails to start first time wait until it has come to rest before using the starter again.

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

Ignition warning light

The ignition warning light serves the dual purpose of reminding the driver to switch off the ignition and of acting as a no-charge indicator. With the ignition switched on the warning light should only be illuminated when the engine is not running or is running at a very low speed. As the engine speed is increased the light should dim and then go out at a fairly low engine speed.

If the light fails to go out until higher engine speeds are reached or remains alight at all times, inspect the dynamo driving belt for correct tension or breakage. If the belt is in order, the charging system must be overhauled by a Distributor or Dealer.

Choke or mixture control

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

On no account should the engine 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.

The first $\frac{1}{4}$ in. (6 mm.) approx. of movement operates only the throttle control. This initial movement can be used to give a fast engine idling speed and prevent stalling when driving at low speeds before the engine has fully warmed up. This will not be detrimental to the engine, but do not run the engine for any length of time with the knob withdrawn beyond this.

Lighting switch

The headlight and pilot light switch is positioned to the right of the ignition switch on the panel.

The pilot lights and tail lights are brought into operation when the switch is moved downwards to the central position. Further downward movement of the switch to the lower position switches on the headlights.

Headlight beam dipping switch and warning light

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

A warning light at the bottom of the instrument dial will glow blue when the headlight beams are in the raised position.

Windscreen wiper switch

The windscreen wiper switch is positioned on the left of the ignition switch. Move downwards to switch on the wipers, which will function only if the ignition 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 sounded by pressing the centre disc of the steering-wheel.

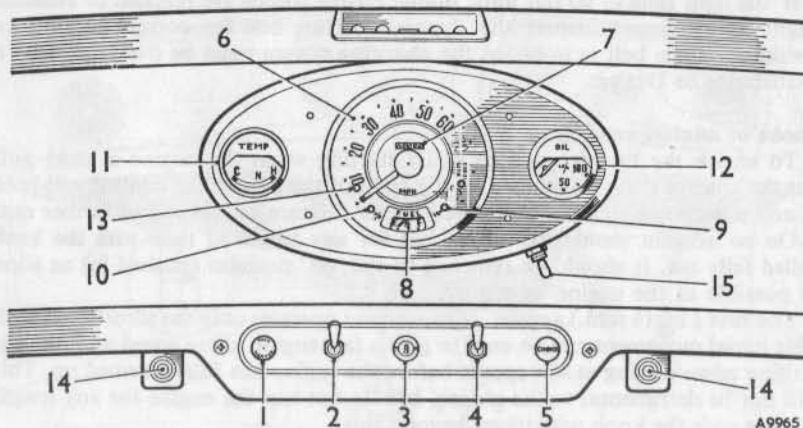
CONTROLS AND INSTRUMENTS

Fuel level gauge, oil pressure gauge

The fuel level gauge is clearly marked and is incorporated in the speedometer dial. To the right of the speedometer is an oil pressure gauge, which should read approximately 60 lb./sq. in. (4.22 kg./cm.²) under normal running conditions.

Lubrication warning light

The lubrication warning light is your guide to the need for more frequent oil and filter change (see page 50).



The instruments and switches

- | | |
|---------------------------------|---------------------------------------|
| 1. Heater control. | 9. Ignition warning light. |
| 2. Wiper switch. | 10. Headlamp main-beam warning light. |
| 3. Ignition and starter switch. | 11. Temperature gauge. |
| 4. Lighting switch. | 12. Oil pressure gauge. |
| 5. Choke control. | 13. Lubrication warning light. |
| 6. Speedometer. | 14. Windscreen washer control. |
| 7. Total distance recorder. | 15. Instrument panel light switch. |
| 8. Fuel level gauge. | |

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 this action is reversed.

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

Instrument lights switch

The switch positioned on the lower face of the instrument cowl at the driver's side operates the instrument lights, provided that the pilot lights are switched on.

CONTROLS AND INSTRUMENTS

Interior lamp

The interior lamp is situated centrally in the roof above the front seats. It is controlled by a switch on the lamp and by an automatic switch on the door pillars.

Water temperature gauge

The temperature gauge indicates the temperature of the coolant entering the radiator from the cylinder head. After the initial rise in temperature during the warming-up period any undue upward change in reading calls for immediate investigation. The gauge does not react instantaneously to changed conditions, but does so slowly.

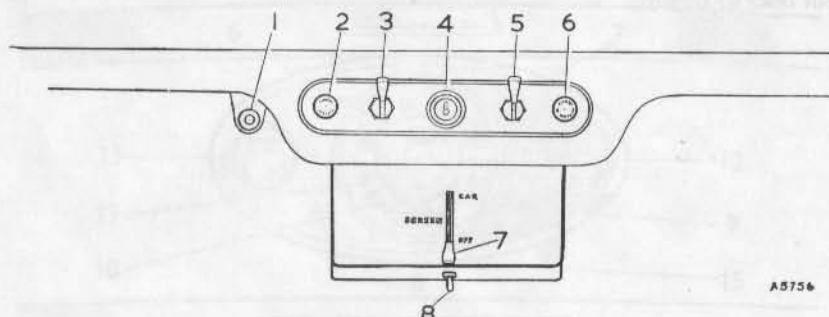
HEATING AND VENTILATING

Fresh-air heater

The fresh-air heater can be used for heating and ventilating the interior of the car and also for demisting and defrosting the windscreen.

Heat control

The left-hand knob on the switch panel regulates the amount of hot water circulating in the heater system. The maximum amount of heat is available when the knob is pushed fully in. Any position of the knob can be selected to meet varying conditions.



The controls and switches

- | | |
|-------------------------------|------------------------------------|
| 1. Windscreen washer control. | 5. Lights switch. |
| 2. Heat control. | 6. Choke control. |
| 3. Windscreen wiper switch. | 7. Air distribution shutter lever. |
| 4. Ignition switch. | 8. Blower switch. |

Air distribution

The lever projecting from the front face of the heater box at its centre controls the air distribution shutter and can be set in any one of three positions.

When set in the top (CAR) position air is distributed mainly to the interior of the car, with some to the windscreen. In the centre (SCREEN) position air is directed onto the windscreen.

The supply of air is cut off when the lever is in the lowest (OFF) position.

Blower motor and switch

The blower motor greatly increases the supply of air to the heater unit, and thus the volume of heat output.

The blower should be switched on when maximum performance from the heating or ventilating system is required, or to compensate for the lack of ram effect at the air intake when the vehicle is travelling at low speed.

The switch for the blower motor is located on the lower forward face of the heater box at its centre and operates with a side-to-side movement.

Fresh-air ventilation (Mk. III)

The car is equipped with a fresh-air ventilating system with inlets to the car interior at each end of the fascia.

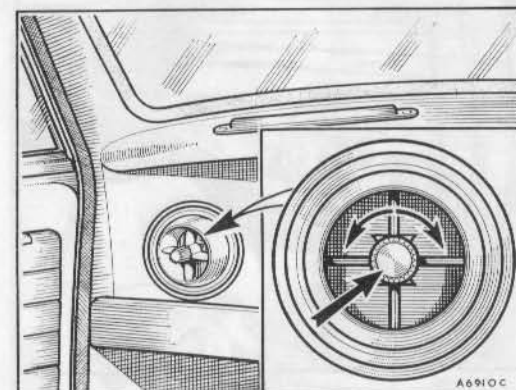
HEATING AND VENTILATING

This system operates only when the car is moving forward, and the volume of air increases with the speed of the car. The inlet can be adjusted to direct the air stream where it is required, and the volume of air can be regulated also by the central knob.

To increase, turn the knob clockwise.

To reduce, turn the knob anti-clockwise.

A fresh-air ventilator inlet, showing (inset) air flow control knob



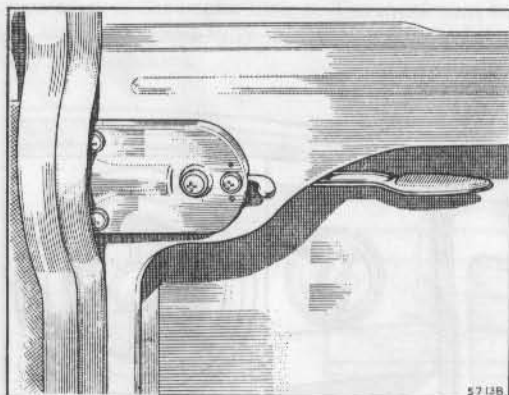
NOTE.—Should unpleasant fumes be drawn into the car, switch off the heater blower motor, set the shutter operating lever in the 'OFF' position and close the fresh-air inlet on the fascia until outside conditions improve.

BODY

Door locks (Mk. II)

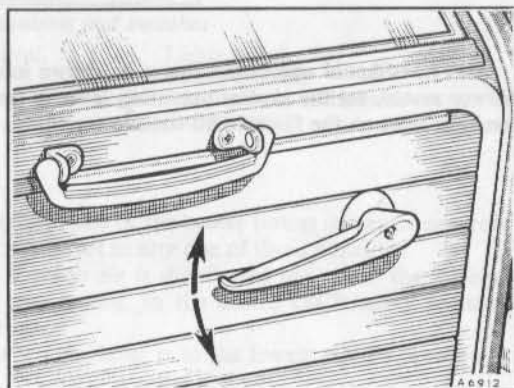
The passenger door may be locked from the inside by lifting up the small safety catch on the front of the door lock.

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



The passenger's door safety catch (Mk. II)

Move the handle down to lock and up to release



Door locks (Mk. III)

Each door may be locked from inside the car by pushing down the interior handle. The driver's door may be locked also from the outside by using the ignition key.

To lock, turn the key anti-clockwise, return it to the upright position and withdraw it.

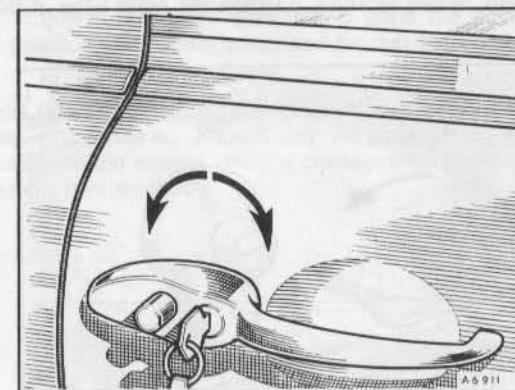
To unlock, turn the key clockwise, return it to the upright position and withdraw it.

To open, press the button. When the door is locked this button cannot be depressed.

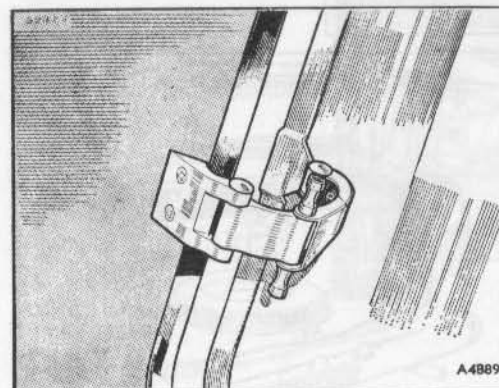
BODY

Front sliding windows (Mk. II)

The door glasses may be partially opened by depressing the window catch and sliding the glass to the desired position. A minimum opening of both the front sliding glasses will provide a draught-free ventilation and aid demisting in the winter. The door glasses may be locked in the closed position by ensuring that the window catch locking plungers engage in the location holes at each end of the window channel retaining strip.



Turn the ignition key anti-clockwise to lock the driver's door from the outside



Showing the rear ventilating window catch partly released

Rear ventilators

The rear ventilating windows are hinged at their front ends and are held in the closed position by a fold-over catch.

To open the window pull the catch forward and push outwards, thus extending the catch, until the desired window opening is obtained.

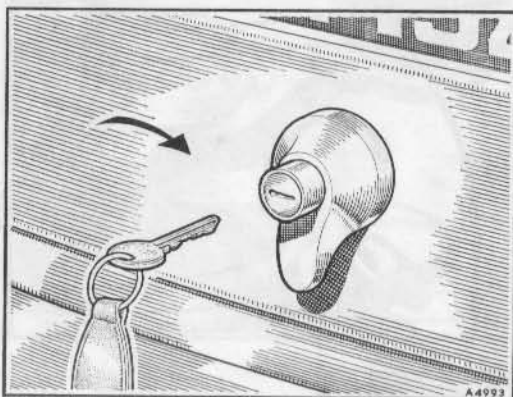
Close the ventilating window by pulling the centre of the catch inwards and then pushing backwards until the catch is felt to snap over into its locked position.

