Scimitar GT 3 litre Owner's Handbook

A copy of the Owner's Handbook is provided with each car. Additional copies are available from the Service Department of your Reliant dealer.

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OWNER'S HANDBOOK



The Scimitar 3-litre, a high-performance car of distinction has been designed, styled and engineered to meet the most exacting requirements in performance, appointment and comfort.

Powered by an advanced design "Vee" engine, providing maximum flexibility and ensuring a smooth and powerful performance, the Scimitar is a car for the connoisseur. As its owner, you will appreciate the importance of regular routine maintenance.

This handbook gives you, very briefly, the necessary information required to keep your car in first class mechanical condition.

Regular Servicing is of the utmost importance, and you will have received with your car, a booklet "The Key to Service". In it, you will find a series of Service Vouchers, the first of which, when signed by your Reliant Dealer, will entitle you to a Free Service after completing 500 miles (800 Km). Details of further services, essential for the long serviceability and safety of your Scimitar, and the vehicle warranties, are also included in your "Key to Service".

The routine maintenance described in this handbook can be carried out by the owner.

However, it must be remembered that where major repairs or long-term maintenance is concerned, your Authorised Dealer has special facilities not usually available to the private owner. You are strongly recommended to make the fullest use of these facilities.

FOREWORD

All Scimitar distributors and dealers are under agreement to provide a full after-sales service at 500 miles. This service is always available near to hand, even though the dealer from whom you obtained your Scimitar is some distance away. Arrangements can always be made to have your free service carried out by a dealer, preferably a Reliant Dealer, nearby. Send his name and address to the dealer who supplied your car, and he will make all the arrangements for you.

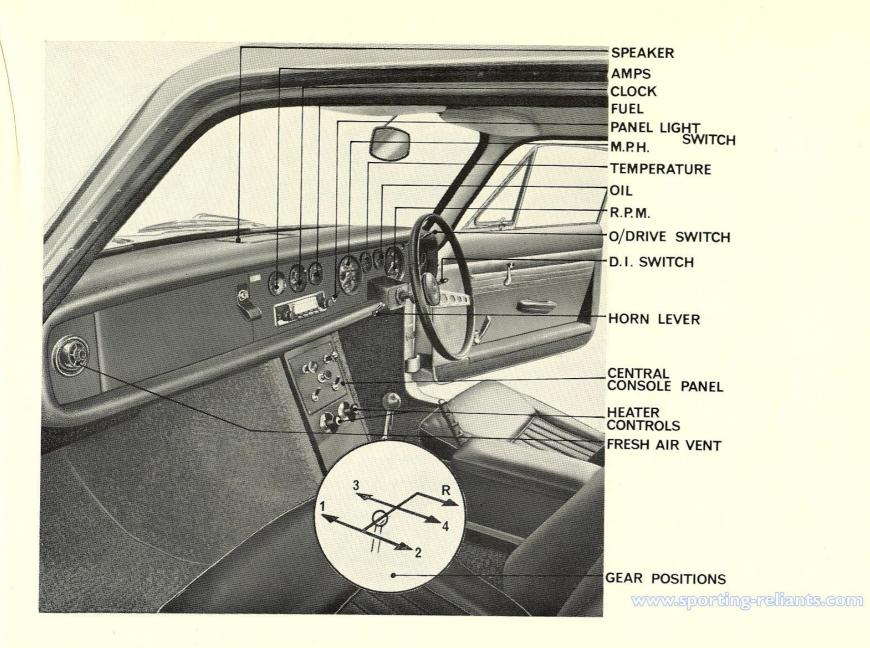
Whenever it is necessary to communicate either with the Reliant Motor Company Limited, or your dealer, please remember to always quote the chassis and engine number. You will find these on a metal plate located under the bonnet lid.

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Introducing your SCIMITAR GT 3 litre

You should first familiarise yourself with the functions of the instruments and controls. To ensure safety and driving confidence, learn to handle them and interpret their readings quickly and easily.

The instruments are described from right to left, as viewed from the driving seat.



INSTRUMENTS

Revolution Counter

The revolution counter is a 6,000 r.p.m. tachometer, situated at the extreme right of the instrument panel.

Main Beam Warning Light

This is a blue light, located in the right hand lower segment of the tachometer. It is illuminated when the headlight main (high) beams are on.

