SPRITE/MIDGET

1275 cc

DRIVER'S HANDBOOK

Part 1

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This Handbook provides an introduction to your car, together with information on the care and periodic maintenance required to combine trouble-free motoring with minimal running costs.

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 emergency, warranty work should always be carried out by an appointed Distributor or Dealer.

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.

Regular use of the Passport to Service Maintenance Scheme is the best safeguard against the possibility of abnormal repair bills at a later date. Failure to have your car correctly maintained could invalidate the terms of the Warranty and may result in unsatisfactory operation of the emission control systems.

Safety features embodied in the car may be impaired if other than genuine parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the vehicle manufacturer's specification. Owners purchasing accessories while travelling abroad should ensure that the accessory and its fitted location on the car conform to mandatory requirements existing in their country of origin.

Your Distributor or Dealer is provided with the latest information concerning special service tools and workshop techniques. This enables him to undertake your service and repairs in the most efficient and economic manner. The operations carried out by your Distributor or Dealer will be in accordance with current recommendations and may be subject to revision from time to time.

Further details on Service Parts will be found under 'SERVICE' on page 61. Please note that references to right- or left-hand in this Handbook are made when viewing the car from the rear.

Specification details set out in this Handbook apply to a range of vehicles and not to any particular vehicle. For the specification of any particular vehicle owners should consult their Distributor or Dealer.

The Manufacturers reserve the right to vary their specifications with or without notice, and at such times and in such manner as they think fit. Major as well as minor changes may be involved in accordance with the Manufacturer's policy of constant product improvement.

Whilst every effort is made to ensure the accuracy of the particulars contained in this Handbook, neither the Manufacturer nor the Distributor or Dealer, by whom this Handbook is supplied, shall in any circumstances be held liable for any inaccuracy or the consequences thereof.

Your car is fitted with emission controls and devices required by the United States Clean Air Act and the Canadian Federal Motor Vehicle Safety Act.

Please read carefully the 'EMISSION CONTROL SYSTEMS' section of the Handbook which contains information on the emission control systems fitted to your car and recognition of symptoms of malfunctions which could affect emissions.

It is imperative that you familiarize yourself with the contents of this section, and ensure that the car you have purchased will remain in compliance with the intentions of the above act.

[The procedures for carrying out all emission control maintenance checks and adjustments are given in Part 3 of this Manual.]
The warning system operates when the ignition is switched on (position ‘II’ on the ignition switch), a forward or reverse gear selected and either the driver’s or passenger’s seat belt is not fastened by the wearer.

**PRECAUTION:** A heavy package placed on the passenger’s seat may operate the warning system. To prevent this happening fasten the passenger’s seat belt.

**LOCKS**

It is most important that owners MAKE A NOTE OF THE KEY NUMBERS IMMEDIATELY on taking delivery of the car and at the same time consult their Distributor or Dealer regarding steering lock key replacements.

- **Keys Identification.** To reduce the possibility of theft, locks are not marked with a number. Owners are advised to make a note of the numbers stamped on the keys, on the numbered tag supplied, or on a label stuck to the windscreen. The driver and passenger door locks use a common key. The luggage compartment and steering locks are operated by separate keys.

- **Steering**
  - The lock face is marked ‘O’ (off), ‘I’ (auxiliary), ‘II’ (ignition), ‘III’ (start). To lock the car steering the key must be removed from the lock (4).
  - To lock the steering, turn the key to position ‘I’, press the key in and while maintaining pressure turn the key anti-clockwise to position ‘O’ and withdraw the key. The steering lock is set during withdrawal of the key and rotation of the steering wheel engages the lock. When unlocking, turn the steering to assist disengagement of the locking plunger.
  - Under no circumstances must the key be moved from the ‘I’ position towards the ‘O’ position when the car is in motion. The car may be towed for recovery with the key in the lock at position ‘I’.

- **WARNING.** The lock fitted to the steering-column works in conjunction and is integral with the ignition starter switch. The designed operating sequence prevents the engine being started with the steering LOCKED. Serious consequences may result from alterations or substitution of the ignition start switch which would permit the engine to be started with the LOCK ENGAGED. Under no circumstances must the ignition switch or the ignition engine start function be separated from the steering lock.

**ANTI-THEFT**

- **Warning buzzer.** A combined ignition and steering lock with warning buzzer is fitted to the car. The warning buzzer will sound if the driver’s door is opened while the key is in the steering lock. The buzzer will not operate if the key is removed from the lock.

- **Recommended procedure.** When leaving the car unattended:
  - Set the hand brake.
  - Lock the steering by removing the key from the ignition steering lock.
  - Lock the car doors and remove the key.

- **Brakes**
  - **Pressure failure warning.** The lamp (1) in the switch will glow, when the brake pedal is pressed, if any part of the hydraulic system is inoperative or on considerable adjustment of the rear brakes is required. If this occurs and in your judgement you can drive safely with braking on two wheels only, proceed at reduced speed to the nearest service facility for immediate repairs. The vehicle should not be driven in this condition except in cases of real emergency and when in your judgement you can proceed safely at reduced speed. Extreme care must be taken and heavy braking avoided.

  - To test the warning lamp, press the switch (1). If the bulb is functioning the lamp will glow and will go out as the switch is released. To test the hydraulic system, apply normal foot pressure to the brake pedal. The lamp will remain off if the hydraulic system is functioning satisfactorily. Check the bulb and the system frequently.

- **IF the warning lamp glows at any time except when the bulb is being tested the cause must be investigated IMMEDIATELY.**

**SEAT BELT WARNING**

1. The seat belt warning system fitted to the car consists of a warning lamp (1) on the control console illuminating the words ‘FASTEN BELTS’, and a warning buzzer.

2. When the ignition is switched on (position ‘II’ on the ignition switch), a forward or reverse gear selected and either the driver’s or passenger’s seat belt is not fastened by the wearer.

3. **PRECAUTION:** A heavy package placed on the passenger’s seat may operate the warning system. To prevent this happening fasten the passenger’s seat belt.
IUMENTS AND SWITCHES

(1) Speedometer. In addition to recording the speed this instrument also records the total distance (3), and the distance travelled for any particular trip (2). To reset the trip recorder, push the knob (4) upwards and turn it clockwise, ensuring that all the counters are returned to zero.

(5) Tachometer. The instrument indicates the revolutions per minute of the engine and assists the driver to use the most effective engine speed range for maximum performance in any gear.*

(6) Oil. The gauge indicates the pressure of the oil in the engine lubrication system.*

(7) Water. The gauge is marked "C" (cold), "N" (normal), and "H" (hot), indicating the temperature of the coolant as it leaves the cylinder head.*

(8) Fuel. When the ignition is switched on the gauge indicates approximately the amount of fuel in the tank.*

* Also see RUNNING INSTRUCTIONS

Fig. 3

BODY FITTINGS

DRIVING MIRRORS

External

Fig. 1

The mirror head is adjustable from the driving position when the window is open. To obtain the maximum rear vision the mirror and arm must be retained in the position shown.

Interior

Fig. 2

The mirror stem with anti-dazzle head is designed to break away from the mounting bracket on impact. The stem may be re-fitted in the mounting bracket as follows. Align the stem ball (1) with the bracket cup (2), ensuring that the small protrusion (3) on the stem aligns with the indent of the mounting bracket. Give the stem a smart tap with a soft instrument to join the two components.

Anti-dazzle. To reduce mirror dazzle, pull the lever (4) away from the windscreen.

Windows and ventilators

Rotate the handle on each door to open and close the windows. The ventilation panels adjacent to each window may be opened after releasing the catch.

Luggage compartment

To open, turn the handle anti-clockwise and raise the lid. When fully raised the support stay will automatically spring into engagement and the lid will be held in the open position. Opening the lid automatically switches on the courtesy light.

To close, raise the lid slightly, push the catch on the support stay forward to release the locking mechanism and lower the lid. Closing the lid automatically switches off the courtesy light.

Head restraint

The vertical position of the head restraint may be adjusted.

To lower, push the head restraint down towards the seat.

To raise, place both hands under the restraint pad and lift the head restraint up away from the seat.

Fig. 1 & 2

Cubby box

To open, press the button (1) and lower the flap.

To lock, insert the key and turn clockwise.

To unlock, turn the key anti-clockwise.

Hard top fitting

Lower the hood.