BODY

Luggage compartment

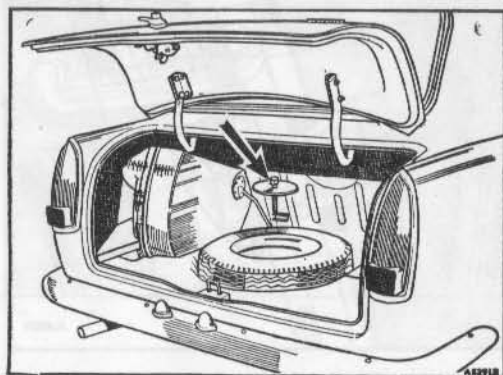
To open, press in the plunger at the lower central edge of the lid to release the retaining catch, and lift up. The lid is held open in its maximum lift position by a counterbalanced torsion spring. To close, lower the lid and press down until the retaining catch is heard to engage. The lid can be locked in the closed position with the ignition key.

To obtain access to the spare wheel and battery, lift the rear edge of the floor until the fasteners are released and withdraw the floor from the luggage compartment. When refitting, position the front edge of the floor into the two channel



Turn the key in the direction of the arrow to lock

The spare wheel clamp plate and bolt released to remove the spare wheel



brackets, and press the retaining bracket on the rear edge into the rubber clamp. On early models the floor is retained in position with one spring fastener on each rear corner.

Spare wheel

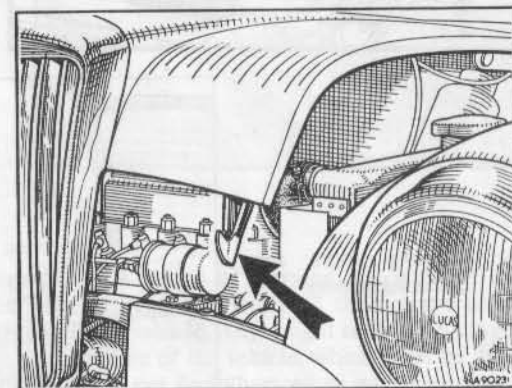
The spare wheel is stowed under the floor of the luggage boot and is secured by a clamp plate which may be released by unscrewing the bolt with the wheel nut spanner.

Bonnet lock

The bonnet is released by pulling the knob marked 'Bonnet' located below the fascia rail at the right-hand side. 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.

It is essential that the bonnet release mechanism and safety catch be adequately lubricated to ensure freedom of operation. Should any stiffness occur, this may result in insecure fastening of the bonnet, with a consequent risk of the bonnet flying open whilst the car is in motion.



Release the safety catch on the left-hand side by pushing it inwards

Windscreen washer

To wash the windscreen, operate the pump by depressing the button located on the lower edge of the fascia panel rail to the left of the control panel. The pump will re-charge itself from the container when the button is released.

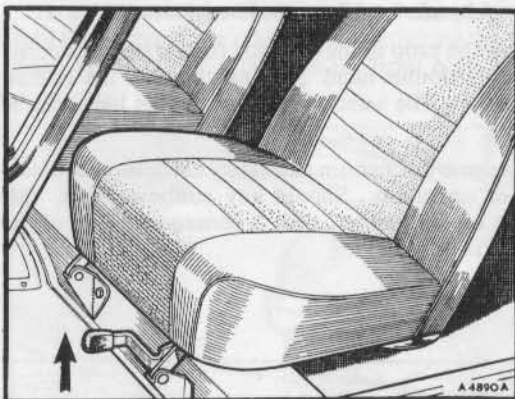
The water container is located under the bonnet on the left-hand side of the dash panel. To refill, pull the container forward out of its clip, hold the moulded cap and unscrew the container. Refill the container, refit to the cap and replace the assembly in its clip.

Under freezing conditions one of the special windscreen washer anti-freeze additives should be mixed with the water in the container. **Do not use radiator anti-freeze.**

BODY

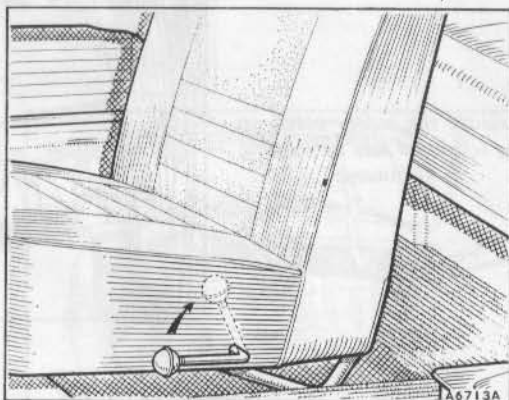
Seat adjustment

The front seats are adjustable and are secured in position by spring-loaded levers which extend beyond the front of each seat. Lift the lever to release the seat for adjustment and move the seat either forwards or backwards as required. When the lever is released it automatically engages its stop to lock the seat in position.



Move the lever upwards to release the seat for adjustment

The reclining front seat operating handle



Reclining front seats (optional extra)

The front seat squabs may be adjusted to variable rake positions but are not fully reclining.

Lift the operating handle located on the inside face of the seat, move the seat squab, and push the handle down to lock the seat in the selected position.

Fuel filler

The fuel filler cap is located on the upper outer face of the rear left-hand wing. Turn the cap anti-clockwise to remove it. When replacing the cap ensure that it is turned clockwise to its fullest extent.

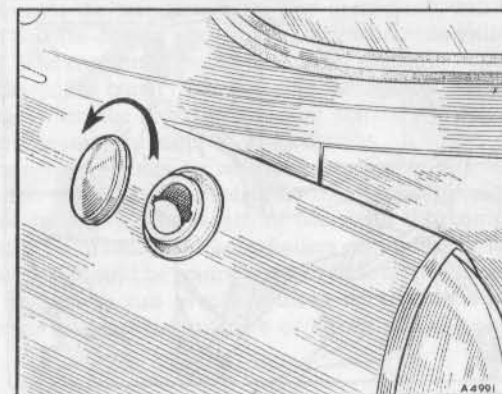
BODY

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 so that 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 filler cap in the direction of the arrow 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 will 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. (16 kg.) should not be carried on the roof.

BMC SEAT BELTS

Description

Seat belts are obtainable from Distributors and Dealers and should only be fitted by them to attachment points incorporated in the car body.

Two types of approved belts, i.e. Kangol Magnet 'static' and Britax 'automatic', are available for the front seats.

On both types the short belt must be adjusted until the buckle is located to the side of the hip (see illustration). When both front seats are equipped with belts ensure that the short belt used for either seat is attached to the side of the tunnel farthest from the wearer, i.e. the belt must cross the tunnel.



A static seat belt, showing the correct position of the buckle

Static type

To fasten, lift open the magnetic buckle tongue and engage the hook into the hinged part of the tongue.

To release, lift the buckle tongue outwards.

To adjust, move the adjuster on the long belt and adjust until the lap portion is comfortably tight and the diagonal belt passes over the chest, with hand clearance between the belt and the chest.

To stow, attach the long belt hook onto the parking device on the door pillar attachment, stow the short belt by attaching the magnetic buckle to the seat frame.

Automatic type

The diagonal belt allows the wearer greater freedom of movement during normal driving. During hard cornering or braking, the reel immediately locks the belt and restricts undue body movement of the wearer.

To fasten, push the tongue (long belt) into the buckle until it is locked—indicated by a positive 'click'.

To release, lift the front plate of the buckle while keeping a slight body pressure against the belt.

To adjust, move the tongue on the long belt until the lap portion is comfortably tight.

To stow, move the tongue on the long belt towards the door pillar pulley bracket.

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. (70 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 operate the starter switch. The crankshaft will be rotated and after a second or two the engine should start up, when the switch must immediately be released. The continued use of the starter when the engine fails to start will not only discharge the battery but will also damage the starter. If the pinion fails to disengage when the engine starts, the starter will emit a high-pitched whine and the engine must be stopped immediately.

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 fully 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 switch 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.

Warming up

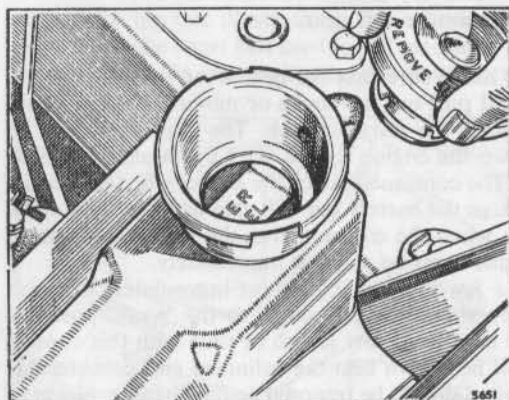
Research has proved that the practice of warming up an engine by allowing it to idle slowly is definitely harmful. The correct procedure is to let the engine run fairly fast, approximately 1,000 r.p.m., corresponding to a speed of about 15 m.p.h. (25 km.p.h.) in top gear, so that it attains its correct 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. Driving with wet brakes can be dangerous. 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. Such damage may be avoided in frosty weather by adding anti-freeze to the water. **Anti-freeze must be used as no provision is made for draining the heater unit.**

Before adding anti-freeze mixture the cooling system must be drained and flushed through by inserting a hose in the radiator 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 correct quantities of anti-freeze for different degrees of frost resistance are:

| Anti-freeze | Commences to freeze | | Frozen solid | | Amount of anti-freeze | | |
|-------------|---------------------|------|--------------|------|-----------------------|------|-----------|
| | % | ° C. | ° F. | ° C. | ° F. | Pts. | U.S. Pts. |
| 25 | —13 | 9 | —26 | —15 | 1½ | 1.8 | .85 |
| 33½ | —19 | —2 | —36 | —33 | 2 | 2.5 | 1.18 |
| 50 | —36 | —33 | —48 | —53 | 3½ | 3.75 | 1.8 |

The amounts of anti-freeze required as quoted in the table refer to cars fitted with a heater. When a heater is not fitted the amounts can be reduced accordingly, using the percentage table to calculate the amount required.

Only anti-freeze of the ethylene glycol type incorporating the correct type of corrosion inhibitor is suitable and owners are recommended to use Bluecol

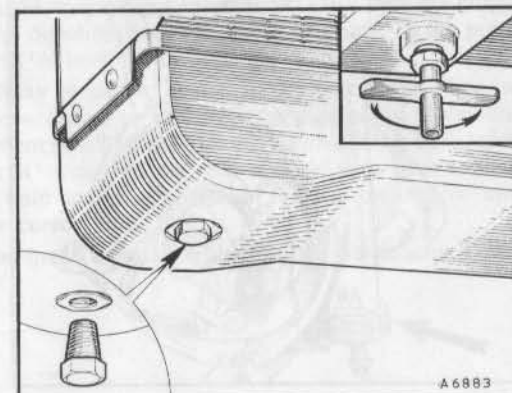
COOLING SYSTEM

Anti-freeze. We also approve the use of any anti-freeze which conforms to Specification B.S.3151 or B.S.3152.

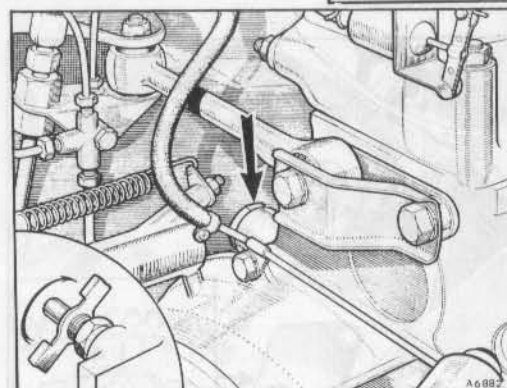
Do not use radiator anti-freeze solution in the windscreen washing equipment.

Anti-freeze can remain in the cooling system for two years provided that the specific gravity of the coolant is checked periodically and anti-freeze added as necessary. This operation should be carried out by an authorized Distributor or Dealer.

After the second winter, the system should be drained and refilled with fresh water, and the appropriate amount of anti-freeze added when required.



The radiator drain plug or tap



The cylinder block drain plug or tap

Draining the cooling system

Two taps or drain plugs are provided in the cooling system. Both are accessible from under the bonnet. Remove the filler cap and both plugs (or turn both taps as indicated in the illustrations).

If the system contains anti-freeze, drain it into a clean container for future use.

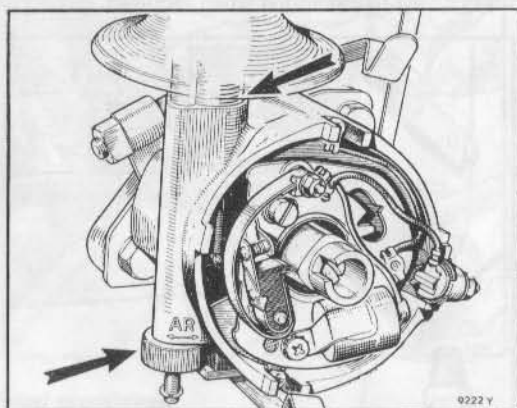
Filling the cooling system

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 then top up to the level of the indicator positioned inside the header tank below the filler neck.