Right-hand direction indicator warning light

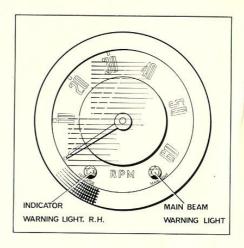
Indicates, by showing a flashing green light, that the right hand direction indicator is operating. Located in the left hand lower segment of the tachometer.

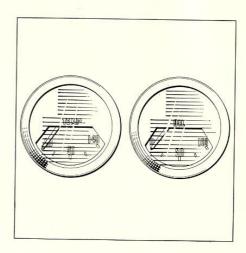
Oil Pressure Gauge

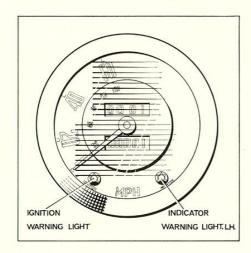
Indicates that oil is circulating the engine under the correct pressure. When starting from cold, the gauge may show a pressure rise to 60 lb. per sq. in., but will gradually fall to about 50 lb. per sq. in. as the engine temperature rises. This is perfectly normal. If a very low indication is given, or the instrument shows no pressure at all, the engine should be switched off immediately and the oil level checked by means of the engine dip stick.

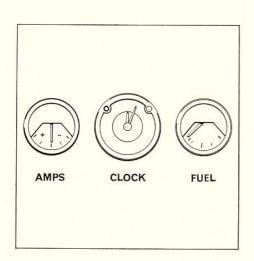
Water Temperature Gauge

Indicates the temperature of the water in the cylinder head. Normal operating temperature is 85°C.









Speedometer

The speedometer is calibrated up to 140 m.p.h. and incorporates a Kilometre scale. Also included in the meter is a total mileage indicator (odometer), and an indicator showing the mileage covered on an individual journey. The latter is re-set to zero by a knurled trip knob located below the speedometer on the underside of the instrument panel.

Left-hand direction indicator warning light

Indicates, by a flashing green light, that the left-hand direction indicator is operating.

Located in the right-hand lower segment of the speedometer.

Ignition warning Light

Located in the left-hand lower segment of the speedometer, the ignition warning light is red, and is illuminated when the ignition is switched on. It fades out when the generator is charging the battery.

Fuel Gauge

The fuel gauge operates from an instrument incorporated in the fuel tank itself and does not become operative until the ignition is either switched on, or when the ignition switch is turned to the left.

The engine should always be switched off whilst the tank is being filled, but the ignition switch can be in the left-hand position so that the fuel gauge can be read.

Clock

The electric clock operates from the car battery, and is consequently always operating. However, it will naturally stop if the battery is disconnected for any reason. In such a case, re-set the clock as soon as the battery is reconnected; simply re-set the clock by means of the button provided. It will re-start automatically on releasing the button.

Ammeter

The ammeter is graduated to indicate the rate of charge or discharge from +50 amps charging, through zero, to -50 amps discharge.

CONTROLS AND SWITCHES

Again, switches and controls are described from right to left, viewed from the driving seat.

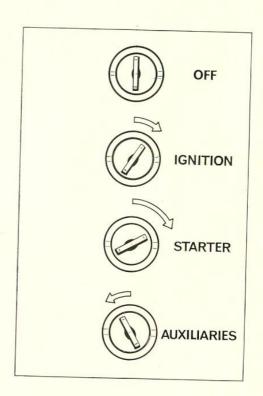
Ignition Switch

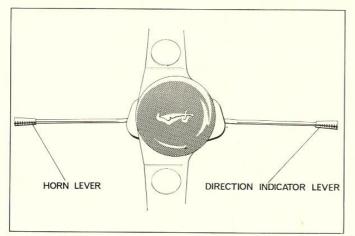
The ignition switch is at the lower right extremity of the instrument panel. It serves a triple purpose; as an on-off switch for the ignition circuit; as an engine starter switch; and as a switch for the auxiliaries.

The ignition is switched on by inserting the key and turning it to the right. Continued clockwise rotation of the key against spring pressure operates the starter circuit. Anti-clockwise rotation maintains all the auxiliaries, including the fuel and temperature gauges, flashing indicators, etc., in circuit when the engine is not running.