Fig. 3 & 4

Position the hard top on the car and engage the toggle fastener tongues in their sockets on the windscreen rail. Check that the rubber sealing strip is correctly positioned forward of the rail. Fasten the toggle links and lock them with the securing brackets (inset, Fig. 3). Fit the bolts into both side-fixing brackets and tighten them down gently and evenly until the hard top seals at both sides and the rear. Do not tighten the bolts hard down.
Check the width of the gap between the flanges of the side-fixing brackets (see Fig. 4), remove the bolts and fit packing washers between the flanges to the thickness of the gap.

Retighten and tighten the securing bolts.

Bonnet

To raise the bonnet, pull the knob (1) located inside the car on the left-hand side below the fascia panel.

Press the safety catch (2) under the front of the bonnet and raise the bonnet. When fully raised the support stay will automatically spring into engagement and the bonnet will be held in the open position.

To close, raise the bonnet slightly, push the catch (3) on the bonnet stay rearwards to release the locking mechanism and lower the bonnet. Apply light pressure with the palms of the hands at the front corners of the bonnet and press down quickly: undue force is not necessary and may cause damage. The safety catch and lock will be heard to engage.

Points

The body and doors are provided with drain holes to allow rain-water and condensation to flow freely from the panels, thus preventing accumulated water from causing rust and corrosion. It is essential that the drain holes are kept clear and are not inadvertently blocked. When painting or applying underseal to the body undersurfaces or doors, temporarily seal or mask the drain holes to prevent the ingress of sealant. Periodically inspect the drain holes and clear any obstruction using a piece of stiff wire or a suitable tool.

Jack up beneath the underfloor may deform the drain apertures; always use the jacking points provided.

Hood (ft top)

It is most important that the instructions for raising, lowering, and folding the hood are carried out in the sequence given. Do not apply pressure to the frame members other than the header ral; undue force is not necessary and should be avoided. Do not fold or store the hood when it is wet or damp.

Lowering

(1) Unclip the sun visors and move to one side. Release the press studs on the windscreen frame and hood frame links (Fig. 7).

(2) Release the hood from the self-fasting strip and the three fasteners on the windscreen frame (Fig. 7).

(3) Open the toggle catches on the windscreen ral (inset, Fig. 7).

(4) Press the header ral rearwards to collapse the hinge links, at the same time keeping the hood material pulled out towards the rear away from the frame (Fig. 8).

(5) Collapse the frame into its storage position in the rear compartment and lay the hood material on the luggage compartment lid.

(6) Fold the quarter-light inwards, on a line between the quarter-light and back-light (Fig. 9).

(7) Fold the hood over the frame into the rear compartment (Fig. 10).

(8) Lay the hood cover over the hood and secure the rear edge with the fasteners (Fig. 11).

(9) Arrange the cover and secure it at the sides with the fasteners provided at each quarter; secure the front edge to the cockpit rear panel with the four press studs (Fig. 11). Reposition the sun visors.

Raising

(1) Remove the hood cover and open both doors.

(2) Lift the hood over the frame and lay it on the luggage compartment lid.

(3) Unfold the quarter-light and pull the header rail forward and upwards at the point indicated by the label. Ensure that the hood material takes up its correct position as the frame is erected.

(4) Engage the hood toggle fastener tongues in their sockets on the windscreen ral, check that the rubber sealing strip is correctly positioned forward of the rail, and fasten the toggle links.

(5) Secure the hood with the fasteners on the rear quarters, windscreen side-posts, and frame hinge links.

(6) Store the hood cover.

Tonneau cover

Fitting. Lay the cover over the cockpit and secure the rear edge and sides with the fasteners on the tonneau and quarter-panels.

Extend the cover forward and secure the front edge to the fasteners on the fascia panel top and windscreen pillars.

Usage. The centre zip allows the cover to be folded down to give access to the driving seat or both seats. Fold the cover down behind the seat and secure it with the fasteners to the headboard (see Fig. 12). The short side zip permits the use of seat belts when the cover is folded down.

Removing. Reverse the fitting procedure.

SEATS AND SEAT BELTS

SEATS

Fig. 1

Seat adjustment

Driving position. Both seats are adjustable and can be moved easily into the most comfortable position. Move the lever (1) located beneath the front of the seat outsowards; hold the lever in this position while the seat position is adjusted. The locking pin is spring-loaded and will automatically lock the seat in the required position when the lever is released.

Seat back adjustment. The rake of the back or squat of the seats can also be adjusted. Ease the body weight from the seat back and move the lever (2), in
the direction of the arrow. Release the lever and ensure that the seat back is fully locked in position; check by applying back pressure on the seat.

**straint** The head restraint (3) may be raised or lowered as desired.

**BELTS**

**Fig. 2**

**Fig. 3**

**The belting system** See page 5 for details of the seat belt warning system which provides an audible and visual warning reminder.

**Fasten** Lift the engagement tongue (1) and draw the belt from the reel over the shoulder and across the chest, and push it into the locking clip (2) of the short belt nearest the wearer.

**Release** Press the release button (3) on the short belt.

**coat** After releasing the belt, hook the tongue (1) onto the parking device (5).

**Vearing** Never attempt to wear the belt other than as a complete diagonal and lap assembly. Do not try to use the belt for more than one person at any time, even small children.

Ensure that the belt webbing is not twisted when in use, and that the belt is adjusted to the correct tightness.

**Stow** After releasing the belt allow the webbing to retract into the automatic reel. Ensure that while the belt is retracted, the engagement tongue has not moved on the belt to a point near the still mounting; this can be remedied by moving the tongue (1) and belt clip (4) towards the reel.

Do not attempt to bleach the belt webbing or re-dye it. If the belts become soiled, sponge with warm water using a non-detergent soap and allow to dry naturally. Do not use caustic soap, chemical cleaners or detergents for cleaning; do not dry with artificial heat or by direct exposure to the sun.

No unauthorized alterations or additions to the belts should be made. Inspect the webbing periodically for signs of abrasion, cuts, fraying, and general wear; pay particular attention to the fixings points and adjusters. Replace belts that are defective or have been subjected to severe strain in an accident.

**RUNNING INSTRUCTIONS**

The following instructions are a guide for starting, running and loading the car, and include notes on the use of the controls and the indications of the instruments.

**Choice of fuel**

Our MG engines have been designed to operate on fuels of 91 octane rating or above and have not been developed for the regular use of unleaded or low lead gasolines. The use of such fuels cannot be recommended as they could have a detrimental effect on engine components, resulting in loss of performance, excess exhaust emissions and, possibly, complete engine failure.

**Starting**

Check that the gear lever is in the neutral position.

Pull out the mixture control (choke).

Switch on the ignition (page 3) and check:

That the ignition warning lamp glows

That the fuel gauge registers.

Operate the starter.

After the engine has started, check:

That the oil pressure gauge registers

That the ignition warning light has gone out.

Push the mixture control (choke) in to the minimum setting.

Check the temperature gauge reading.

**Mixture control (choke)**

The function of this control is to enrich the air/fuel mixture for cold engine starting and to provide a faster idle speed without enrichment during the warm-up period.

The amount which the control knob must be pulled out to achieve easy starting will depend on engine temperature and prevailing conditions.

To lock the control in the required position, turn the control knob a quarter of a turn clockwise.

After the engine has been started with the aid of the choke, unlock the control and push it gradually as the engine warms, until only about 1/3 in of travel remains. With the control in this position the engine will run at a faster idle speed and attain its correct working temperature as quickly as possible.

Do not warm up the engine by allowing it to idle slowly or by leaving it idling with the control pulled out. Driving the car onto the road while the engine is cold with the control partly pulled out is preferable to allowing the engine to idle, or run with the control pulled out, in the garage or on the driveway prior to moving off.

**Ignition warning lamp**

The lamp should glow when the ignition is switched on, and go out and stay out at all times while the engine is running above normal idling speed. Failure to do so indicates a fault in the battery charging system. Check that the fan belt is correctly tensioned before consulting your Distributor or Dealer.

**Starter**

Do not operate the starter for longer than five to six seconds.

To prevent damage the starter cannot be operated while the engine is running.

If after a reasonable number of attempts the engine should fail to start, switch off the ignition and investigate the cause. Continued use of the starter when the engine will not start, not only discharges the battery but may also damage the starter.