IGNITION EQUIPMENT

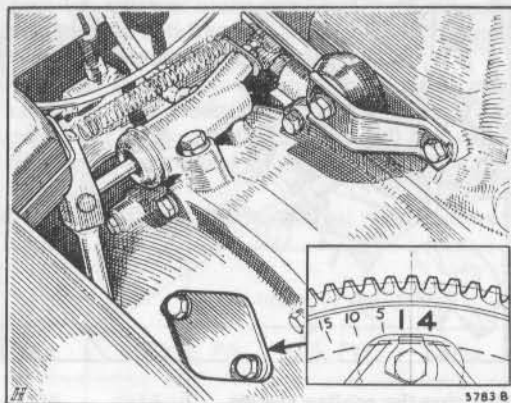
Static ignition timing

The point where ignition should start is given in 'GENERAL DATA'. With the crankshaft stationary at this position the contact breaker points should be just beginning to open. When the engine is running, timing is varied by a centrifugal advance mechanism and a vacuum control.



The ignition adjusting nut and 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°, 10°, and 15° B.T.D.C. positions are also provided



Checking static ignition timing

The following information describes a method of checking the ignition timing; it does not detail the resetting of the timing when the distributor has been removed from the engine.

Check that the contact points are set to the correct gap when on the peak of the distributor cam (see page 51).

IGNITION EQUIPMENT

Remove the inspection cover from the top of the clutch housing and, with a mirror, look for the small pointer projecting below the top of the opening. Four marks are provided on the flywheel face: 1/4, which is the T.D.C. position for Nos. 1 and 4 cylinders, and three further marks giving 5°, 10°, and 15° B.T.D.C. To turn the flywheel to the required position remove the sparking plugs, engage top gear, and push the car forward. Align the small pointer on the clutch housing with the correct mark on the flywheel (see 'GENERAL DATA').

With the crankshaft in this position the contact points should be just about to open.

If the points are open, turn the knurled nut towards 'R' until they are closed, then turn the nut in the reverse direction until the points just part. If the points are closed, turn the nut towards 'A' until they just part.

A simple electrical method may be used to ensure an accurate check. Connect a 12-volt bulb between the low-tension terminal on the side of the distributor and a good earth point on the engine. Switch on the ignition. If the bulb lights, turn the knurled nut towards 'R' until the light goes out and then back towards 'A' until it just lights. If the bulb does not light, turn the nut towards 'A' until it just lights. This will give the correct static timing.

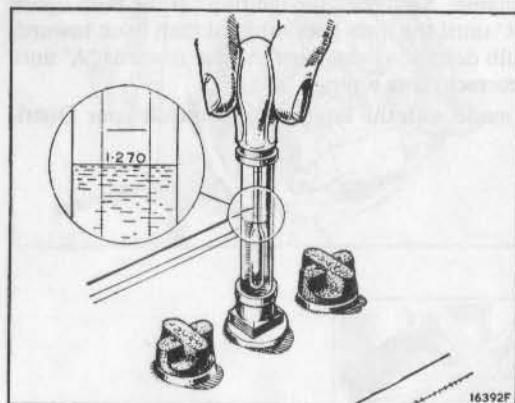
If this adjustment cannot be made with the knurled nut, consult your Distributor/Dealer.

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:

| | For climates below 27° C (80° F.) | For climates above 27° C (80° F.) |
|----------------------------------|--------------------------------------|--------------------------------------|
| 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 |



Taking hydrometer readings

These figures are given assuming that the temperature of the solution is about 16° C. (60° F.). If the temperature of the electrolyte exceeds 16° C. (60° F.) .002 must be added to the hydrometer reading for each 3° C. (5° F.) rise to give the true specific gravity. Similarly, .002 must be subtracted from the hydrometer reading for every 3° C. (5° F.) below 16° C. (60° F.). 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 Distributor or Dealer.

Top up the cells weekly with distilled water until the perforated guard in each cell is covered. Do not use tap-water and do not use a naked light when examining the condition of the cells. More frequent topping up may be necessary in hot climates or if long daily runs are made.

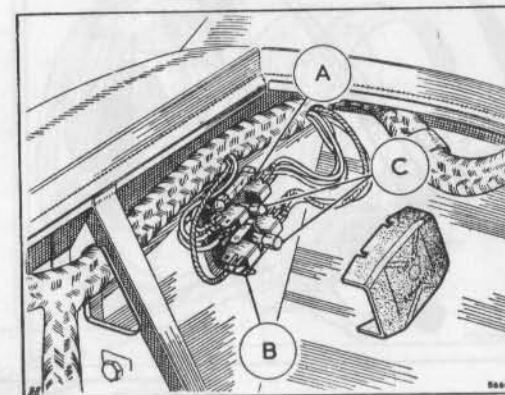
Do not overfill, and always wipe away all dirt and moisture from the top of the battery.

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.

ELECTRICAL EQUIPMENT

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 wing valance near 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. (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 a Distributor or Dealer.

Voltage regulator

This is a sealed unit, located on the right-hand wing valance, 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 squared end of the starter armature with a spanner.

Windscreen wiper

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

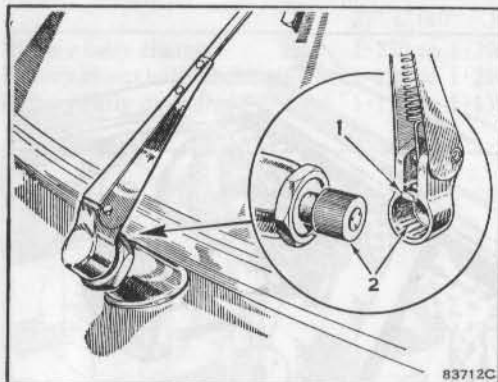
Should it be necessary to reposition the wiper arms on their spindles, they

ELECTRICAL EQUIPMENT

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

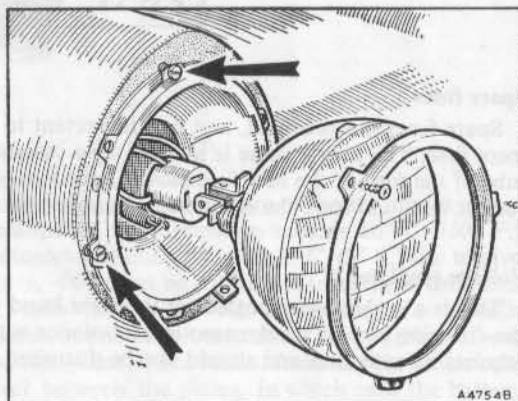
To renew the rubber wiping element of the blade, ease off the rubber stop from one end of the blade and slide the rubber element out of its retainer. Fit the new rubber carefully, ensuring that the grooves in the top of the rubber register correctly in the metal retainer.

Replace the rubber stop.



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

An exploded view of the sealed-beam (U.K.) headlamp showing the light unit and adjusting screws



Headlamps (sealed-beam U.K.)

The headlamps are fitted with sealed-beam light units, and in the event of failure the complete light unit must be renewed.

Remove the retaining screw at the bottom of the plated lamp rim and lift off the rim. Unscrew the three Phillips screws securing the light unit retaining plate, supporting the lens of the light at the same time. Remove the plate, lift the unit forward, and pull off the three pin plug from the back of the light unit.

To replace the unit reverse the above procedure, but ensure that the lugs moulded on the back of the lens engage in the slots in the back-shell before fitting the rim.

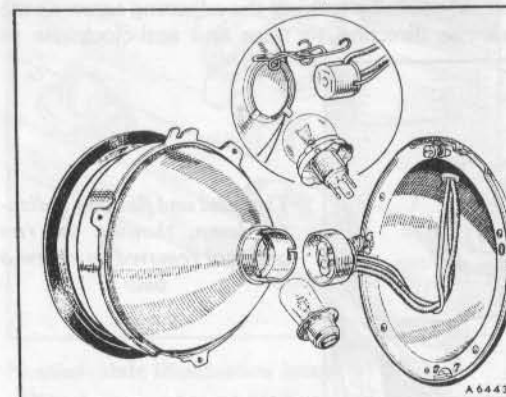
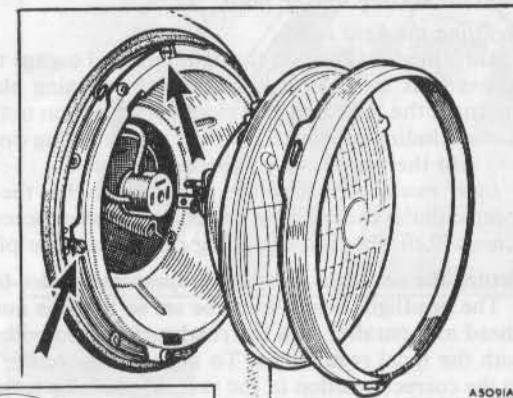
ELECTRICAL EQUIPMENT

Headlamps (sealed-beam, North America)

To change a light unit remove the retaining screw from the bottom of the lamp rim, lift the bottom of the rim forwards and upwards, and detach the rim. Slacken the three Phillips screws securing the light unit retaining rim and rotate the rim anti-clockwise to remove, supporting the lens of the light unit at the same time. Pull off the three-pin plug from the rear of the light unit.

The light unit must be renewed when necessary as a complete assembly.

The North American type sealed-beam light unit assembly indicating the adjusting screws



The headlamp light unit, with the European-type bulb and socket shown inset

Headlamps (European type)

Removing the light unit

Unscrew the retaining screw at the bottom of the plated lamp rim and lift off the rim. Remove the dust-excluding rubber, which, on early models, will reveal the three spring-loaded securing screws. The light units on later models are secured with three self-tapping screws.

Early models: Press the light unit inwards against the spring-loaded screws and turn it in an anti-clockwise direction until the screw heads can pass through the slots in the retaining plate. Withdraw the light unit sufficiently to gain access to the wiring and bulbs.

Later models: Remove the three securing screws to withdraw the light unit and gain access to the wiring and bulbs.

ELECTRICAL EQUIPMENT

Bulb replacement (European type)

Access to the light unit is described in the previous paragraph, 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 coil resting in the base of the bulb flange and engaging the two retaining lugs on the reflector seating for the bulb.

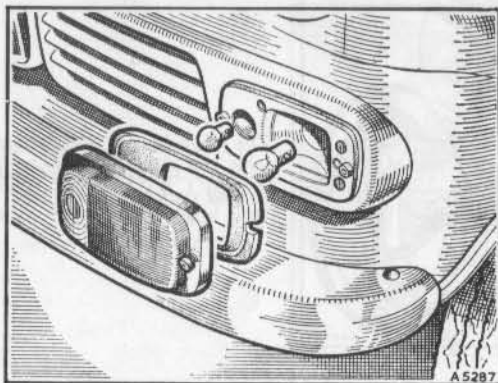
Refitting the light unit

Early models: Position the light unit and engage the heads of the spring-loaded screws with the enlarged ends of the retaining plate attachment slots. Press in and turn the light unit in a clockwise direction until it is fully engaged. Refit the dust-excluding rubber on the light unit retaining rim with its flanged face forward, and refit the plated rim and securing screw.

Later models: Position the light unit so that the slotted rim of the retainer is located under the heads of the beam adjusting screws and refit the three securing screws. Refit the dust-excluding rubber and the plated rim as on early models.

Setting the headlight beams (European and sealed-beam types)

The headlight beams must be set so that the main driving beams are straight ahead and parallel with the road surface and with each other, or in accordance with the local regulations. To adjust, remove the lamp rim and set each lamp to the correct position in the vertical plane by turning the adjusting screw at the top of the light unit in a clockwise direction to raise and anti-clockwise to



The pilot and flashing indicator lamp, showing the rim and seal removed to renew a bulb

lower the beam. Horizontal adjustment on the sealed-beam types is made by turning the adjustment screw on the right-hand side of the light unit. On the European type of light unit there are two horizontal adjustment screws, one on either side of the light unit.

Checking and resetting should be entrusted to a Dealer or Distributor who will have specialist equipment available for this purpose.

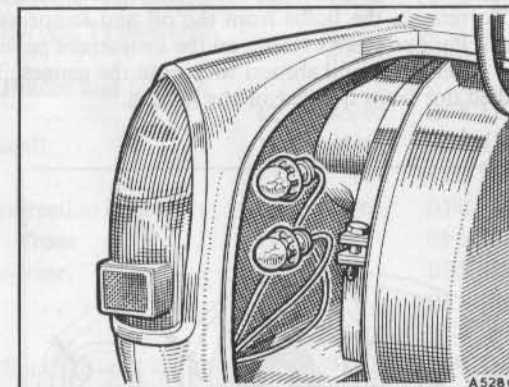
This operation should be carried out at the beginning of each winter.