Overdrive Switch

The overdrive mechanism is brought into operation by a simplified arrangement necessitating only the operation of a slim lever-type switch located above the ignition switch. It provides finger tip control permitting the overdrive to be brought in or out without moving the hand from the steering wheel.





Direction Indicator Switch

The direction indicator switch is operated by means of a lever which projects from the right-hand side of the steering column cowl. Movement of the lever upwards operates the left-hand direction indicator. Movement of the lever downwards operates the right-hand direction indicator.

Indication of correct operation, as already mentioned, is given by flashing of a green light on the revolution counter or the speedometer, for right and left-hand directions respectively. The indicators are self-cancelling.

Headlamp Flasher

Headlamp flashing is effected by pulling the direction indicator lever towards you.

Horn Switch

The horn switch is operated by means of a lever, similar to the direction indicator switch, which projects from the left-hand side of the steering column cowl. Movement of this lever in any direction operates the horn.

Panel Light Switch

The instrument panel light switch controls the illumination of the instruments, when required.

Radio

The radio receiver is centrally located on the panel. The loudspeaker is mounted under the top panel of the fascia.

Glove Compartment

At the left-hand extremity of the fascia is the glove compartment, provided with its own individual key for locking.

SWITCHES AND CONTROLS ON THE CENTRAL CONSOLE

The Lights Switch

The lights switch is situated bottom right of the upper half of the console. In its top position it is *off*. In the other two positions, it operates (a) side and tail lamps, and (b) the headlamps.

Windscreen Wiper Switch

Located directly above the lights switch. The dual speed wipers are brought into operation by turning the switch to the right, two positions being provided according to which wiper speed is required.

Windscreen Washer

The windscreen washer control is the top left control on the console. A 15-second spray from twin jet washers is initiated by pulling the control knob out. The spray can be stopped by returning the knob to its initial position.

Cigar Lighter

The lighter is the central component in the upper half of the console. The element is heated by pushing the unit in. As soon as the required temperature is reached, the unit springs back automatically, and can then be lifted out of its carrier and used. After usage, return it to its carrier.

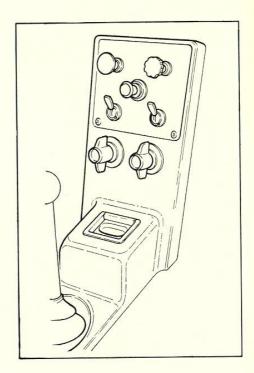
Heater Fan Switch

The heater switch is situated to the left of the light switch. It brings a booster fan into operation in the heater system. Similarly, it can be used for boosting cool air.

Heater Control

The heater and ventilation controls are located side by side at the bottom of the panel.

To regulate the heating to your requirements turn the heater control clockwise to increase heat.



Ventilation Control

The ventilation control is mounted to the left of the heater control and is similar in appearance.

The heater apertures are located one either side of the central console.

Fresh Air Vents

At the two extremities of the fascia are two fully rotatable and adjustable fresh air nozzles.

Choke

Your car is fitted with an automatic choke. Before starting the engine, first press the accelerator pedal right down. Next remove your foot from the pedal. Then start the engine. The engine will then receive the rich mixture it requires for starting from cold. After the car has been driven a short distance, the engine will warm sufficiently for the mixture to be returned to normal. This adjustment is completely automatic and is taken care of by the choke mechanism.

All the foot-operated controls are situated conventionally.

FOOT OPERATED CONTROLS

The throttle pedal is located to the right of the brake pedal.

Throttle Pedal

Brake Pedal

The footbrake is operated by a pendant pedal actuating a hydraulic system to initiate operation of $10\frac{5}{8}$ in. disc brakes on the front wheels and 9 in. diameter drum brakes on the rear wheels. The pedal is fully adjustable at the brake master cylinder and at the pad stem.

Clutch Pedal

The clutch pedal is also of the fully adjustable pendant type, operating an $8\frac{1}{2}$ in. dry plate clutch, hydraulically.

Dip Switch

The dip switch is located immediately to the left of the clutch pedal. Press once to dip the main beam. Pressing the switch a second time restores the beam to its normal position.