If the starter pinion fails to engage with the flywheel ring, or fails to disengage when the engine starts, the starter will emit a high-pitched whine; release the ignition key immediately. Should the starter pinion become jammed in mesh with the flywheel ring, turn the squared end of the armature spindle with a spanner.
The gauge should register a pressure as soon as the engine is started up. The pressure may rise above 70 lb./sq. in. (4.92 kg/cm²) when the engine is started from cold and as the oil is circulated and warmed the pressure should then drop to between 40 and 70 lb./sq. in. (2.81 to 4.92 kg/cm²) at normal running speeds and to approximately 20 lb./sq. in. (1.4 kg/cm²) at idling speed.

Should the gauge fail to register any pressure, stop the engine immediately and investigate the cause. Start by checking the oil level.

Normal operating temperature is reached when the pointer is in the 'N' sector.

When maximum acceleration is required upward gear selections should be made when the needle reaches the yellow sector (5,500 to 6,300 r.p.m.) Prolonged or excessive use of the highest engine speeds should be avoided. This may cause damage to the engine.

The beginning of the red sector (6,300 r.p.m.) indicates the maximum safe speed for the engine.

Never allow the needle to enter the red sector.

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

During the first 500 miles (800 km),
DO NOT exceed 45 m.p.h. (72 km.p.h.)
DO NOT operate at full throttle in any gear.
DO NOT allow the engine to labour in any gear.

If the car has been washed, driven through water, or over wet roads for prolonged periods full braking power may not be available. Dry the brakes by applying the foot brake lightly several times, while the car is in motion. Keep the hand brake applied while using high pressure washing equipment.

Due consideration must be given to the overall weight carried when fully loading the car. Any loads carried on a luggage rack or downward load from a towing hitch must also be included in the maximum loading.

The towing weight of 1,344 lb. (610 kg) is the maximum that is permissible. When using bottom gear a gradient of up to 1 in 8 can be ascended while towing a weight not exceeding this figure. It may be possible to exceed this figure if it can be established that the overall weight is being properly distributed and that the vehicle can cope with the increased load. However, if the vehicle is carrying loads of more than 1,344 lb. (610 kg) the maximum weight should be limited to 1,344 lb. (610 kg) for safety reasons. Any such loads must be declared to the police and the maximum weight recorded on the vehicle registration certificate.

The ignition/steering lock key must be at position 'I' or 'II' and must not be removed during the tow. For towing start the key must be at position 'II'.

Clean the carpets with a semi-stiff brush or a vacuum cleaner preferably before washing the outside of the car. The most satisfactory way to give carpets and upholstery a thorough cleaning is with UNIPART Upholstery Cleaner, diluted one part with eight parts warm water. Apply vigorously with a semi-stiff brush, and remove the surplus with a damp cloth or sponge. Carpets should not be cleaned by the 'dry-clean' process. The plastic faced upholstery and roof lining may be treated with undiluted UNIPART Upholstery Cleaner spread thinly over the surface to be cleaned with a brush or cloth. Leave for five minutes, then wipe off with a moist sponge or cloth.

UNIPART Upholstery Cleaner can be used for cleaning and renovating all the usual upholstery materials, and rubber, but it should not be used on painted surfaces.

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 UNIPART Car Shampoo. Large deposits of mud must be softened with water before using the sponge. Scratches 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 underbody cleaning. 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 UNIPART Car Polish is all that is required to remove traffic film and to ensure the retention of the new appearance.

Wash the windshield with water containing UNIPART Car Shampoo. When the dirt has been removed polish with a clean dry cloth or chamois-leather until bright. Any slight tarnish found on stainless-steel components which have not received regular attention may be removed with UNIPART Chrome Cleaner. An occasional application of light mineral oil or grease will help to preserve the finish, particularly during winter, when salt may be used on the roads, but these protective measures must not be applied to plastic finishes.

Windscreen If windscreen smearing has occurred it may be removed with UNIPART Screen Cleaner.

Wipe down the hood, do not use any lustrous liquid polish, and do not use any abrasive agents on the paintwork.

Do not use caustic soaps, detergents, or spirit cleaners to clean the hood or the hood back-light.

PRODUCTS mentioned above are obtainable from your Distributor or Dealer.

Frost precautions 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. The specific gravity check should be carried out by an authorized Distributor or Dealer.

After the second winter the system should be drained and flushed. Refer to the instructions given for draining the cooling system, then clean out the system thoroughly by flushing water through the radiator passages using a hose inserted in the radiator filler orifice. (See Editor's Note at end of Part 1)

Before adding the recommended anti-freeze make sure that the cooling system is watertight; examine all joints and renew any defective hose.

We recommend owners to use UNIPART Frostbeat or Bluedry Anti-freeze to protect the cooling system during frosty weather and reduce corrosion to the minimum. We also approve the use of anti-freeze which conforms to specification B.S.3151 or B.S.3152.

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

<table>
<thead>
<tr>
<th>Anti-freeze</th>
<th>Commerces to freeze</th>
<th>Frozen solid</th>
<th>Amount of anti-freeze</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>°C</td>
<td>°F</td>
<td>Pts.</td>
</tr>
<tr>
<td>25</td>
<td>-13</td>
<td>45</td>
<td>1</td>
</tr>
<tr>
<td>33</td>
<td>-19</td>
<td>-3</td>
<td>2</td>
</tr>
<tr>
<td>50</td>
<td>-36</td>
<td>-53</td>
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</tbody>
</table>

WHEELS AND TYRES

Jacking up

The jack is designed to lift one side of the car at a time. Apply the hand brake, and place a wedge against each side of one of the wheels on the opposite side of the car to the one being jacked.

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 threads to prevent the formation of rust.

WHEELS Preventive maintenance

Owners are recommended to check wheel nuts on pressed type wheels for tightness each week. Take care not to overtighten (torque wrench setting 44 to 46 lb. ft. (6.08 to 6.16 kg.m.).

Fig. 1

Fig. 2

NEING

NEING

NEING

NEING

NEING
Insert the wheel disc lever in the recess provided in the road wheel and lever off the disc, using a sideways motion.

To refit the hub disc, place the disc rim over two of the three retaining shoulders of the wheel. Position the disc on the third retaining shoulder and snap the rim into the locked position by clicking the disc a quick blow with a clenched hand in the position shown (Fig. 2).

Slacken the four nuts securing the road wheel to the hub; turn anti-clockwise to loosen and clockwise to tighten. Raise the car with the jack to lift the wheel clear of the ground and remove the nuts. Withdraw the road wheel from the hub. When refitting the road wheel locate the wheel on the hub, lightly tighten the nuts with the wheel nut spanner (securing nuts must be fitted with the taper side towards the wheel), and lower the jack. Fully tighten the wheel nuts, tightening them diagonally and progressively, at the same time avoid over-tightening.

Replace the wheel disc and jack socket plug.

Use the spanner to slacken the octagonal hub nuts. Always jack up a wheel before using the hammer, and always hammer the nuts tight.

Locknuts are marked 'LEFT' or 'RIGHT' to show to which side of the car they must be fitted, and also with the word 'UNDO' and an arrow.

Before replacing a wheel wipe all serrations, threads, and cones of the wheel and hub and then lightly coat them with grease. If a forced change is made on the road, remove, clean, and grease as soon as convenient.

Inservice
When the car is new, after the first long run or after 50 miles of short runs, jack up the wheels and hammer the nuts to make sure that they are tight.

Once a year remove the wheels for examination and regreasing.

Tyres are marked with the maximum load and inflation pressure figures. When fitting replacement tyres ensure that they are to the same specification and marking. The permissible load and tyre pressures are shown on page 15 of this handbook.

Radial-ply tyres (SP) 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.

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

Wear Indicator. Tyres fitted as original equipment have wear indicators incorporated in their tread pattern. When the tyre tread has worn down until 0.06 in. of the tread remains the wear indicator bar will appear across the full width of the tread pattern.

Spare wheel. The space wheel supplied with new cars is inflated above the recommended running pressure. The pressure must be checked and adjusted before use.