Pilot and flashing indicator lamps

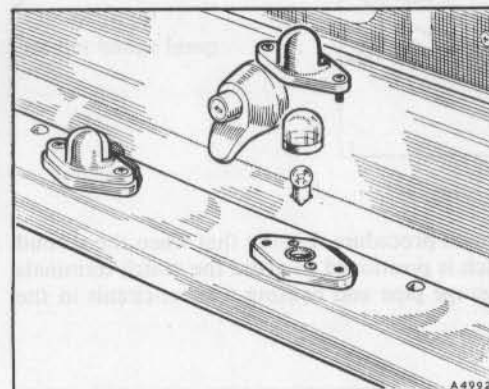
To remove a bulb from the combined pilot and flashing indicator lamps, unscrew the two screws retaining the front rim, and detach the rim complete with lens and rubber seal. The bulbs can then be removed as necessary.

Stop, tail, and flashing indicator lamps

To remove a bulb, from inside the luggage compartment pull out the appropriate bulb holder from the rear of the lamp, and detach the bulb.



Showing the bulbs and holders removed from the rear of the combined stop, tail, and flashing indicator lamp



The number-plate lamps showing the component parts

Number-plate illumination lamps

The two number-plate illumination lamps are mounted at the centre of the rear bumper. To renew a bulb, unscrew the two screws retaining the chromium-plated lamp cover, detach the lens and remove the bulb. Each bulb has a bayonet-type fixing.

Bonnet badge lamp

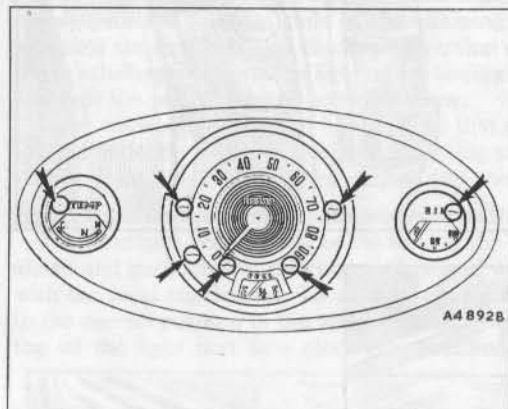
To remove the bulb from the bonnet badge lamp, raise the bonnet, squeeze together the retaining clips projecting from the back of the lamp, push the clips forward and withdraw the bonnet badge from the front of the grille. The bulb, which has a bayonet fixing, can then be renewed. Replace the badge by engaging the spring clips in their slots in the lamp base and pressing the badge into position. Ensure that the clips are fully sprung into position on the rear face of the lamp.

ELECTRICAL EQUIPMENT

Panel and warning light bulbs

Remove the warning light bulbs for ignition and headlight beam and the speedometer illumination bulb from under the bonnet by withdrawing the push-in-type holders from the rear of the speedometer.

To remove the bulbs from the oil and temperature gauges unscrew the four small Phillips screws visible on the instrument panel inside the car and withdraw the panel cover and shroud to expose the gauges. The bulb holders can then be pulled out from the rear of the gauges.



The panel and warning light bulb holders

Refitting is a reversal of the removal procedure. Ensure that when the shroud is being refitted the panel light switch is positioned to avoid the switch terminals coming into contact with the oil gauge pipe and causing a short-circuit in the electrical system.

Interior lamp

To renew a bulb, squeeze the forward and rear faces of the plastic lens together until the retaining lugs on the lens are clear of the sockets in the lamp base. The lens can then be withdrawn and the festoon-type bulb pulled out of its holder.

Fuel pump

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

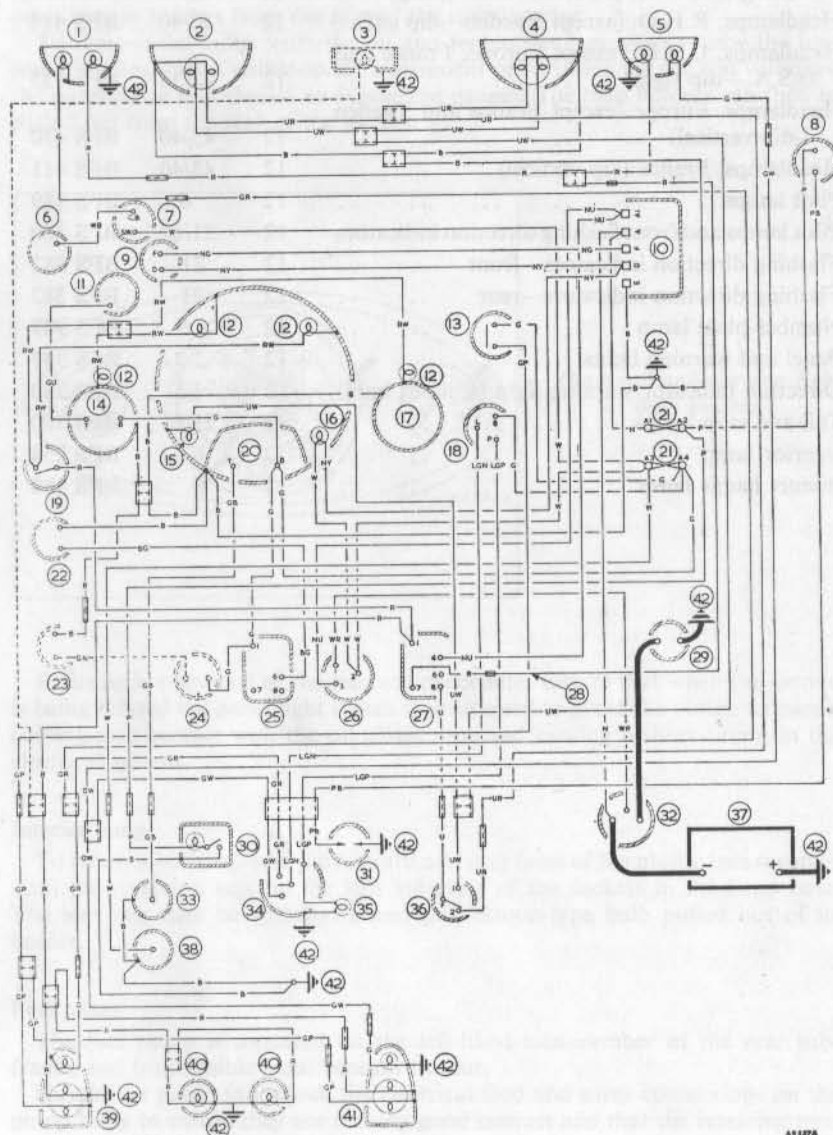
Should the pump fail, check the electrical feed and earth connections on the pump body to ensure they are making good contact and that the retaining nuts are reasonably tight. Examine and, if necessary, tighten up the inlet and delivery connections at the pump unions. Air leakage into the fuel line on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

ELECTRICAL EQUIPMENT

Replacement bulbs

| | Volts | Watts | BMC Part No. |
|------------------------------------------------------------------------|-------|-------|--------------|
| Headlamps, R.H.D. (Sweden—vertical dip) .. | 12 | 45/40 | BFS 410 |
| Headlamps, R.H.D. (except Sweden—dip left) .. | 12 | 50/40 | BFS 414 |
| Headlamps, L.H.D. (except Europe, France and U.S.A.—dip right) | 12 | 42/36 | BFS 355 |
| Headlamps, Europe (except France and Sweden—dip vertical) | 12 | 45/40 | BFS 410 |
| Headlamps, France (dip vertical) | 12 | 45/40 | BFS 411 |
| Pilot lamps | 12 | 6 | BFS 989 |
| Pilot lamps and front flashing direction indicators | 12 | 21/6 | BFS 380 |
| Flashing direction indicators—front | 12 | 21 | BFS 382 |
| Flashing direction indicators—rear | 12 | 21 | BFS 382 |
| Number-plate lamp | 12 | 6 | BFS 989 |
| Panel and warning lights | 12 | 2.2 | BFS 987 |
| Direction indicator warning light (Lilliput bulb) | 12 | 1.5 | BFS 280 |
| Tail and stop lamps | 12 | 21/6 | BFS 380 |
| Interior lamp | 12 | 6 | BFS 254 |
| Bonnet badge lamp | 12 | 6 | BFS 989 |

WIRING DIAGRAM (1961 to 1964)



KEY TO WIRING DIAGRAM

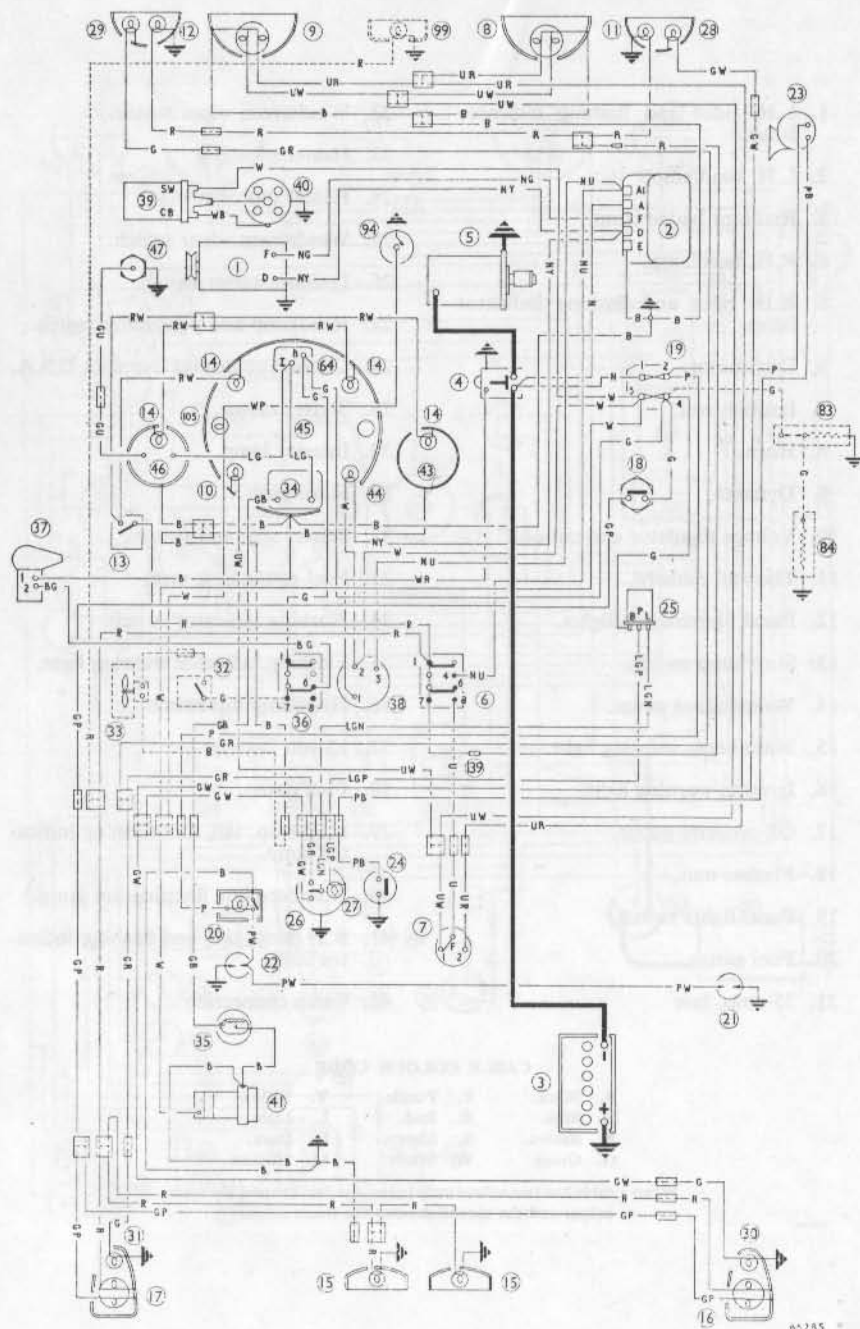
1. L.H. pilot and flashing indicator lamp.
2. L.H. headlamp.
3. Radiator badge lamp.
4. R.H. headlamp.
5. R.H. pilot and flashing indicator lamp.
6. Distributor.
7. Ignition coil.
8. Horn.
9. Dynamo.
10. Voltage regulator and cut-out.
11. Thermal element.
12. Panel illumination lights.
13. Stop lamp switch.
14. Temperature gauge.
15. Main-beam warning light.
16. Ignition warning light.
17. Oil pressure gauge.
18. Flasher unit.
19. Panel lights switch.
20. Fuel gauge.
21. 35-amp. fuse
22. Windscreen wiper motor.
23. Heater motor.
24. Heater motor switch.
25. Windscreen wiper switch.
26. Ignition/starter switch.
27. Headlamp and pilot lamp switch.
28. Connect to terminal No. 8 for U.S.A.
29. Starter motor.
30. Interior lamp.
31. Horn-push.
32. Starter solenoid switch.
33. Fuel gauge tank unit.
34. Flashing indicator switch.
35. Flashing indicator warning light.
36. Headlamp dip switch.
37. 12-volt battery.
38. Fuel pump.
39. L.H. stop, tail, and flashing indicator lamp.
40. Number-plate illumination lamp.
41. R.H. stop, tail, and flashing indicator lamp.
42. Earth connection.