HAND CONTROLS

Handbrake

The handbrake lever, conveniently placed to the driver's left hand, is of the fly-off type. It operates on the rear brakes only. To apply the handbrake pull it on, without pressing the knob situated at the top of the lever. To lock the lever when applied, press the knob. To release the hand-brake, simply give it a flick towards you and let go, when it will release automatically.

When the handbrake is used for parking, always leave the car in gear as a safety precaution. It is always possible that some external source of vibration might cause sufficient movement for the brake to fly-off inadvertently.

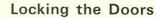
Gearchange

Gearchange is effected by a short lever operating through a remote control mechanism, to a four speed synchromesh gearbox. The gear lever positions are shown in the diagram. Always ensure that the gear lever is in neutral, before starting the engine.

Never attempt to engage reverse gear unless the car is stationary.

The doors are wide-opening, with wind-up windows. The usual CONTROLS ON window winding handle and door pull handle are fitted.

DOOR AND BODY



Zero-torque locks are provided. There is therefore no need to slam the doors in order to ensure that they are locked.

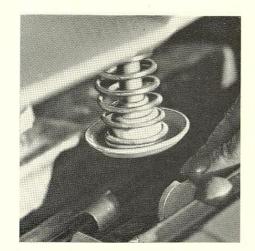
The driver's door is locked from the out-side, by means of a tumbler lock, and is unlocked by means of the same key as that used for the ignition switch.

The passenger's door is locked from the inside. To lock it, push the door-opening lever forward; i.e. beyond its normal "closed" position.

Bonnet Release

The bonnet is released by pulling a T-shaped handgrip which is situated immediately under the fascia, to the right of the steering column. Operation of this lever unlocks the bonnet, and it will rise slightly under spring pressure. The bonnet can then be opened from outside the car. First release the safety catch at the front of the bonnet. Raise the bonnet to its fully-open position. It is held in this position by a ratchet-type prop bar.

To close the bonnet, release the holding lever on the prop bar, and lower the bonnet gently until the locking devices are contacted. Hand pressure on the bonnet will then close the locks.



To Open the Boot

The boot is locked and unlocked by using the ignition key. To open the boot, push the button to release the catch. The lid will then open slightly under spring pressure, and can be lifted fully open. A telescopic strut, similar to that used on the bonnet, will keep the boot lid fully open. To shut the boot, release the prop lever, and close in the same way as the bonnet.

Seat Adjustment

Aero-type seats, upholstered in foam rubber and leather-cloth, have been designed for maximum comfort. Both the driver's and passenger's seats are adjustable in a fore and aft position, the driver's seat being so arranged as to provide a "straight arm" driving position.

To adjust your seat, move the adjuster lever located near the floor, in a lateral — or horizontal — direction. This will release the peg-and-hole locating mechanism. Slide the seat to the position that suits you best, and release the lever.

The backrest of both front seats swivels fully forward, to provide ease of access to the rear seat. A knurled adjuster is provided at the base of each backrest to adjust the backrest angle.



DRIVING YOUR SCIMITAR

Before Starting

The careful driver will daily check the radiator water and engine oil levels, topping up if necessary. The tyre pressures and battery electrolyte level should also be checked regularly and corrected if necessary.

Before starting the engine make sure that the gear lever is in the neutral position and that the hand-brake is applied.

Starting The Engine

As stated earlier, your car is equipped with an automatic choke. Before starting the engine, first press the accelerator pedal right down. Next remove your foot from the pedal. Then start the engine by turning the ignition key fully clockwise, but release as soon as the engine fires.

Once this simple operation has been carried out, the engine will receive the rich mixture it requires for starting from cold. After the car has been driven a short distance the engine will warm sufficiently for the mixture to return to normal. This adjustment is automatically taken care of by the choke mechanism.

If any difficulty is experienced in starting a hot engine, the starter can be operated with the accelerator depressed. Release the accelerator as soon as the engine fires. However, the procedure mentioned above should always be used for starting from cold.

Do not race a cold engine. In order to reach normal running temperature quickly, you should drive away steadily as soon as the engine has been started.

Driving

The gear-change positions, are shown on page 7. When starting from rest, depress the clutch pedal fully and move the gear into first gear. Gradually release the clutch pedal, at the same time gently pressing the accelerator and releasing the handbrake. The car will move smoothly away. Never use force on the gear lever, even if the gear will not engage easily. Instead, return the lever to neutral, momentarily release the clutch pedal and depress it again, then it should be possible to engage the gear.