Tyre, including the spare, must be maintained at the pressures recommended (see 'GENERAL DATA'); check with an accurate tyre gauge at least once a week, and regulate as necessary. Pressure should be checked when the tyres are cold; do not reduce the pressure in warm tyres where the increase above the normal pressure is due to temperature. See that the valve caps are screwed down firmly by hand. The cap prevents the entry of dirt into the valve mechanism and forms an additional seal on the valve, preventing any leakage if the valve core is damaged. The spare wheel supplied with new cars is inflated above the recommended running pressure. The pressure must be checked and adjusted before use.

Excessive local distortion can cause the casing of a tyre to fracture and may lead to premature tyre failure. Tyres should be examined, especially for cracked walls, exposed cords, etc. Flats and other sharp objects should be removed from the tyre tread; if embedded, they may work through the cover. Any oil or grease which may get onto the tyres should be cleaned off by using fuel sparingly. Do not use paraffin (kerosene), which has a detrimental effect on rubber.

When repairing tubes, have punctures or injuries vulcanised. Ordinary patches should only be used for emergencies. Vulcanising is absolutely essential for tubes manufactured from synthetic rubber. (See Editor's Note at end of Part 1)

Radial-ply tyres are standard equipment and replacements must be of the radial-ply type.

Unbalanced wheel and tyre assemblies may be responsible for abnormal wear of the tyres and vibration in the steering. Consult your Distributor/Dealer.

The level of the fluid in the brake master cylinder reservoir is visible through the plastic reservoir (1); the level must be maintained up to the position marked (2) on the side of the reservoir.

To check the level of the fluid in the clutch master cylinder reservoir (2), remove the plastic filler cap. The fluid level must be maintained at the bottom of the filler neck.

Use only Lockheed Universal Brake Fluid (Series 3203) or Castrol Girling Brake Fluid: alternatively, use a brake fluid conforming to F.M.V.S.S. D.O.T.3 specification with a minimum boiling-point of 260°C (500°F). Before refilling the filler caps check that the breather holes (indicated by the arrows) in the caps are clear. The centre disc (4) of the brake reservoir cap may be removed for cleaning.

(See Editor's Note at end of Part 1)

A free movement of 1 in. (2.5 mm) (4), measured at the pedal pad must be maintained on the pedal. To adjust the free movement, slacken the stop light switch locknut (1) and turn the switch (2) clockwise to decrease or anti-clockwise to increase the clearance. Tighten the stop light switch locknut.

Adjustment of the disc brakes to compensate for friction pad wear is automatic and manual adjustment is therefore not required. Before the lining material (arrowed) has worn down to the minimum permissible thickness of 4 in. (1.6 mm) or will have done so before the next inspection is due, the brake pads must be renewed. Special equipment is required, and new pads should be fitted by an authorised Distributor or Dealer.

Excessive brake pedal travel is an indication that the rear brake-shoes require adjusting. The brakes on both rear wheels must be adjusted to regain even and efficient braking.

Block the front wheels, fully release the hand brake and jack up each rear wheel in turn. Turn the adjuster (arrowed) in a clockwise direction (viewed from the centre of the car) until the wheel is locked, then turn the adjuster back until the wheel is free to rotate without the shoes rubbing. Repeat the adjustment on the other rear brake.

Remove the two countersunk screws (pressed wheels) or the four nuts (wire wheels) and withdraw the brake-drum.

Inspect the linings for wear, and clean out the dust from the backplate assembly and drum.

Refit the drum and road wheel and adjust the brake-shoes.

When it becomes necessary to renew the brake-shoes or pads it is essential that only genuine shoes or pads, with the correct grade of lining, are used. Always fit new shoes or pads as complete axle sets, never individually or as a single wheel set. Serious consequences could result from out-of-balance braking due to mixing of linings.

Replacement brake-shoes or pads are obtainable from your Distributor or Dealer.

The hand brake is automatically adjusted with the rear wheels. If there is excessive movement of the hand brake lever, consult your Distributor or Dealer.

Charge the nipples on the hand brake balance lever (2) and hand brake cable (1) with one of the recommended greases.
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 18,000 miles whichever is the sooner.
3. All fluid seals in the hydraulic system should be renewed, and all flexible hoses should be examined and renewed if necessary every 3 years or 36,000 miles (60,000 km.) whichever is the sooner. At the same time the working surface of the piston and of the 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:
1. At all times use the recommended brake fluid.
2. Never leave fluid in unsealed containers. It absorbs moisture quickly and this can be dangerous when used in the braking system.
3. Fluid drained from the system or used for bleeding is best discarded.
4. The necessity for absolute cleanliness throughout cannot be over-emphasized.

The electrical installation on this car is NEGATIVE (-) earth return and the correct polarity must be maintained at all times. Reversed polarity will permanently damage semi-conductor devices in the alternator and tachometer, and the radio transistors (when fitted).

Before fitting a radio or any other electrical equipment, make certain that it has the correct polarity for installation in this vehicle.

The battery must be kept clean and dry, and the terminals should be smeared with petroleum jelly. The vehicle must be level when the electrolyte in the cells is being checked.

More frequent topping-up of the electrolyte levels may be necessary in hot weather or when long journeys are made.

DO NOT USE A NAKED LIGHT WHEN CHECKING THE LEVELS.

(See Editor's Notes at end of Part 1)

NOTE—Do not leave the battery in a discharged state for any length of time. When not in regular use have the battery fully charged, and every fortnight give a short refresher charge to prevent permanent damage to the battery plates.

'Pacemaker' (Type A9, AZ9, A11, AZ11). The electrolyte levels (1) are visible through the translucent battery case or may be checked by fully raising the vent cover (2) and tilting it to one side. The electrolyte level in each cell must be maintained so that the separator plates (3) are just covered. To avoid flooding, the battery must not be topped up within half an hour of it having been charged from any other source than the generating system fitted to the car.

To top up the levels raise the vent cover and pour distilled water into the trough (4) until all the rectangular filling slots (5) are full and the bottom of the trough is just covered. Press the cover firmly into position: the correct quantity of distilled water will automatically be distributed to each cell. In extremely cold conditions, run the engine immediately after topping-up to mix the electrolyte.

The fuses are housed under the fuse cover (1) mounted in the engine compartment adjacent to the battery.

Fuses connecting 1-2. The fuse (2) protects one parking lamp, one tail lamp, one number-plate lamp, and one front and rear side marker lamp.

Fuses connecting 3-4. The fuse (3) protects one parking lamp, one tail lamp, one number-plate lamp, and one front and rear side marker lamp.

Fuses connecting 5-6. The fuse (4) protects the circuits which operate only when the ignition is switched on. These circuits are for the direction indicators, brake stop lamps, reverse lamps and seat belt warning.

Fuses connecting 7-8. The fuse (5) protects the equipment which operates independently of the ignition switch, namely, horns, interior and luggage compartment lamps, headlamp flasher, brake failure warning lamp, door and seat belt audible warning, and the cigar-lighter (if fitted).

Two spare fuses (6) are provided and it is important to use the correct replacement fuse. The fusing value, current rated 17 amp (35 amp. blow rated), is marked on a coloured slip of paper inside the glass tube of the fuse.

Line fuses

Auxiliary equipment. The 35 amp. line fuse (7) protects the windscreens, wiper, windscreens washer, heater blower motor and radio circuits when the ignition is switched on and the ignition switch is in position 'V'.

Hazard warning. The 35 amp. line fuse (8) protects the hazard warning lamps and is located behind the hazard warning switch. It is accessible only when the centre console is withdrawn (see page 10).

Radio (if fitted). A separate additional line fuse protects the radio. See the instructions supplied with the radio for the correct fuse ratings.

To change a line fuse, hold one end of the cylindrical fuse holder (9), push in, and twist the other end (10). Remove the fuse (11) from the cylindrical holder.

Blown fuses

The units which are protected by the fuses can be identified from the wiring diagram. A blown fuse is indicated by the failure of all the units protected by it, and is confirmed by examination of the fuse when withdrawn.

Before renewing a blown fuse inspect the wiring of the units that have failed for evidence of a short-circuit or other fault.

Accessories

If an electrical accessory is being fitted and it is required to operate independently of the ignition circuit it should be connected to terminal 'B' on the fuse block; if it is required to operate only when the ignition is switched on, connect it to terminal 'W'. The terminal numbers are marked on the fuse block.

Headlamps

Light unit

To remove a light unit, remove the outer rim retaining screw (1) and withdraw the outer rim (2). Unscrew the three inner rim retaining screws (3), remove the inner rim (4), withdraw the light unit (5), and disconnect the three-pin plug (6).