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.

WIRING DIAGRAM (1964 onwards)



KEY TO WIRING DIAGRAM

1. Dynamo.
2. Control box.
3. 12-volt battery.
4. Starter solenoid.
5. Starter motor.
6. Lighting switch.
7. Headlamp dip switch.
8. R.H. headlamp.
9. L.H. headlamp.
10. Main-beam warning lamp.
11. R.H. sidelamp.
12. L.H. sidelamp.
13. Panel lamps switch.
14. Panel lamps.
15. Number-plate illumination lamps.
16. R.H. stop and tail lamp.
17. L.H. stop and tail lamp.
18. Stop lamp switch.
19. Fuse unit (35 amps.).
20. Interior light.
21. R.H. door switch.
22. L.H. door switch.
23. Horn.
24. Horn-push.
25. Flasher unit.
26. Direction indicator switch.
27. Direction indicator warning lamp.
28. R.H. front flasher lamp.
29. L.H. front flasher lamp.
30. R.H. rear flasher lamp.
31. L.H. rear flasher lamp.
32. Heater switch (when fitted).
33. Heater motor (when fitted).
34. Fuel gauge.
35. Fuel gauge tank unit.
36. Windscreen wiper switch.
37. Windscreen wiper motor.
38. Ignition/starter switch.
39. Ignition coil.
40. Distributor.
41. Fuel pump.
43. Oil pressure gauge.
44. Ignition warning lamp.
45. Speedometer.
46. Water temperature gauge.
47. Water temperature transmitter.
64. Bi-metal instrument voltage stabilizer.
83. Induction heater and thermostat (when fitted).
84. Suction chamber heater (when fitted).
94. Oil filter switch.
99. Radiator badge illumination lamp.
105. Oil filter warning lamp.
139. Connect to No. 6 for U.S.A. (alternative connection).

CABLE COLOUR CODE

| | | |
|-----------|------------|-------------------|
| B. Black. | G. Green. | W. White. |
| U. Blue. | P. Purple. | Y. Yellow. |
| N. Brown. | R. Red. | L.G. Light Green. |

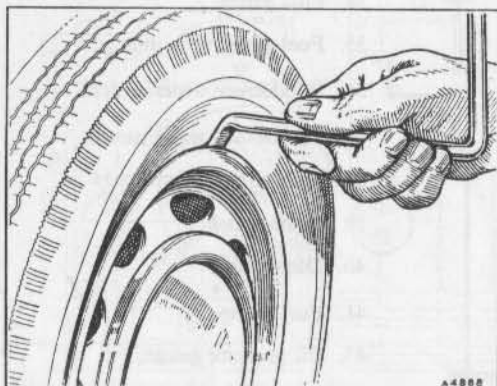
When a cable has two colour code letters the first denotes the main colour and the second denotes the tracer colour.

WHEELS AND TYRES

Hub cover removal

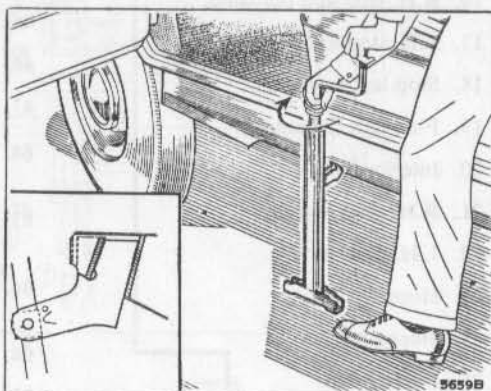
Insert the flattened end of the wheelbrace between the edge of the cover and road wheel and lever the cover away from the wheel, using the tyre as a fulcrum for the wheelbrace at a point diametrically opposite the tyre valve.

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.



Use the end of the combined wheelbrace and jack handle to remove a hub cover from the road wheel

Insert the lifting bar of the jack into the jacking socket. **NOTE.**—The bar must be fully inserted into the socket before attempting to lift the car with the jack.



Jacking

The jack is designed to lift one side of the car at a time. Insert the lifting bar of the jack into the socket below the door. 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** (see illustration inset), **OTHERWISE THE JACK MAY BE DAMAGED AND THE BRACKET DISTORTED.**

WHEELS AND TYRES

Removing and replacing 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.

When replacing the wheel nuts, ensure that the tapered faces of the nuts are facing against the wheel.

Lower the jack and fully tighten the nuts in the sequence 1, 3, 4, 2, imagining them to be numbered 1 to 4 in rotation.

Jack maintenance

If the jack is neglected it may be difficult to use in a roadside emergency. Examine it occasionally, clean off accumulated dust, and lightly oil the thread to prevent the formation of rust.

CARE OF TYRES

Tyre pressures

The recommended tyre pressures under normal conditions are given in 'GENERAL DATA'.

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. Under-inflation 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.

Tubeless tyres

The air seal in a tubeless tyre is formed by the tyre bead on the wheel rim 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 given on page 39.

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 on to the tyres should be cleaned off by using fuel sparingly. Do not use paraffin (kerosene), which has a detrimental effect on rubber.

Tyre replacement

Radial-ply tyres (SP41) should only be fitted in sets of four, although in certain circumstances it is permissible to fit a pair on the rear wheels. Tyres of different construction must not be used on the same axle. A pair must never be fitted to the front wheels with conventional tyres at the rear.

Consult your Distributor or Dealer before changing to radial-ply tyres.

Changing positions of tyres

To obtain the maximum tyre mileage and to reduce irregular tread wear, occasionally interchange the front and rear wheels diagonally, bringing the spare wheel into use.

The positional changing of wheels must not be undertaken if radial-ply tyres have been fitted to the rear wheels only.

CARE OF 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 region of the valve, a small area at a time 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 can only be carried out over the inner rim of the road wheel; no attempt must be made to remove or refit 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 is more easily accomplished with a compressed-air line.

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.

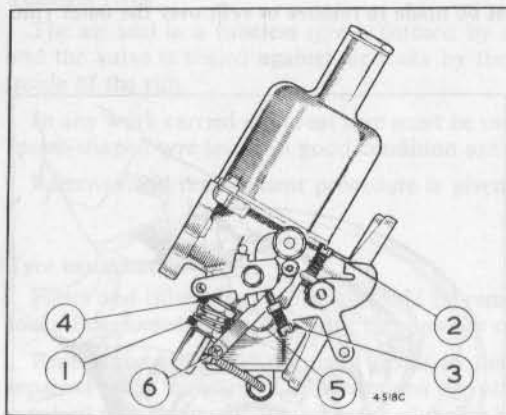
CARBURETTER

Carburettor jet adjustment

Uneven firing can be caused by an incorrect mixture. If the mixture is too weak the exhaust beat is uneven with a splashy or irregular misfire, and the exhaust is colourless. If the mixture is too rich the misfire is rhythmical and the exhaust blackish.

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 enriching 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 adjusting screw.
3. Fast-idle adjustment screw.
4. Jet locknut.
5. Float-chamber securing bolt.
6. Jet link securing screw.

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 adjusting 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 by turning the throttle adjusting screw (2) 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 contacts a cam, is just clear of the cam face by about $\frac{1}{16}$ in. (.40 mm.).

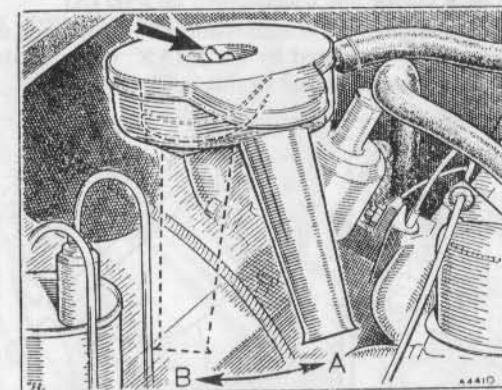
If, however, the engine beat is uneven, denoting irregular firing, the mixture strength may need adjustment—but remember that defective compression, a faulty valve, or faulty ignition may also cause misfiring.

CARBURETTER

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



MAINTENANCE ATTENTION

The recommended lubricants are indicated by a letter after each item and are listed on page 68.

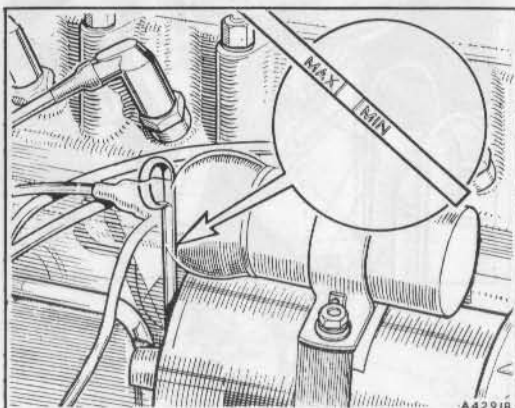
WEEKLY

Radiator

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

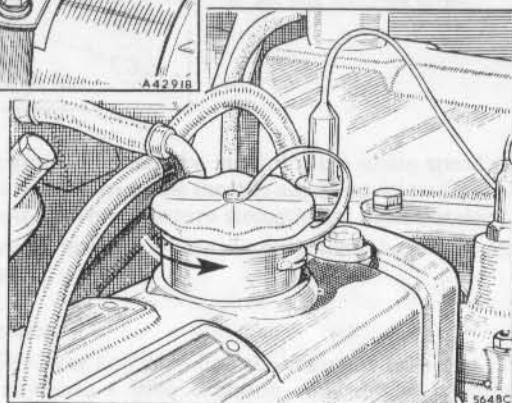
Check engine and transmission oil level (A)

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



The dipstick is located on the forward side of the cylinder block

Turn the oil filler cap anti-clockwise to release it



Filling up with oil (A)

Clean, fresh oil is essential. Refill with a recommended oil.

Tyre pressures

Check all tyre pressures with 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.

Battery

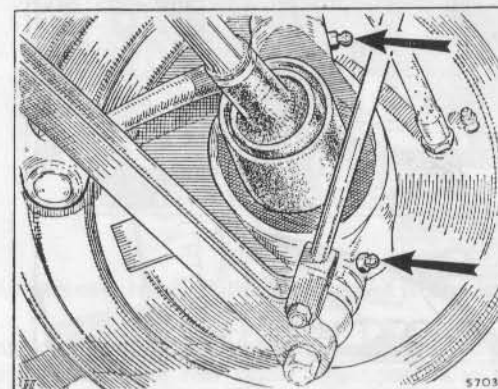
Check the level of the electrolyte in each cell, and top up as necessary.

Every 3,000 miles (5000 km.) or 3 months

Grease points (B)

Grease nipples are situated at the points listed below, and several strokes from a grease gun 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 show the lubricating nipples on the upper and lower steering swivel knuckles



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

- (3) Rear suspension radius arms. One nipple each side. The grease gun must be applied to the nipple and operated there until the grease exudes from the inner bush.

Battery

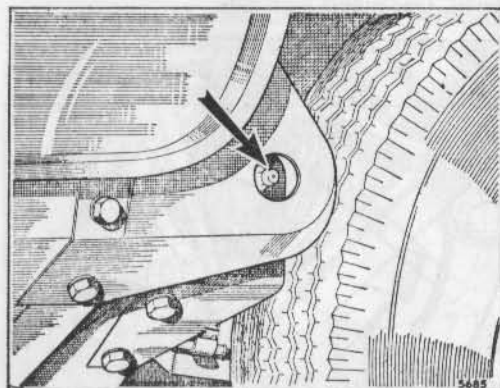
Remove the filler plug from each of the cells and examine the level of the electrolyte in each. If necessary, add sufficient distilled water to bring the electrolyte just above the top of the perforated guard. Do not use tap-water and do not use a naked light when examining the conditions of the cells.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

Every 3,000 miles (5000 km.) or 3 months

The battery is located in the well of the luggage compartment beneath the floor.