As the car gains speed, change up through the gears. If conditions are such that the engine labours or the car loses speed, change down. It is good practice to select a lower gear when descending a steep hill.

The gearbox has synchromesh on all forward gears. It is not necessary to double declutch when changing up or down. Remember that before selecting reverse gear it is necessary to stop the car. When you stop, depress the clutch before the car finally halts; apply the handbrake, move the gear lever to neutral and then release the clutch.

Driving Overdrive

The overdrive is operative on 3rd and top gear only, and with the overdrive engaged the gear change procedure is the same as that for the conventional drive.

To engage overdrive push the switch lever on the facia down (see also page 7).

Minimum engagement speeds are dependent on road conditions and it is essential that the car continues to run easily without sign of engine labouring.

Maximum disengagement speeds:—

Top gear 90 m.p.h. (145 k.p.h.)

Third gear 65 m.p.h. (105 k.p.h.)

Disengagement of the overdrive at speeds higher than those stated above could cause damage from "over-revving".

Running-in is largely a matter of common sense. The aim should be to avoid imposing undue stresses on the engine and transmission during the early stages of use.

RUNNING-IN

Therefore, you should avoid fast starts for the first 500 miles (800 km), although speeds not in excess of 50 m.p.h. (80 k.p.h.) in top gear, 35 m.p.h. (56 k.p.h.) in third gear, 20 m.p.h. (32 k.p.h.) in second gear, and 10 m.p.h. (16 k.p.h.) in first gear, subject to legal speed limits, will assist in running-in. However, avoid maintaining the same engine or road speed for long periods. Vary your speed as much as practicable and release the accelerator now and again.

Do not allow the engine to labour, particularly when driving up steep hills; change down in good time, but bear in mind that changing down too soon can result in undesirably high engine speeds.

After the first 500 miles (800 km) your Reliant Dealer will service your car free of charge. Correct attention at this first service will do much to ensure subsequent trouble-free motoring.

Do not rest your foot on the clutch pedal unless you are changing gear. Do not coast downhill with the car in gear and the clutch depressed. Whatever the road or traffic conditions, always keep the appropriate gear engaged. When travelling downhill with the engine acting as a brake, do not switch off the ignition.

To reduce the risk of skidding on slippery surfaces, apply the brakes cautiously and progressively, but on a bend under these conditions try to avoid applying the brakes. Accelerate gently, but if the car does start to skid, steer into the direction in which the car is skidding. Use the brakes sparingly, if at all, until the car is brought back into the line of travel.

GENERAL HINTS

ROUTINE MAINTENANCE

Regular routine inspection, maintenance, lubrication, and, in general, planned servicing, of your SCIMITAR G.T. are absolutely essential to ensure trouble-free motoring and to get the best out of your car.

Much of the maintenance required is a matter of common sense, is very quickly carried out, and can be done as a matter of course by the owner. Other items of maintenance require special equipment and should be carried out by your SCIMITAR G.T. dealer, at the periods prescribed. However, neglect of even the simplest item can have serious consequences.

Of all items of servicing, lubrication plays the predominant part. Be certain to use the recommended lubricants. A chart is given on page 41.

MAINTENANCE PERIODS

These fall into well-classified categories;

- 1. Regular day-by-day attention.
- Maintenance at the first 500 miles.
- 3. Maintenance at all subsequent 5,000 mile periods.

Full details of the service Schedules are given on page 42 of this handbook.

The following notes are only intended as a brief guide to the general requirements of routine inspection, maintenance, lubrication and adjustment. Fuller details on any point can be obtained from your Reliant Dealer or direct from the Reliant Motor Company Limited.

ENGINE OIL

Ensure that the car is standing on level ground, and withdraw the engine dipstick, located on the right-hand side of the engine. Wipe it with a clean rag, replace, and again withdraw. The oil level will be shown by the mark left by the oil on the lower end of the dipstick.

There are two marks on the dipstick; FULL and DANGER. Top up with the recommended grade oil to the full mark. Note: The distance between the "Full" and "Danger" markings on the dipstick represents two pints of oil. (See lubrication chart page 41).