To fit a light unit, connect the three-pin plug, position the light unit in the headlamp body ensuring that the three lugs formed on the outer edge of the light unit engage in the slots formed in the body, and fit the inner retaining rim. Refit the outer rim.

Beam setting

Two adjusting screws are provided on each headlamp for setting the main beams. The screw (7) is for adjusting the beam in the vertical plane, and the screw (8) is for horizontal adjustment. The beams must be set in accordance with local regulations; resetting and checking should be entrusted to your Distributor or Dealer, who will have special equipment available for this purpose.
Remove the lens retaining screws (1) and slide the lens upwards to gain access to the direction indicator and stop/tail lamps.

**Warning lamp bulbs.** Remove the push-fit bulb holders (3) from the lamps and remove the bayonet type fixing bulbs (6). To remove the ignition and high beam warning bulbs the centre console must also be withdrawn.

**Lights and heater booster switch bulbs.** Remove the push-fit bulb holders (7) from the switches and remove the bayonet type fixing bulbs (8). To remove the lights switch bulb the centre console must also be withdrawn.

**Brake failure warning lamp.** Remove the retaining spring clip (9) and withdraw the holder/test-push assembly from the facia. Through the two pivot holes in the holder depress the pivot lugs (10) and remove the test-push rocker from its holder. Unscrew and remove the bulb (11).

To renew a bulb, remove the two securing screws and lift off the lamp hood (1) and lens (2). When refitting, ensure that the lamp lens seal (3) is correctly positioned. Tighten the screws evenly and progressively to compress the seal.

(1) **Front (amber).** To remove a bulb, remove the securing screw (1) and lift off the lamp lens, noting that one end is secured by a locating tab (2). When refitting, ensure that the sealing rubber is positioned correctly and that the lens tab (2) is located beneath the lamp body rim before refitting the securing screw.

(2) **Rear (red).** To gain access to the bulb (3), the rubber lips retaining the chrome bezel and lamp lens should be eased open with a screwdriver and the bezel (1), and lens (2), removed. When refitting ensure that the thick end of the wedge-shaped lens faces rearwards.

To renew a bulb, remove the two securing screws and withdraw the lens. Press the bulb down towards the lower contact and withdraw it from the lamp. Fit one end of the new bulb into the hole in the lower contact, then press the top of the bulb into the lamp until the point of the cap engages in the hole in the upper contact.

To replace a defective bulb, remove the two screws securing the lamp lens. Withdraw the festoon-type bulb from the retaining clips.

The lens is held in the lamp by four locating lugs. To gain access to the bulb, gently squeeze the sides of the lens together and withdraw it from the lamp. The bulb may then be withdrawn from its contacts.

**Hazard switch bulb.** Withdraw the centre console. Remove the push-fit bulb holder (13) from the switch, and remove the bayonet fixing type bulb (14).

**Hazard warning lamp bulb.** Withdraw the centre console. Remove the push-fit bulb holder (15) from the lamp and remove the bayonet fixing type bulb (16).

**Seat belt warning lamp bulb.** Withdraw the centre console. Remove the push-fit bulb holder (17) from the lamp and remove the bayonet fixing type bulb (18).

**Cigar-lighter (if fitted) illumination bulb.** Withdraw the centre console. Squeeze the sides of the bulb holder (19) and remove the bulb. Remove the bulb holder (20) from the hood clip and remove the bayonet fixing type bulb (21).

**Replacement bulbs**

<table>
<thead>
<tr>
<th>Bulbs</th>
<th>Voltage</th>
<th>Watts</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headlamp—sealed beam</td>
<td>12</td>
<td>50/40</td>
<td></td>
</tr>
<tr>
<td>Sidelamp (with flasher)</td>
<td>12</td>
<td>5/21</td>
<td>GLB 380</td>
</tr>
<tr>
<td>Stop/tail</td>
<td>12</td>
<td>5/21</td>
<td>GLB 390</td>
</tr>
<tr>
<td>Reverse</td>
<td>12</td>
<td>18</td>
<td>BFS 273</td>
</tr>
<tr>
<td>Number-plate lamp</td>
<td>12</td>
<td>6</td>
<td>GLB 999</td>
</tr>
<tr>
<td>Direction indicator</td>
<td>12</td>
<td>6</td>
<td>GLB 342</td>
</tr>
<tr>
<td>Side marker lamp, front and rear</td>
<td>12</td>
<td>5</td>
<td>BFS 501</td>
</tr>
<tr>
<td>Ignition warning</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
<tr>
<td>Main beam</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
<tr>
<td>Direction indicator warning lamp</td>
<td>12</td>
<td>2</td>
<td>GLB 987</td>
</tr>
<tr>
<td>Brake warning lamp</td>
<td>12</td>
<td>1-5</td>
<td>GLB 280</td>
</tr>
<tr>
<td>Panel illumination lamp</td>
<td>12</td>
<td>2-2</td>
<td>GLB 643</td>
</tr>
<tr>
<td>Cigar-lighter illumination</td>
<td>12</td>
<td>6</td>
<td>GLB 254</td>
</tr>
<tr>
<td>Luggage compartment lamp</td>
<td>12</td>
<td>6</td>
<td>GLB 254</td>
</tr>
<tr>
<td>Courtesy lamp</td>
<td>12</td>
<td>6</td>
<td>GLB 987</td>
</tr>
<tr>
<td>Hazard warning lamp</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
<tr>
<td>Seat belt warning lamp</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
<tr>
<td>Switch illumination</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
<tr>
<td>Hesler rotary control illumination</td>
<td>12</td>
<td>2</td>
<td>GLB 281</td>
</tr>
</tbody>
</table>

Access to the bulbs is gained from the back of the fascia and/or by removing the centre console.

**Hood control lamp bulb.** Remove the push-fit bulb holder (1) from the control and remove the bayonet fixing type bulb (2).

**Instrument panel lamp bulbs.** Remove the push-fit bulb holders (3) from the instruments and unscrew the bulb (4).
Contact set renewing. Remove the nut (5) and lift the top insulating bush and both leads from the stud. Remove the securing screw (6) with its spring and plain washer, and lift off the con- piece contact set. If removal of the moving contact only is required leave the securing screw (6) in position.

Fitting. Before fitting a new contact set, wipe the points clean with fuel or spirit. Lubricate the pivot post (2) and check that the insulating bush (9) is correctly positioned below the spring loop. Position the contact set on the distributor plate and lightly tighten the securing screw (6). Locate the lead terminals around the insulating bush so that they make contact with the spring and tighten the nut (6). Set the contact gap.

Whenever a new contact set has been fitted, recheck the gap after the first 500 miles (800 km). During this period, the heel of the contact will have bedded in and reduced the gap.

Spark plugs

The spark plugs should be cleaned, preferably with an air-blast service unit.

Check the plug gaps, and reset if necessary to the recommended gap (see ‘GENERAL DATA’). To reset, use a special Champion spark plug gauge and setting tool; move the side electrode, never the centre one.

When refitting the plugs make sure that the washers are not defective in any way.

Screw the plug down by hand as far as possible, then use a spanner for tightening only. Always use a tubular box spanner to avoid possible damage to the insulator, and do not under any circumstances use a movable wrench. Never overtighten a plug, but ensure that a good joint is made between the plug body, washer, and cylinder head. Wipe clean the outside of the plugs before reconnecting the H.T. leads.

When fitting new spark plugs ensure that only the recommended type and grade are used (see ‘GENERAL DATA’).
Both the engine oil filler cap and the fuel tank filler cap are non-venting and form a seal on the filling aperture. IT IS ESSENTIAL TO THE SATISFACTORY OPERATION OF THE EVAPORATIVE LOSS SYSTEM THAT BOTH CAPS ARE ALWAYS REPLACED PROPERLY AND TIGHTENED FULLY. A DEFECTIVE CAP OR CAP SEAL MUST BE REPLACED.

SYSTEM

The elements of the carburettor air cleaners must be renewed every 12,000 miles (20000 km.) or 12 months; more frequent changes may be necessary in dusty operating conditions.

The air cleaner covers and elements should only be removed when the elements are being renewed. To fit new elements, remove the interconnecting bracket securing nut (1) and unscrew the air-cleaner bolts (2) from the mounting plate (3). Lift off the assembly, remove the cover (4) and extract the element (6) and the distance pieces (5) for the air cleaner bolts.