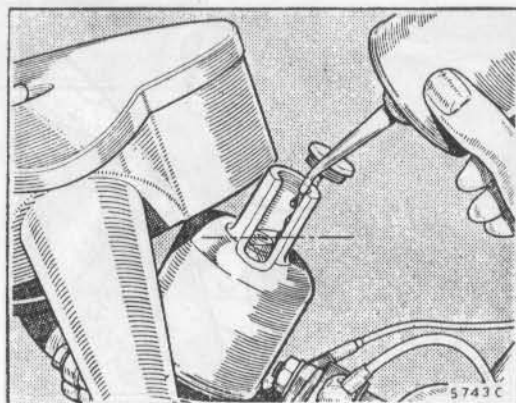
Carburettor damper (A)

The reservoir needs topping up periodically with thin engine oil. 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.



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

Lubricating the carburettor piston damper. Top up to the correct level



The function of the piston damper unit is to provide an appropriate degree of enrichment for acceleration, and also to improve cold starting.

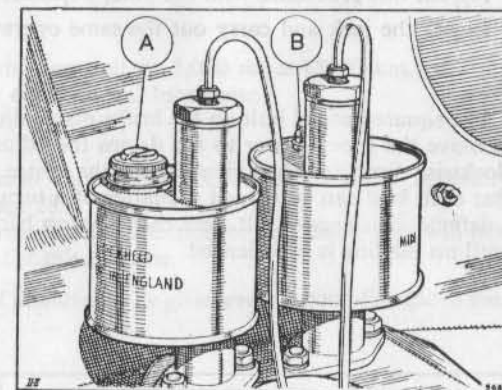
Brake and clutch master cylinders

Check the level of fluid in the hydraulic brake and clutch master cylinders, and replenish if necessary with Lockheed Super Heavy Duty Brake Fluid. If this is not available a fluid conforming to Specification S.A.E. 70.R3 should be used.

Every 3,000 miles (5000 km.) or 3 months

Maintain the level of the fluid at $\frac{1}{4}$ in. (6 mm.) below the bottom of the filler neck in each cylinder.

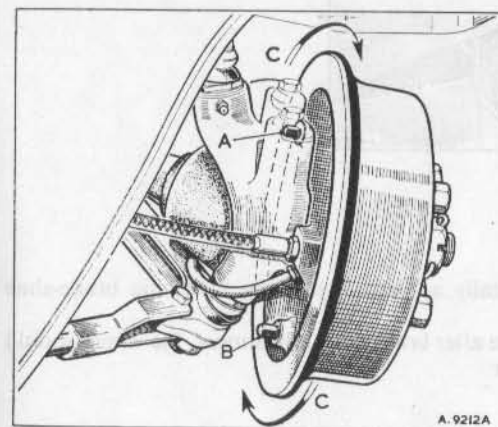
The level of the fluid in the hydraulic brake (A) and clutch (B) master cylinder reservoirs should be maintained at $\frac{1}{4}$ in. (6 mm.) below the bottom of the filler neck



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 36).



Showing the location of the front brake adjusters (L.H. side illustrated)

- A. Rear shoe adjuster.
- B. Front shoe adjuster.
- C. Turn the adjusters in the direction of rotation as indicated.

Front

The front brakes are of the two-leading-shoe type and have two squared adjusters to each wheel, projecting from the inside face of each brake backplate.

To adjust, jack up one front wheel, and turn one adjuster at a time in the same direction as the forward rotation of the wheel with a suitable spanner until the wheel is locked. Back off the adjuster the minimum amount necessary

Every 3,000 miles (5000 km.) or 3 months

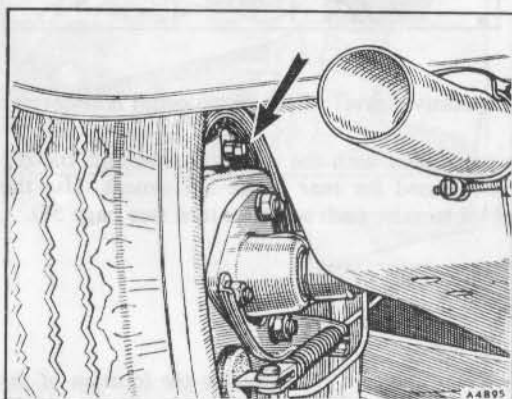
to allow the wheel to revolve freely. Spin the wheel, apply the foot brake hard to centralize the brake-shoe, and re-check the adjustment.

Repeat this procedure with the other adjuster.

Lower the jack and carry out the same operation on the other front wheel.

Rear

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.



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

Hand brake

The hand brake is automatically adjusted when the hydraulic brake-shoe adjustment is carried out.

If hand brake travel is excessive after brake-shoe adjustment, the owner should consult his Distributor or Dealer.

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, or an approved alternative, 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 in different drums. To maintain the balance required and ensure maximum braking efficiency, BMC Service replacement shoes should be fitted in preference to relining.

Every 3,000 miles (5000 km.) or 3 months

Steering-column clamp bolt

Check the torque tightness and tighten if necessary to 8 to 9 lb. ft. (1.0 to 1.2 kg. m.).

Engine/transmission unit (A)

Change oil in engine/transmission unit at 3,000 miles (5000 km.) if using monograde or single-viscosity conventional lubricants.

Headlight beam setting

The headlight beam alignment should be checked, and reset if necessary. Adjustment is described on page 28.

This operation should be entrusted to a Distributor or Dealer, who will have specialist equipment available for this purpose.

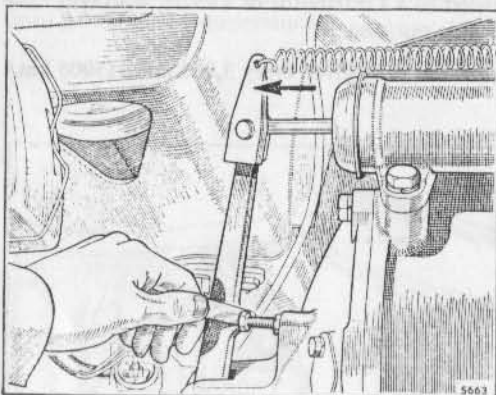
For the complete summary of attention to be given every 3,000 miles (5000 km.) or 3 months, refer to page 60.

Every 6,000 miles (10000 km.) or 6 months

Clutch adjustment

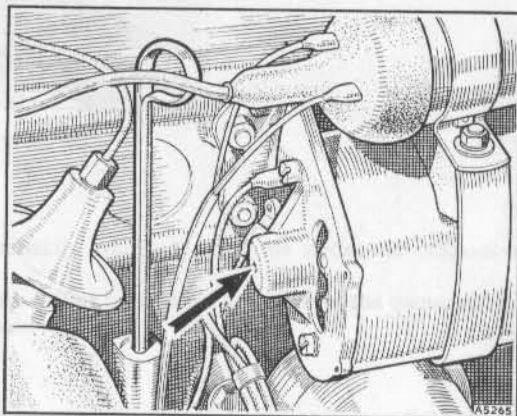
It is important that a clearance exists between the clutch thrust race and the thrust ring. All cars have this clearance carefully set before dispatch. Gradually, as wear takes place, however, this clearance will diminish, and if neglected clutch slip will result.

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 .020 in. (.51 mm.) between the operating lever and the head of the adjustment bolt. Correct if necessary.



Checking the clearance between the adjustable return stop and the operating lever

The lubricating hole for the dynamo end bearing



Dynamo bearing (A)

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

Do not over-oil.

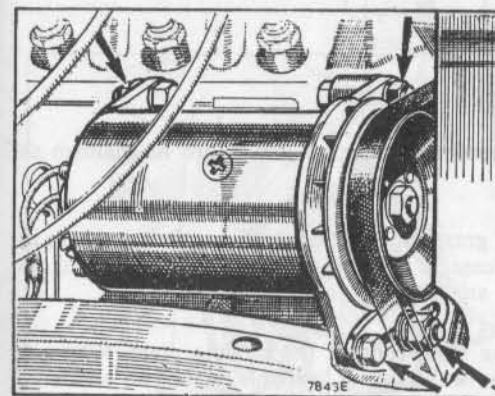
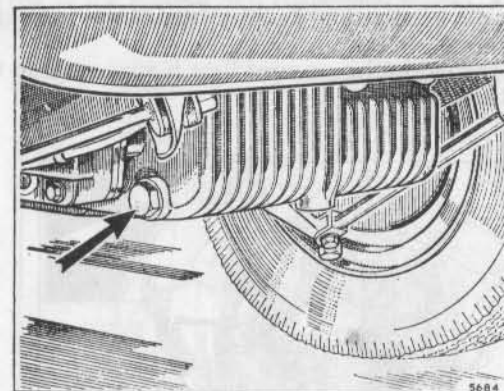
Every 6,000 miles (10000 km.) or 6 months

Draining the sump

Remove the magnetic drain plug and allow the oil to drain, preferably when the engine is warm.

Clean and refit the drain plug, and refill the sump with fresh oil.

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



The dynamo attachment points to be slackened for belt adjustment. The ignition coil is removed for clarity

Fan belt

Inspect the fan belt tension; it should be possible to move the belt about $\frac{1}{2}$ in. (12 mm.) each way at the centre of its longest run.

To tighten, slacken the dynamo securing bolts and pull the dynamo with the hand to give the correct tension. Do not over tighten as this could cause the dynamo bearings to wear.

Every 6,000 miles (10000 km.) or 6 months

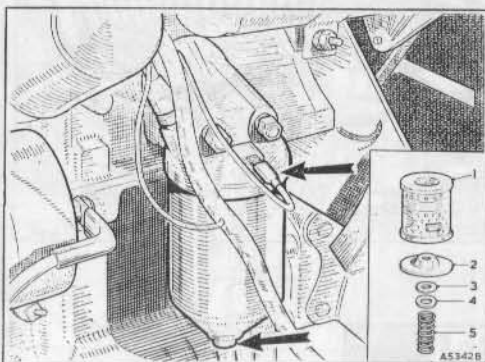
Oil filter

Renew the oil filter element. Unscrew the bowl retaining bolt and remove the bowl and element. Remove the element and clean the bowl, washers, and spring. Inspect the seating washer and renew it if necessary, it must be a good fit on the bolt.

Reassemble the components to the bowl as illustrated. Use element to BMC Part No. 8G 706.

Refit the assembly to the filter head, rotate the bowl while tightening to ensure correct location into the filter head. Inspect the filter for leaks immediately the engine is started.

The lubrication warning light is your guide to the need for a more frequent oil change.



The engine oil filter showing the warning light pressure differential switch and filter retaining bolt

1. Filter element.
2. Seating plate.
3. Seating washer.
4. Steel washer.
5. Spring.

Distributor (mechanical check)

Check the functioning of the automatic advance and retard mechanism as follows.

Centrifugal advance mechanism

Remove the distributor cap and grasp the rotor firmly. Turn the rotor arm in the direction of rotation and release it. The rotor arm should return to its original position without showing any tendency to stick.

Vacuum advance

Use a screwdriver to check the movement of the moving plate. Where a modified cap having a window cut in the side is available fit the cap and start the engine. Open the throttle and observe the movement of the contact breaker plate.

Checking the distributor contact breaker

Cleaning

Remove the cap and rotor arm. Wipe the inside and outside of the cap and ensure the free movement of the small carbon brush.

If the contact points are burned or blackened, unscrew the nut securing the end of the spring, remove the washers and both wire terminals, and lift off the

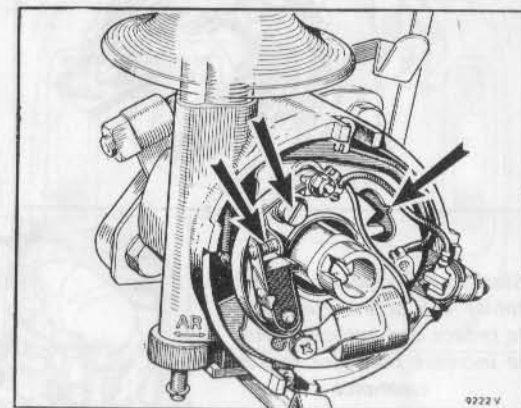
Every 6,000 miles (10000 km.) or 6 months

lever complete with spring. Clean the points with fine carborundum stone or very fine emery cloth.

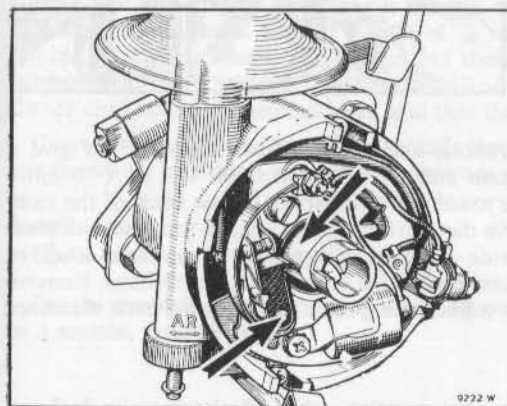
Adjustment

Rotate the crankshaft as described on page 23 until the contacts are fully opened. **Make sure that the ignition is switched off.**

To adjust the gap, slacken the locking screw (centre arrow) and move the contact plate with a screwdriver in the notched hole (right-hand arrow). Turn anti-clockwise to increase the gap, a .016 in. (.40 mm.) gauge should be a sliding fit between the contacts.