Under no circumstances, allow the level to become so low that it falls to the section marked DANGER. You can either carry out this operation yourself or alternatively, get into the habit of having your oil level checked whenever you stop at a service station for petrol. All reputable service stations carry out this service willingly, and stock the requisite grade of oil.

The sump capacity is $6\frac{1}{2}$ pints (3.69 litres).

RADIATOR

Remove the radiator filler cap, and top up, as necessary, to the overflow pipe. Remember to top up with anti-freeze solution as well as water, if you already have anti-freeze in the system.



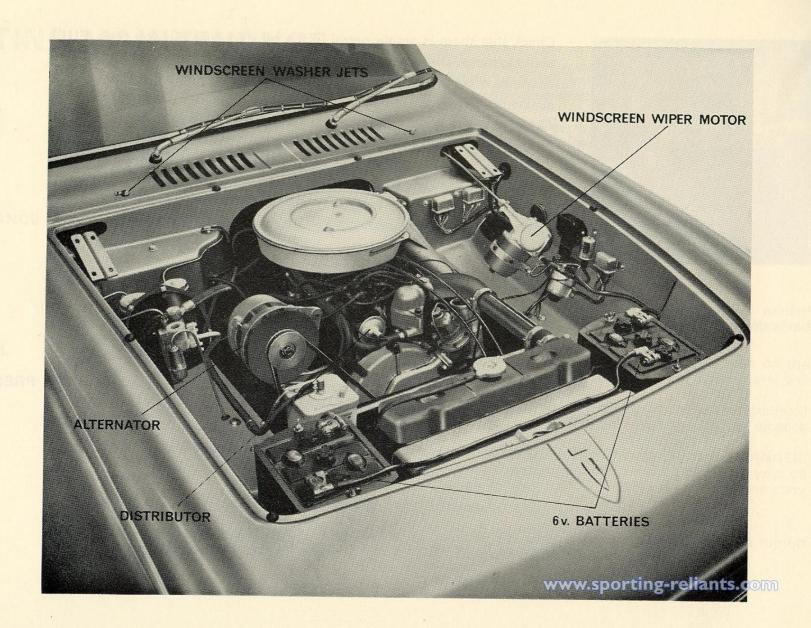
Check that there is ample petrol in the tank for any trip you are FUEL about to make. The petrol level is indicated on the fuel gauge, which becomes operative as soon as you switch on the ignition, or the auxiliaries. The petrol tank has a capacity of 21¹/₄ gallons (86 litres). The filler is situated on the left-hand side towards the rear of the body. The filler cap has a spring lock.

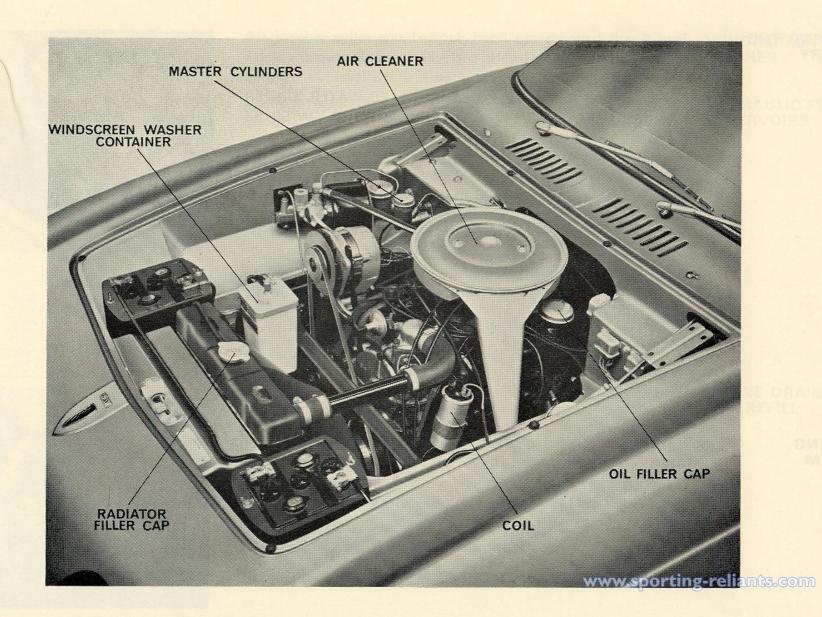
To unlock, press the button. The cap can then be lifted open. It is self locking on closure.