The carburettor incorporates features which assist in reducing exhaust emissions. Maladjustment or the fitting of parts not to the required specification may render these features ineffective.

Unscrew the damper cap at the top of the carburettor and withdraw the damper. Top up with clean engine oil to bring the oil level 1 inch below the top of the carburettor damper tube. Push the damper assembly back into position and screw in the cap. Under no circumstances should heavy bodied lubricants be used. Failure to lubricate the piston damper may cause the piston to flutter and reduce acceleration and have an adverse effect on exhaust emission.

The carburettor throttle and choke control linkages and cables, and the accelerator pedal fulcrum.

The efficient operation of the engine and exhaust emission control equipment depends not only on correct carburettor settings but also on correct ignition timing, contact breaker and spark plugs and valve rocker clearances. It is essential that these items are checked before adjusting the carburettors. Tuning of the carburettors is confined to setting the idle and fast idle speeds and the mixture setting at idle speed. Adjustments should only be undertaken on cars required to conform with exhaust emission control regulations if the use of a reliable tachometer, carburettor balance meter and an exhaust gas analyser (CO meter) is available.

1. Remove the air cleaners.
2. Top up the carburettor piston dampers with recommended engine oil to the correct level.
3. Check the throttle control for correct functioning.
4. Ensure that the mixture control (choke) will return fully, that the cable has 3 in. (3 mm.) free play (1) before it starts to pull on the lever and a small clearance exists between the fast idle screws (2) and their cams.
5. Raise each carburettor lifting pin (3), release the pin and check that the piston falls freely onto the bridge of the carburettor, indicated by a distinct metallic click. Consult your Distributor/Dealer if the piston fails to fall freely.
6. Connect a reliable tachometer.
7. Start the engine and run it at a fast idle speed until it attains normal running temperature then run it for a further five minutes.
8. Increase the engine speed to 2,500 rev./min. for 30 seconds.

NOTE.—Tuning can now be commenced. If delay prevents the adjustment being completed within three minutes, increase the engine speed to 2,500 rev./min. for 30 seconds and then continue tuning. Repeat this cleaning procedure at three minute intervals until tuning is completed.

9. Check the idle speed (tachometer), see 'GENERAL DATA' and check the carburettors for balanced air intake using a balance meter.
10. If the balance is not correct, adjust as follows: release the throttle connector (6) between the carburettors and adjust by turning the throttle adjusting screw (4) on one of the carburettors until the balance is correct. Then adjust the idle speed by turning the throttle adjusting screw (6) on each carburettor by the same amount. Re-check the carburettor balance.

Check the throttle shaft pin clearance and adjust if necessary—see paragraph 17.

If a smooth idle at the correct speed and balance is not obtainable adjust the idle speed mixture setting as follows:

11. Stop the engine. Remove each suction chamber and piston, and screw the jets (5) up until they are flush with the bridge of the carburettor or up as far as possible. Turn down the jet adjusting nut (3) on each carburettor three complete turns. Refit the piston and suction chambers and top up the piston damper oil levels.

NOTE.—This operation need not be carried out if it is known that the jets are in the same relative position.

12. Start the engine. Turn the jet adjusting nut (5) on both carburettors in the same direction, one flat at a time, up to waxen or down to rich, within the limits of the adjustment restrictor until the fastest speed is recorded on the tachometer. Now turn the nuts up slowly until the speed just commences to fall. Turn the nuts down very slowly by the minimum amount until the maximum speed is regained.

13. Using the exhaust gas analyser check that the percentage CO reading is within the prescribed limits. If the reading falls outside the limits reset both jet adjusting screws equally by the minimum amount necessary to bring the reading just within the limits. If a smooth idle at the correct speed or the prescribed CO reading cannot be obtained you should consult your Austin MG Dealer.

14. Recheck the idle speed and carburettor balance and adjust as necessary with the throttle adjusting screws.

15. Set the throttle interconnection clamping levers so that the link pin is 0.012 in. (0.32 mm.) away from the lower edge of the fork (see inset 8) as follows:

16. Stop the engine and slacken both clamping bolts (6) on the throttle spindle interconnection.

17. Insert a 0.012 in. (3 mm.) feeler gauge (7) between the throttle shaft stop and the carburettor heat shield. Move each throttle spindle interconnection lever downwards until the lever pin rests on the lower arm of the carburettor throttle fork. Tighten the clamping bolts (6) Fig. 4 on each fork, ensuring that there is approximately 3 in. (0.79 mm.) float on the interconnection rod. Remove the feeler gauge. The pins on the throttle spindle lever should then have clearance in the throttle fork.

18. Ensure that 3 in. (2 mm.) free movement exists before the cable starts to pull on the lever.

19. Run the engine at 1,500 r.p.m. and check the carburettors for balance.

20. Pull out the mixture control knob until the linkage is about to move the carburettor jets. Lock the knob in position.

21. Using the balance meter to ensure equal adjustment, turn the fast idle adjusting screws equally to give the fast idle speed—see 'GENERAL DATA'. Stop the engine.

22. Refit the air cleaners.

GEARBOX AND REAR AXLE

Gearbox

To gain access to the gearbox combined oil filler and level plug, lift the floor covering on the left-hand side of the gearbox cover and remove the rubber plug. Clean around the filler plug before removing it.

The oil level should be maintained at the bottom of the filler plug aperture thread.

Rear axle

A combined oil filler and level plug is located on the rear of the axle. The oil level should be maintained at the bottom of the plug aperture; ensure that the car is standing level when checking. After topping up the oil level, allow sufficient time for any surplus oil, which may have been added accidentally, to run out of the aperture before replacing the plug.

Ensure that the rear axle oil is not drained when the After-sales Service is carried out.

Lubrication

Steering rack

A lubrication nipple for the steering rack is located on the right-hand side of the rack housing, which is accessible when the bonnet is raised. When lubricating, give a maximum of 10 strokes with an oil gun filled with one of the recommended oils.

Fig. 1

Fig. 2
Axle pins: Two lubricating nipples (1) and (2) are provided on each swivel pin. To lubricate, charge the nipples with one of the recommended greases. To ensure full penetration of the lubricant, this operation is best carried out with the car partly jackd up.

Steering wheel (Fig. 2) The steering tie-rod ball joint at each side is provided with a lubrication nipple (3). To lubricate, charge the nipples with one of the recommended greases.

Suspension (Fig. 2) A lubricating nipple (4) is provided on each of the outer fulcrum pins. To lubricate, charge the nipples with one of the recommended greases.

1. Wheel alignment Incorrect front wheel alignment can cause excessive and uneven tyre wear. The front wheels must be set parallel or toe-in + 1/8 in. (1.2 mm) to each other when the steering is in the straight-ahead position.

To set the wheel alignment correctly requires the use of a special gauge; this work should be entrusted to your Distributor or Dealer.