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



The cam (upper arrow) and contact breaker pivot

Distributor lubrication (A) (B)

Lightly smear the cam with grease (Ref. B) and place a drop of engine oil (Ref. A) on the contact breaker lever pivot.

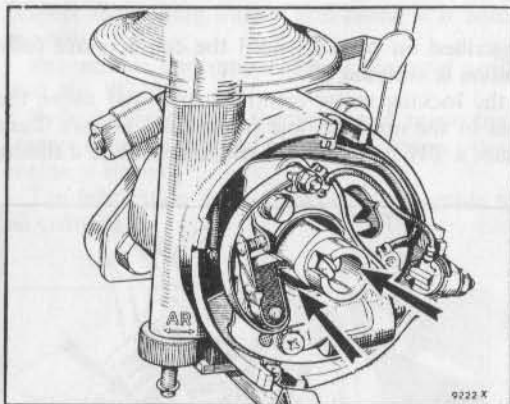
With the rotor arm removed, add a few drops of engine oil to the cam bearing. Do not remove the cam securing screw.

Add a few drops of oil through the base plate.

Use lubricant sparingly and wipe off any surplus.

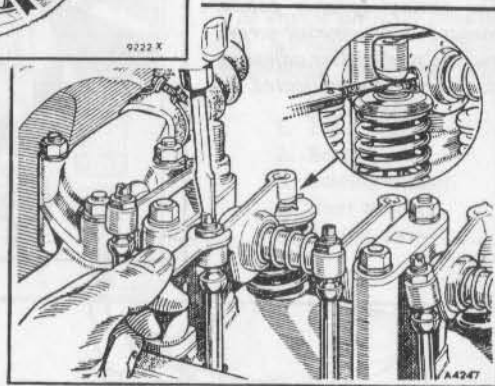
Every 6,000 miles (10000 km.) or 6 months

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



The distributor cam bearing and automatic timing control lubricating points

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



Valve rockers

Check the valve rocker clearances, and adjust where necessary, to give a clearance between the rocker arm and the valve stem of .012 in. (.30 mm.) when cold. Adjustment must be made with the tappet on the back of the cam.

To turn the crankshaft, remove the sparking plugs, engage top gear and push the car forward, or jack up one side of the car and rotate the front road wheel to turn the crankshaft and thus move each valve to its checking position. Remove the rocker cover and follow the adjustment procedure checking each clearance in the following order:

Adjustment

Hold the adjusting screw against rotation while slackening the locknut, insert the feeler gauge and turn the screw until the gauge is a sliding fit; tighten the locknut and recheck the clearance.

Checking 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 " " |

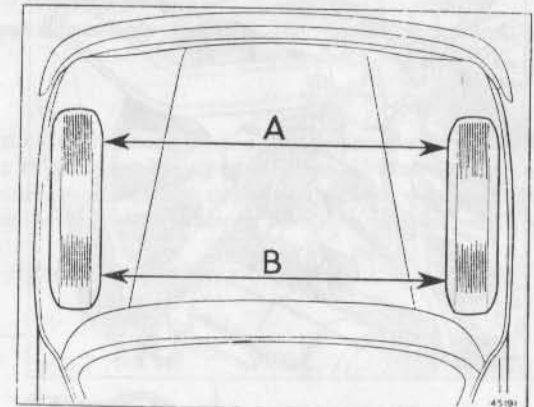
Every 6,000 miles (10000 km.) or 6 months

Sparking plugs

The sparking plugs should be cleaned, preferably with an air-blast, and the gaps reset to the dimensions given under 'GENERAL DATA', page 4.

Use a 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.



The front wheel alignment check must be taken with the wheels in the straight-ahead position. Dimension (A) must be $\frac{1}{8}$ in. (1.6 mm.) greater than (B)

Wheel alignment

Excessive and uneven tyre wear is usually caused by faulty wheel tracking. The front wheels must toe out a total of $\frac{1}{8}$ in. (1.6 mm.), or at an angle of 7 min. 30 sec. per wheel, but ensure that these measurements are taken on a 14½ in. (36.83 cm.) diameter (on the side wall of the tyre) at a distance of 9.4 in. (24.21 cm.) above the ground 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 strongly advised to entrust this work to his Dealer or Distributor.

Lamps

Check all lamps for correct functioning.

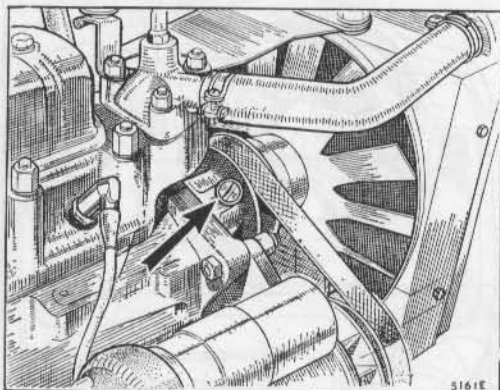
For the complete summary of attention to be given every 6,000 miles (10000 km.) or 3 months, refer to page 61.

Every 12,000 miles (20000 km.) or 12 months

Water pump (B)

Remove the plug from the water pump casing and add a small quantity of grease.

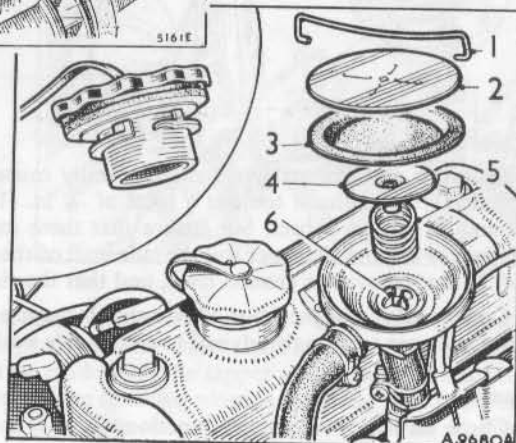
The lubrication of the water pump must be done very sparingly, otherwise grease will seep past the bearings onto the face of the carbon sealing ring and impair its efficiency.



The water pump grease plug

The breather control valve with the combined air filter/oil filler cap shown inset (second type)

1. Spring clip.
2. Cover.
3. Diaphragm.
4. Metering needle.
5. Spring.
6. Cruciform guides.



Closed-circuit breathing

Air filter/oil filler cap

Fit a new air filter/oil filler cap.

Breather control valve

Testing

With the engine at normal running temperature, run it at idling speed. Remove the oil filler cap. If the valve is functioning correctly the engine speed will increase by approximately 200 r.p.m. as the cap is removed, the change in speed being audibly noticeable. If no change in speed occurs, service the valve as follows

Every 12,000 miles (20000 km.) or 12 months

Servicing

Remove the spring clip (1) and dismantle the valve. Clean all metal parts with trichlorethylene or fuel. If deposits are difficult to remove, immerse in boiling water before applying the solvent. **Do not use an abrasive.**

Clean the diaphragm (3) with detergent or methylated spirits.

Replace components showing signs of wear or damage.

Reassemble the valve, making sure the metering needle (4) is in the cruciform guides (6) and the diaphragm is seated correctly.

NOTE.—The first-type valve assembly (without the cruciform guides) is serviced as an assembly.

Air cleaner (dry-type)

The air cleaner element must be replaced with a new element every 12,000 miles (20000 km.), or earlier in dusty operating conditions. Unscrew the wing nut from the top of the cleaner, withdraw the cover and cleaner element, and discard the element. Thoroughly clean the container, fit a new element, and replace the cover and wing nut.

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

Sparkling plugs

Fit new sparking plugs.

Steering

Check steering and suspension moving parts for wear.

For the complete summary of attention to be given every 12,000 miles (20000 km.) or 12 months, refer to page 62.

SUPPLEMENTARY TOOL KIT

To supplement the tool kit a waterproof canvas roll containing the following is obtainable from all Distributors. Part No. AKF 1596 should be quoted.

6 spanners:

- $\frac{1}{8}$ in. \times $\frac{3}{8}$ in. A.F.
- $\frac{7}{16}$ in. \times $\frac{1}{2}$ in. A.F.
- $\frac{1}{2}$ in. \times $\frac{9}{16}$ in. A.F.
- $\frac{9}{16}$ in. \times $\frac{5}{8}$ in. A.F.
- $\frac{11}{16}$ in. \times $\frac{13}{16}$ in. A.F.
- $\frac{3}{4}$ in. \times $\frac{7}{8}$ in. A.F.

1 pair 6-in. pliers.

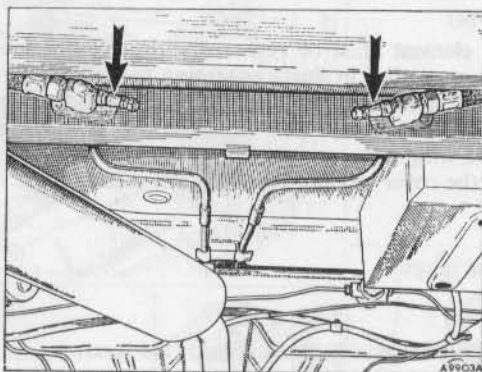
- 1 $\frac{1}{2}$ \times $\frac{1}{8}$ in. A.F. tubular spanner.
- 1 7 in. \times $\frac{3}{8}$ in. diameter tommy-bar.
- 2 screwdrivers.

HYDROLASTIC SUSPENSION

After the first 12,000 miles (20000 km.) the pressure in the system should be checked, and corrected if necessary. All work connected with the system must be entrusted to an authorized Dealer.

Under no circumstances must the system be tampered with. The valve shown in the illustration must not be touched.

Should the suspension system suffer damage and lose fluid, the suspension arms on the damaged side of the vehicle will contact both the front and rear bump rubbers. In this condition the car can be driven with complete safety at 30 m.p.h. (50 km.p.h.) over metalled roads to the nearest authorized Dealer.



The Hydrolastic suspension valves. Do not open these valves without the correct equipment

LUBRICATION WARNING LIGHT

The lubrication warning light is your guide to the need for a more frequent oil and filter change. If the warning light appears and continues to glow when the engine is running at or above idling speed, it will indicate that an oil and filter element change is necessary. This change must be made as soon as possible within a maximum of the next 300 miles (500 km.).

If 6,000 miles or six months have passed since the last oil and filter change, although the warning light has not appeared, both the engine oil and filter element must be changed.

HYDRAULIC BRAKE SYSTEMS

Preventive Maintenance

In addition to the recommended periodical inspection of brake components it is advisable as the car ages and as a precaution against the effects of wear and deterioration, to make a more searching inspection and renew parts as necessary. It is recommended that:

1. Disc brake pads, drum brake linings, hoses, and pipes should be examined at intervals no greater than those laid down in the Passport to Service.
2. Brake fluid should be changed completely every 18 months or 24,000 miles (40000 km.) whichever is the sooner.
3. All fluid seals in the hydraulic system and all flexible hoses should be examined and renewed if necessary every 3 years or 40,000 miles (65000 km.) whichever is the sooner. At the same time the working surface of the pistons and of bores of the master cylinder, wheel cylinders, and other slave cylinders should be examined and new parts fitted where necessary.

Care must be taken always to observe the following points:

- (a) At all times use the recommended brake fluid.
- (b) Never leave fluid in unsealed containers. It absorbs moisture quickly and this can be dangerous.
- (c) Fluid drained from the system or used for bleeding is best discarded.
- (d) The necessity for absolute cleanliness throughout cannot be over-emphasized.

THE BMC SERVICE FACTORY EXCHANGE UNIT SCHEME

The BMC Exchange Scheme—the most comprehensive in Europe—has been designed specifically to **save you money**.

Briefly, the scheme covers practically every major assembly on any BMC car marketed in the last 10 years, and includes components such as heaters and servo units for brakes as well as a wide range of instruments.

If, for example, you want another engine, the Distributor returns the old one to us, and we issue one which has been fully reconditioned in one of our own specialist factories.

By using this technique the cost is considerably reduced, but **not the quality**, and each replacement unit carries the same Factory Warranty as a brand-new one.

Your BMC Distributor or Dealer will be pleased to give you full details and comparative examples of the money which you can save by taking advantage of this scheme.