Always use a recommended petrol of the correct grade. Your engine is fitted with a high compression head. It is adjusted to run on a 97 octane fuel (British Premium Grade). If a lower octane fuel is used – between 88 and 95 – retard the distributor setting 4°. This is one division on the setting scale.

The pressures should be checked while the tyres are cool, otherwise TYRE PRESSURE misleading readings may be obtained. A weekly check must be considered the absolute minimum. Ensure that all valve caps are in position. Inspect tyres for any sign of damage. Clean off any oil or grease.

Recommended tyre pressures are: Front 26 lb. per sq. in. (1.82 kg. per sq. cm.) Rear 26 lb. per sq. in. (1.82 kg. per sq. cm.)





CHECKING THE BATTERY

Two 6-volt batteries are fitted, located one either side of the radiator. Check the acid level in each cell. It should cover the plates by about $\frac{1}{4}$ in. to $\frac{3}{8}$ in. (6 cm. to 9 cm.). If the level has dropped below this, top each cell up. USE DISTILLED WATER. UNDER NO CIRCUMSTANCES SHOULD ORDINARY TAP WATER BE USED.

At the same time, ensure that the filler plugs, and connections are tight. The terminals should be given a light coating of petroleum jelly.

Keep the top of the batteries clean. As a precautionary measure, wipe it over periodically with a rag moistened in ammonia, in order to neutralise any acid that may have splashed on to the battery surface.

If the batteries are at any time disconnected, ensure that they are re-connected with the *negative* terminal earthed.



It is a wise precaution to check the lighting system at least once a week, or before starting on a trip. This is simply a matter of operating the appropriate controls (lighting switch; dip switch; turn indicator lever and headlamp flasher; panel light switch; stop lamps), and ensuring that all lighting components are in full working order.







Check the contents of the windscreen washer bottle, and replenish if necessary.

WINDSCREEN WASHER

Check the level of the clutch and brake hydraulic reservoirs. This is readily achieved by removing the reservoir caps. They are situated with their Master Cylinders.

HYDRAULIC FLUID RESERVOIRS

Top us as necessary, bringing the level to the point indicated on the reservoir casing.

IMPORTANT: TOP UP RESERVOIRS ONLY WITH CASTROL GIRLING BRAKE FLUID (AMBER) when necessary. Use no other fluid otherwise seals may be damaged and cause brake failure.

Before removal of the cap on either reservoir, wipe both the reservoirs themselves and the caps with a clean dry cloth, to ensure that no dirt enters the system. IT IS ESSENTIAL TO ENSURE THAT THE HYDRAULIC FLUID IS UN-CONTAMINATED BY DIRT OR THROUGH ANY OTHER CAUSE.

At the first 500 miles, this is covered by the special "After-Sales Service" already mentioned. It is preferable to drain the engine when the oil is hot. To drain remove the drain plug situated at the bottom of the sump, and allow the oil to run into a suitable drain pan.

Make certain that drainage is fully completed. Then, using an approved grade of oil, first replace the drain plug and then refill through the oil filler mounted on the valve rocker cover until the level reaches the FULL mark on the dipstick.

ENGINE DRAIN AND REFILL

GEARBOX OIL LEVEL

Remove filler and level plug and top up the oil level (500 miles).

Drain and refill the gearbox, using the recommended lubricant only.

Ensure that the vehicle is standing on level ground and, preferably, carry out the oil change while the oil is hot, in order to ensure maximum drainage.

Remove the gearbox drain plug and the combined filler/level plug. Ensure that complete drainage has been achieved. Replace drain plug, and refill to the correct level. Replace the combined filler/level plug.

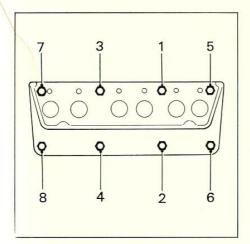
REAR AXLE

To drain, the plug is removed, together with the combined level and filler plug. To refill, the drain plug is replaced, and the axle is replenished through the level filler plug.

Checking the oil level and topping up is readily affected by means of the combined filler/level plug.

STEERING UNIT

All steering connections are checked under the "After-Sales" servicing arrangement. The steering unit is of the rack and pinion type, friction damped. The steering wheel is of two-spoke design, steel-rimmed, rubber and leather covered, 15 in. (381 mm) diameter. Three turns achieve full lock.