R.A.L. DATA

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<thead>
<tr>
<th>Engine</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>122C</td>
<td>12CD (4-cylinder overhead valve)</td>
<td>Engine type</td>
</tr>
<tr>
<td>12C, 12V</td>
<td></td>
<td>Engine type (evaporative loss)</td>
</tr>
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<td>2.78 in. (70.61 mm)</td>
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<td>Bore</td>
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<td>3.2 in. (81.28 mm)</td>
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<td>Stroke</td>
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<tr>
<td>77.8 cu.in. (1,274.86 c.c.)</td>
<td></td>
<td>Cubic capacity</td>
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<td>8.8:1</td>
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<td>Compression ratio</td>
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<tr>
<td>1:3.4</td>
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<tr>
<td>0.012 in. (3.0 mm)</td>
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<td>Valve rocker clearance (cold)</td>
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<td>700 c.m (4)</td>
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<td>Idler speed (122C)</td>
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<tr>
<td>1,000 r.p.m.</td>
<td></td>
<td>Idler speed (other)</td>
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<tr>
<td>1,100 r.p.m. to 1,200 r.p.m.</td>
<td></td>
<td>Final idle speed</td>
</tr>
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<tr>
<td>20 lb./sq. in. (1.14 kg/cm.2)</td>
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<td>Oil pressure: Idling (approx.)</td>
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<table>
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<tr>
<th>Ignition</th>
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<th>Champion UN12Y</th>
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<td>Spark plugs</td>
<td>Champion UN12Y</td>
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<tr>
<td>Spark plug gap</td>
<td>0.024 to 0.026 in. (0.62 to 0.66 mm)</td>
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<table>
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<tr>
<td>Carburetor</td>
<td>Twin S.U. type HS2</td>
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<tr>
<td>Carburator needle</td>
<td>ABC (spring-loaded type)</td>
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<td>Early A.M.</td>
<td>S.U. type AUM 365 electric</td>
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<tr>
<td>Pump (12V)</td>
<td>S.U. (Electric) type AUM 206</td>
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<table>
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<td></td>
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<tr>
<td></td>
<td>Third: 1.59:1</td>
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<tr>
<td></td>
<td>Fourth: 1.00:1</td>
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<table>
<thead>
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<tr>
<td>Front</td>
<td>Pressed</td>
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<tr>
<td>Rear</td>
<td>Pressed</td>
</tr>
<tr>
<td>Wire</td>
<td>Wire</td>
</tr>
<tr>
<td>Track: Front</td>
<td>3 ft. 10 in.</td>
</tr>
<tr>
<td></td>
<td>3 ft. 10 in.</td>
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<tr>
<td></td>
<td>3 ft. 10 in.</td>
</tr>
<tr>
<td></td>
<td>3 ft. 10 in.</td>
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<tr>
<td>Turning circle: Left lock</td>
<td>31 ft. 1 in.</td>
</tr>
<tr>
<td>Right lock</td>
<td>31 ft. 2 in.</td>
</tr>
<tr>
<td>Front wheel alignment</td>
<td>Parallel to 1 in. (2.54 cm)</td>
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<tr>
<td>Wheelbase</td>
<td>6 ft. 8 in. (203.5 cm)</td>
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<tr>
<td>Overall length</td>
<td>11 ft. 5 in. (3.49 m)</td>
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<tr>
<td>Overall width</td>
<td>4 ft. 6 in. (1.4 m)</td>
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<tr>
<td>Overall height</td>
<td>4 ft. 4 in. (1.32 m)</td>
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<tr>
<td>Ground clearance</td>
<td>5 in. (12.7 cm)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Batteries</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>6 gallons (72 U.S. gallons, 23.3 litres)</td>
</tr>
<tr>
<td>Fuel tank (evaporative loss)</td>
<td>5 gallons (6 U.S. gallons, 22.7 litres)</td>
</tr>
<tr>
<td>Engine sump (including filter)</td>
<td>12 pints (7 U.S. pints, 9.0 litres)</td>
</tr>
<tr>
<td>Gearbox</td>
<td>2 pints (7 U.S. pints, 1.3 litres)</td>
</tr>
<tr>
<td>Rear axle</td>
<td>12 pints (7 U.S. pints, 9.0 litres)</td>
</tr>
<tr>
<td>Cooling system (with heater)</td>
<td>6 pints (7 U.S. pints, 9.0 litres)</td>
</tr>
<tr>
<td>Pressed or spiked</td>
<td></td>
</tr>
<tr>
<td>Disc</td>
<td></td>
</tr>
<tr>
<td>Wire</td>
<td></td>
</tr>
<tr>
<td>Wire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.20 -130</td>
<td>Cross ply</td>
</tr>
<tr>
<td>14SR5 x 13</td>
<td>Radial ply</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tyre pressures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>Rear</td>
</tr>
<tr>
<td>18 lb./sq. in. (1.27 kg/cm.2)</td>
<td>20 lb./sq. in. (1.4 kg/cm.2)</td>
</tr>
<tr>
<td>22 lb./sq. in. (1.55 kg/cm.2)</td>
<td>24 lb./sq. in. (1.69 kg/cm.2)</td>
</tr>
<tr>
<td>Maximum weight</td>
<td>21.5 lb. (9.75 kg)</td>
</tr>
<tr>
<td>2.064 lb. (928 kg)</td>
<td>2.196 lb. (966 kg)</td>
</tr>
<tr>
<td>2.315 lb. (9.5 kg)</td>
<td>2.464 lb. (1090 kg)</td>
</tr>
<tr>
<td>Maximum permissible towing weight</td>
<td>Maximum</td>
</tr>
<tr>
<td>2.344 lb. (10.6 kg)</td>
<td>2.344 lb. (10.6 kg)</td>
</tr>
<tr>
<td>913 lb. (413 kg)</td>
<td>913 lb. (413 kg)</td>
</tr>
<tr>
<td>1,344 lb. (556 kg)</td>
<td>1,344 lb. (591 kg)</td>
</tr>
<tr>
<td>2,151 lb. (975 kg)</td>
<td>2,151 lb. (975 kg)</td>
</tr>
<tr>
<td>2,196 lb. (966 kg)</td>
<td>2,196 lb. (966 kg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weights</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerbside</td>
<td>1,701 lb. (772 kg)</td>
</tr>
<tr>
<td>(fuel tank, all optional extras and accessories)</td>
<td>1,744 lb. (790 kg)</td>
</tr>
<tr>
<td>Normal kerbside weight</td>
<td>110 lb. (500 kg)</td>
</tr>
<tr>
<td>(driver, passenger, and 50 lb. luggage)</td>
<td>913 lb. (413 kg)</td>
</tr>
<tr>
<td>Maximum</td>
<td>2,328 lb. (1061 kg)</td>
</tr>
<tr>
<td>kerbside weight</td>
<td>1,344 lb. (610 kg)</td>
</tr>
<tr>
<td>Towing hitch load</td>
<td>1,344 lb. (610 kg)</td>
</tr>
</tbody>
</table>

**MAINTENANCE SUMMARY**

[NOTE—See page 382 for Maintenance Summary issued in 1975.]

Basic tuning data will be found on the Vehicle Emission Control Information Label located in the engine compartment.

Weakly or before a long journey:
- Check the gas level in the engine and top up as necessary.
- Check battery and top up to correct level if necessary.
- Check coolant level and top up as necessary.
- Check windshield washer and top up as necessary.
- Check all pressure settings, including space.
- Check the pressure and adjust if necessary.

Maintenance Intervals:
- Change oil engine:
- Change oil filter:

<table>
<thead>
<tr>
<th>Lubrication Service</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change oil engine</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fit new oil filter</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check level of all fluid reservoirs, brake clutch, rear axle, transmission, battery, windshield washer</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check all pressure settings, including space</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubricate all grease fittings</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubricate all locks and hinges</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubricate all throttle and choke controls and cables</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubricate steering rack and pinion</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

LUBRICATION:

Maintenance:

- At 30,000 miles or 36 months
- At 12,000 miles or 12 months
- At 6,000 miles or 6 months
- At 2,000 miles or 2 months

ENGINE:
- Check drive belts. Adjust if necessary.
- Renew all belts at 24,000 miles or 24 months.
- Check all hoses, vacuum, air and water for condition and tightness.
- Renew all filter cleaner elements in air pump and carburettor.
- Adjust valve rocker clearances.
- Tighten all manifold nuts.
- Usually check exhaust and intake systems for leaks.
- Check heating and cooling system for leaks.
- Check resistor in starter cover or panel for obstruction.
- Check vacuum manifold for damage, leaks and security.
- Check the ignition switch and relay, and if necessary, inspect and repair.
- Check air cleaner element in air pump and renew if necessary.
- Check air pump, correct or renew if necessary.

- At 24,000 miles or 24 months
Safety features embodied in the car may be impaired if other than genuine parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the vehicle manufacturer's specification. Owners purchasing accessories while travelling abroad should ensure that the accessory and its fitted location on the car conform to mandatory requirements existing in their country of origin.

Identification
When communicating with your Distributor or Dealer always quote the commission 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 secured to the left-hand side of the bonnet lock platform.

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

Gearbox number. Stamped on the left-hand side of the gearbox casing.

Rear axle number. Stamped on the front of the left-hand rear axle tube near the spring seating.

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

- 6 spanners: \( \frac{4}{8}, \frac{5}{8}, \frac{1}{2}, \frac{3}{8}, \frac{1}{2}, \frac{7}{8} \) in. A.F.
- 1 pair 6 in. pliers.
- 1 pair 8 in. diameter tommy-bar.
- 1 in. \( \times \) \( \frac{1}{4} \) in. A.F. tubular spanner.
- 2 screwdrivers.