Units available:

- Engines and Ancillaries
- Clutches
- Transmissions
- Braking System Units
- Steering Gears
- Instruments
- Electrical Units
- Bumper Bars
- Fuel Pumps
- Shock Absorbers
- Heaters

BODYWORK

Coachwork

Regular care of the body finish is necessary if the new appearance of the car exterior is to be maintained against the effects of air pollution, rain, and mud.

Wash the bodywork frequently, using a soft sponge and plenty of water containing a mild detergent. Large deposits of mud must be softened with water before using the sponge. Smears should be removed by a second wash in clean water, and with the sponge if necessary. When dry, clean the surface of the car with a damp chamois-leather. In addition to the regular maintenance, special attention is required if the car is driven in extreme conditions such as sea spray, or on salted roads. In these conditions and with other forms of severe contamination an additional washing operation is necessary which should include under-body hosing. Any damaged areas should be immediately covered with paint and a complete repair effected as soon as possible. Before touching-in light scratches and abrasions with paint, thoroughly clean the surface. Use petrol/white spirit (gasoline/hydrocarbon solvent) to remove spots of grease or tar.

The application of BMC Car Polish is all that is required to remove traffic film and to ensure the retention of the new appearance.

Bright trim

Never use an abrasive on stainless, chromium, aluminium, or plastic bright parts and on no account clean them with metal polish. Remove spots of grease or tar with petrol/white spirit (gasoline/hydrocarbon solvent) and wash frequently with water containing a mild detergent. When the dirt has been removed polish with a clean dry cloth or chamois-leather until bright. Any slight tarnish found on stainless or plated components which have not received regular washing may be removed with BMC Chrome Cleaner. An occasional application of mineral light oil or grease will help to preserve the finish, particularly during winter, when salt may be used on the roads, but these protectives must not be applied to plastic finishes.

Windscreen

If windscreen smearing has occurred it can be removed with BMC Screen Cleaner.

Interior

Clean the carpets with a stiff brush or vacuum cleaner, preferably before washing the outside of the car. The most satisfactory way to give carpets a thorough cleaning is to apply BMC 2-way Cleaner with a semi-stiff brush, brush vigorously and remove the surplus with a damp cloth or sponge. Carpets should not be cleaned by the 'Dry-Clean' process. The upholstery and roof lining may be treated with BMC 2-way Cleaner applied with a damp cloth and a light rubbing action.

A razor blade will remove transfers from the window glass.

The BMC approved products mentioned above are obtainable from your Distributor or Dealer.

MAINTENANCE SUMMARY

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

NOTE.—Take the advice of your Distributor/Dealer on:

1. The need for more frequent engine oil changes;
2. When to change round road wheels.

ALL MATERIALS CHARGEABLE TO THE CUSTOMER.

Weekly

- Check oil level in engine/transmission unit. Top up if necessary.
- Check water level in radiator. Top up if necessary.
- Test tyre pressures, and regulate if necessary.
- Check battery level, and top up if necessary.

3,000 miles (5000 km.) or 3 months service

1. *Engine*
 - Top up carburetter piston damper.
 - Check water level in radiator, and top up if necessary.
 - Top up windscreen washer bottle.
2. *Clutch*
 - Check level of fluid in the supply tank, and top up if necessary.
3. *Steering*
 - Check the steering-column clamp bolt and tighten to the correct torque figure.
4. *Brakes*
 - Check brakes, and adjust if necessary.
 - Make visual inspection of brake pipes and hoses.
 - Check level of fluid in the supply tank, and top up if necessary.
5. *Electrical*
 - Check battery and top up to correct level.
 - Check headlight beam alignment.
6. *Lubrication*
 - Lubricate all grease nipples.
 - Change oil in engine/transmission unit if using monograde or single-viscosity conventional lubricants.
7. *Wheels and tyres*
 - Check tyre pressures.

MAINTENANCE SUMMARY

6,000 miles (10000 km.) or 6 months service

1. *Engine*
 - Top up carburetter piston damper.
 - Check fan belt tension.
 - Check valve rocker clearances, and adjust if necessary.
 - Check water level in radiator, and top up if necessary.
 - Top up windscreen washer bottle.
2. *Ignition*
 - Check distributor contacts points, clean, and adjust if necessary.
 - Check functioning of the automatic advance mechanism.
 - Lubricate distributor as necessary.
 - Clean and adjust sparking plugs.
3. *Clutch*
 - Check level of fluid in the supply tank, and top up if necessary.
 - Check clearance at return stop, and adjust if necessary.
4. *Steering*
 - Check front wheel alignment, and adjust if necessary.
 - Check the steering-column clamp bolt and tighten to the correct torque figure.
5. *Brakes*
 - Check brakes, and adjust if necessary.
 - Make visual inspection of brake pipes and hoses.
 - Check level of fluid in the supply tank, and top up if necessary.
6. *General*
 - Check tightness of all nuts and bolts on universal joints, and suspension, etc.
7. *Electrical*
 - Check battery cell specific gravity readings and top up to correct level.
 - Check all lamps for correct functioning.
 - Check headlight beam alignment.
8. *Lubrication*
 - Change oil in engine/transmission unit and wipe magnetic drain plug.
 - Lubricate dynamo bearing.
 - Fit new oil filter element.
 - Lubricate all grease nipples.
 - Lubricate door locks and hinges.
9. *Wheels and tyres*
 - Check tyre pressures.

9,000 miles (15000 km.) or 9 months service

Carry out the 3,000 miles (5000 km.) service.

MAINTENANCE SUMMARY

12,000 miles (20000 km.) or 12 months service

1. Engine

- Top up carburetter piston damper.
- Check valve rocker clearances, and adjust if necessary.
- Fit new air cleaner element.
- Check fan belt tension.
- Check radiator water level and top up if necessary.
- Top up windscreen washer bottle.
- Crankcase closed breather system; change engine oil filler cap and clean crankcase breather valve.

2. Ignition

- Check distributor contact points, clean, and adjust if necessary.
- Check functioning of the automatic advance mechanism.
- Lubricate distributor as necessary.
- Fit new sparking plugs.

3. Clutch

- Check level of fluid in the 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.
- Check front wheel alignment, and adjust if necessary.
- Check the steering-column clamp bolt and tighten to the correct torque figure.

5. Brakes

- Check brakes, and adjust if necessary.
- Make visual inspection of brake pipes and hoses.
- Check level of fluid in the supply tank, and top up if necessary.
- Inspect and blow out brake linings and drums.

6. General

- Check tightness of all nuts and bolts on universal joints, and suspension, etc.

7. Electrical

- Check battery cell specific gravity readings and top up to correct level.
- Check all lamps for correct functioning.
- Check headlight beam alignment.

8. Lubrication

- Drain engine/transmission oil and refill with fresh oil. Wipe magnetic drain plug.
- Fit new oil filter element.
- Lubricate dynamo bearing.
- Lubricate water pump.
- Lubricate door locks and hinges.
- Lubricate all grease nipples.

9. Wheels and tyres

- Check tyre pressures.

LUBRICATION DIAGRAM

KEY TO LUBRICATION DIAGRAM

Weekly

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

Every 3,000 miles (5000 km.) or 3 months

- (2) STEERING JOINTS. }
 (3) REAR SUSPENSION } Give three or four strokes of the grease gun.
 RADIUS ARMS. }
- (4) CARBURETTOR. Remove the cap from the top of the suction chamber and top up to the correct level with oil.

Every 6,000 miles (10000 km.) or 6 months

- (5) ENGINE. Drain off the old oil and refill with fresh oil.
 (6) ENGINE. Fit a new oil filter element. (See page 50.)
 (7) DISTRIBUTOR. Lubricate all parts as necessary.
 (8) DYNAMO. Add a few drops of oil through the oil hole in the commutator end bearing.

Every 12,000 miles (20000 km.) or 12 months

- (9) WATER PUMP. Remove the plug from the water pump body and lubricate the pump sparingly with grease.

AS INDICATED BY WARNING LIGHT

ENGINE. Fit new oil filter element and change engine/transmission oil. (See pages 49 and 50.)

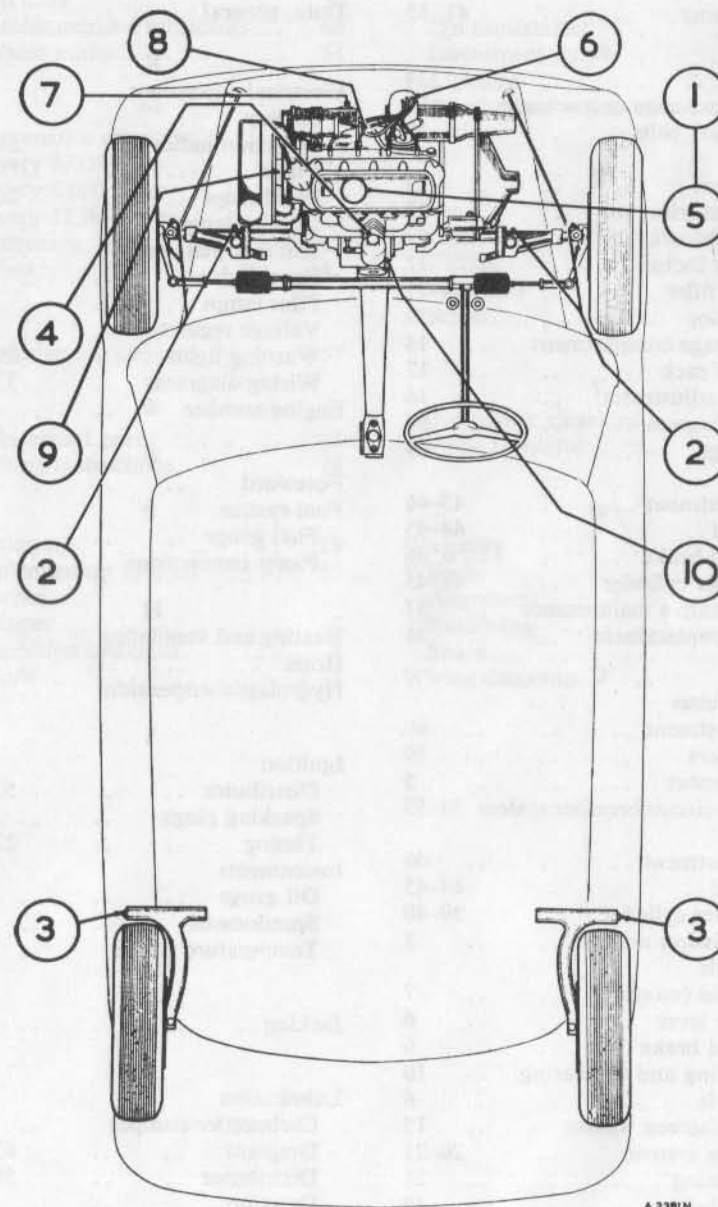
NOTES:

The gear change shaft lubricating nipple shown on indicator 10 requires attention at major overhaul periods only, when grease to Ref. B should be used.

Change oil in engine/transmission unit every 3,000 miles (5000 km.) if using mono-grade or single-viscosity lubricants.

Oil and grease references are detailed on page 68.

LUBRICATION DIAGRAM



A.2381N

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KEY TO RECOMMENDED LUBRICANTS

| | A | B | C |
|---------------------|-------------------------------------------------------------------------|-------------------------------|--------------------------------|
| Component | Engine/Transmission Unit, Oilcan, and Carburetters | Grease Points | Upper Cylinder Lubrication |
| Climatic conditions | All temperatures above -18°C . (0°F .) | All conditions | All conditions |
| STERNOL | Sternol W.W. Multigrade 10W/40 | Ambroline L.H.T. | Sternol Magikoyl |
| DUCKHAM'S | Q. 5500 | Duckham's L.B. 10 Grease | Duckham's Adcoid Liquid |
| CASTROL | Castrolite | Castrolase L.M. | Castrollo |
| ESSO | Esso Extra Motor Oil 10W/30 | Esso Multipurpose Grease H | Esso Upper Cylinder Lubricant |
| MOBIL | Mobiloil Special 10W/30 or Mobiloil Super 10W/40 | Mobilgrease M.P. | Mobil Upperlube |
| BP | Super Visco-Static | Energase L. 2 | Upper Cylinder Lubricant |
| SHELL | Shell Super Motor Oil | Shell Retinax A | Shell Upper Cylinder Lubricant |
| FILTRATE | Filtrate 10W/30 Multigrade | Filtrate Super Lithium Grease | Filtrate Petroyle |

Approval is also given to Esso Extra Motor Oil 20W/40, Filtrate 20W/50, Mobiloil Special 20W/40, Castrol XL and Duckham's Q. 20-50 for temperatures down to -12°C . (10°F .), and to monograde or single-viscosity conventional lubricants supplied by companies listed above.