British Leyland Motors Ltd
600 Willowtree Road, Leonia
New Jersey 07605

British Leyland Motors Canada Limited
4445 Fairview Street
Burlington, Ontario - Canada

Telephone: (201) 461/7300 Telex: 135491
Telephone: (416) 632/3040 Telex: 021678

TUNING MODIFICATIONS

Tuning modifications
For competition, circuit racing, and speed trials a wide range of MG Factory Special Tuning parts are available through your Distributor or Dealer. Full details of the varying stages of tune and the fitting of the parts listed below are given in Tuning Booklet C-AKD 5906.

**Warning:** The car is delivered from the factory in its standard form tuned to give maximum performance with complete reliability, and meeting any U.S. legal requirements as to emission control and safety regulations. Super-tuned cars should be utilized only in off-road competition driving. Owners availing themselves of the factory-built standard form may prohibit its use on public roads.

**REMEMBER:** The warranty provides that it is invalidated if the car is used for racing.

**Engine**

**Carburettor**
Twin 1\( \frac{1}{4} \) in. or 1\( \frac{1}{2} \) in. S.U. carburettors and full installation kit. Weber twin-choke carburettors and full installation kit.

**Ignition**
Competition distributor with a special advance curve. Racing sparking plugs.

**Transmission**

**Suspension**
Front anti-roll bar and installation kit. Competition setting shock absorbers. Front suspension lowering kit.

**Wheels and brakes**
Wide-rim wire wheels. Competition brake pads.

**Miscellaneous**
Lightweight bucket seats. Leather bonnet straps. Alternator pulleys for reduced speed.

For further details see your Distributor or Dealer or write to:

**Special Tuning Department**
AUSTIN MORRIS GROUP BRITISH LEYLAND UK LIMITED

ABINGDON-ON-THAMES BERKSHIRE ENGLAND

Telephone: Abingdon 251 Telex: 63128 Teleprinter: Grims, Abingdon

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ICE

Ice service
Your Distributor or Dealer is provided with the latest information concerning special service tools and workshop techniques. This enables him to undertake your service and repairs in the most efficient and economic manner.

9 parts and accessories
Genuine BRITISH LEYLAND and UNIPART parts and accessories are designed and tested for your vehicle and have the back-up of the British Leyland Factory Warranty. ONLY WHEN GENUINE BRITISH LEYLAND AND UNIPART PARTS ARE USED CAN RESPONSIBILITY BE CONSIDERED UNDER THE TERMS OF THE WARRANTY.

For more information on UNIPART, see your British Leyland Distributor or Dealer.

Genuine British Leyland and UNIPART parts and accessories are supplied in cartons and packs bearing either or both of these symbols.
ECONOMEND LUBRICANTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Engine, Synchromesh Gearbox, Overdrive, Distributor, Carburettor, and Oil-scan</th>
<th>Rear Axle and Steering Gear</th>
<th>Grease Points</th>
<th>Upper Cylinder Lubrication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climatic conditions</td>
<td>All temperatures above -19°C. (10°F.)</td>
<td>Temperatures -19°C. to -5°C. (0°F. to 20°F.)</td>
<td>All temperatures below -15°C. (5°F. to 7°F.)</td>
<td>All temperatures above -10°C. (10°F.)</td>
</tr>
<tr>
<td>BP</td>
<td>BP Super Visco-Static</td>
<td>BP Super Visco-Static 10W/30 or 10W/40</td>
<td>BP Super Visco-Static</td>
<td>BP Hypogear 90 EP</td>
</tr>
<tr>
<td>SHELL</td>
<td>Super Shell Motor Oil</td>
<td>Super Shell Motor Oil</td>
<td>Shell Super Motor Oil 10W/30</td>
<td>Shell Spirax Heavy Duty 90</td>
</tr>
<tr>
<td>FILTRATE</td>
<td>Filtrate Super 20W/50</td>
<td>Filtrate Super 10W/30</td>
<td>Filtrate 5W/20</td>
<td>Filtrate 5W/20</td>
</tr>
<tr>
<td>DUCKHAMS</td>
<td>Duckhams Q. 20-50</td>
<td>Duckhams Q 2.500</td>
<td>Duckhams Q. 2.500</td>
<td>Duckhams Hypoid 90S</td>
</tr>
<tr>
<td>CASTROL</td>
<td>Castrol GTX or Castrol XL 20/50</td>
<td>Castrolite or Castrol Super</td>
<td>Castrolite or Castrol Super</td>
<td>Castrol Hypoy B. 80</td>
</tr>
<tr>
<td>ESSEX</td>
<td>Unifo or Esso Extra Motor Oil 10W/30</td>
<td>Unifo or Esso Extra Motor Oil 10W/30</td>
<td>Esso Extra Motor Oil 10W/30</td>
<td>Gear Oil G.X. 80</td>
</tr>
<tr>
<td>MOBIL</td>
<td>Mobilol Special 20W/50</td>
<td>Mobilol Super 10W/50</td>
<td>Mobilol Super 10W/50</td>
<td>Mobilube HD 80</td>
</tr>
</tbody>
</table>

JUBRICATION

To ensure that the vehicle is standing on a level surface when checking the oil levels.

KELY

ENGINE. Check oil level and top up if necessary.

6,000 miles or 6 months

ENGINE. Drain and refill with new oil.

ENGINE OIL FILTER. Remove disposable cartridge, fit new.

CARBURETTERS. Top up carburettor piston damper.

THROTTLE AND CHOKE. Lubricate throttle and choke control linkages, cables, and accelerator pedal fulcrum.

DISTRIBUTOR. Lubricate all parts as necessary.

REAR AXLE. Check oil level, and top up if necessary.

GEARBOX. Check oil level and top up if necessary.

STEERING TIE-ROD BALL JOINT (2 nipples)

FRONT SUSPENSION (6 nipples)

HAND BRAKE CABLE (1 nipple)

HAND BRAKE COMPENSATING LEVER

Give three or four strokes with a grease gun.

Lubricate all door, bonnet, boot locks, and hinges, and hand brake mechanical linkage.

30,000 miles or 6 months

STEERING RACK. Lubricate steering rack—this work must be entrusted to your Distributor or Dealer.

Rication service at 3,000 miles or 3 months

ENGINE. Drain and refill with new oil.

THROTTLE AND CHOKE. Lubricate throttle and choke control linkages, cables, and accelerator pedal fulcrum.

REAR AXLE. Check oil level, and top up if necessary.

GEARBOX. Check oil level, and top up if necessary.

STEERING TIE-ROD BALL JOINT (2 nipples)

FRONT SUSPENSION (6 nipples)

HAND BRAKE CABLE (1 nipple)

HAND BRAKE COMPENSATING LEVER (1 nipple)

Give three or four strokes with a grease gun.

Lubricate all door, bonnet, boot locks, and hinges and hand brake mechanical linkage.

Recommended oils and greases are given above.
Cooling System

Anti-freeze solutions
You can check the specific gravity of the coolant solution by using an anti-freeze hydrometer. With this instrument, a quantity of coolant is sucked in and the position of a glass float indicates the specific gravity of the solution, usually in terms of the temperature at which ice begins to form.

A more thorough job of flushing can be done if the thermostat is removed from its housing and the housing reinstalled before flushing.

Wheels and Tires

Tire Maintenance
"Vulcanizing" is a process of tire repair in which a patch is applied under heat and pressure.

Brakes

Brake and clutch master cylinder
Only the brake fluids specified should be used. Other brake fluids may have a lower boiling point and will boil in disc brake systems under hard usage. This can cause temporary malfunction until the fluid has cooled (pedal will feel spongy).

Electrical

Battery
Do not use a naked light, or open flame, when examining the condition of the cells. The reason for this is that hydrogen and oxygen gases are produced under normal charging conditions and the mixture of these two gases in the proper proportions is explosive.

Checking the specific gravity
When checking the specific gravity of a battery be sure to use a battery hydrometer, not an anti-freeze hydrometer.

Ignition

Checking ignition timing
The spark timing may be set with a commercially available timing light. A flash occurs every time the No. 1 cylinder fires, illuminating the timing marks at the crankshaft pulley. The engine should be run at the rpm specified in "General Data" and the knurled nut adjusted until the setting corresponds to that listed in "General Data" for the engine type you are working with.