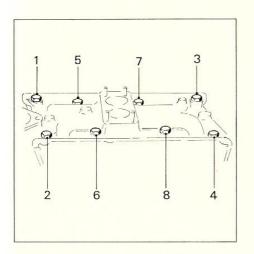
Cylinder head bolts, are examined and tightened under the CYLINDER HEAD "After-Sales" arrangement.

If it is necessary for you to tighten the cylinder head bolts yourself, ensure that the operation is carried out in the sequence shown in the accompanying illustration. It is important, also, to avoid over-tightening. Employ a torque wrench. Tighten bolts in the following stages in the sequence shown.

45 to 55 lb. ft. (6.22 - 7.60 kgm.)55 to 65 lb. ft. (7.60 - 8.98 kgm.)65 to 70 lb. ft. (8.98 – 9.67 kgm.)

Re-tighten all nuts to 65 - 70 lb. ft. (8.98 - 9.67 kgm.) when the engine is at running temperature.

The cylinder head bolts should be undone in the reverse order to that shown for assembly.



The inlet manifold is an aluminium casting mounted on the cylinder heads between the Vee and thus forms a cover for the tappet chamber.

The gasket is of a composition type material with cork inserts at each end to form an oil-tight joint between the manifold and the front and rear walls of the cylinder block tappet chamber. When fitting the manifold tighten the bolts progressively in the sequence shown as follows:-

- (1) 3 to 6 lb. ft. (0.41 to 0.83 kgm.) torque
- (2) 6 to 11 lb. ft. (0.83 to 1.52 kgm.) torque
- (3) 13 to 16 lb. ft. (1.80 to 2.21 kgm.) torque

Re-tighten all bolts to 13 to 16 lb. ft. (1.80 to 2.21 kgm.) torque when the engine is at the normal operating temperature after first re-tightening the cylinder head bolts.

BOLTS

MANIFOLD BOLTS

EXHAUSTMANIFOLDS

A cast iron exhaust manifold is used for each bank of cylinders and is bolted to the cylinder head, on the outside of the "Vee". Each manifold has separate ports for each cylinder and incorporates a flange for attaching the exhaust pipe.

The manifolds are fitted with asbestos gaskets, which are reinforced with perforated steel, and are retained by bolts fitted plain washers.

VALVE CLEARANCE

Check clearances when the engine is hot. The specified clearance is:—

Exhaust 0.018 in. (0.0467 mm) Inlet 0.010 in. (0.254 mm).

To adjust, turn rocker retaining nut in a clockwise direction to reduce and anti-clockwise to increase clearance.

Adjust valves in the following order and ensure that the correct clearance is used in relation to exhaust and inlet valves.

Valves Open	Valves to Adjust
1 and 6	7 (in) and 10 (ex)
8 and 11	4 (in) and 5 (ex)
2 and 3	9 (in) and 12 (ex)
7 and 10	6 (in) and 1 (ex)
4 and 5	11 (in) and 8 (ex)
9 and 12	2 (in) and 3 (ex)

DISTRIBUTOR ADJUSTMENT

Distributor adjustment

The Distributor incorporates automatic timing control and operates from a 12-volt ignition coil. The ignition timing is checked and re-set if necessary; the sparking plugs are examined and adjusted if necessary, and the distributor contact breaker points are examined and, if required, re-set; all within the "After-Sales Service" schedule.



To adjust the distributor contact points. The gap should be adjusted within a range of 0.014 in. and 0.016 in. (0.356 and 0.406 mm).

The setting should be such that, when the fibre heel of the moving contact is on the highest point of the cam, there is a gap within the range given above. This is affected by slackening the locking screw on the fixed contact and moving it until the correct gap is obtained, using a feeler gauge. Tighten the locking screw securely.

Re-check the gap to ensure that it has not been varied during locking. Re-adjust if necessary

Remove the distributor cap by releasing the clips. Apply one or two drops of engine oil to the cam retaining screw, around its edges. Smear a thin film of petroleum jelly to the contact breaker cam. Lubricate the contact breaker pivot post with a smear of engine oil, but ensure that the contact breaker points are not contaminated. Apply a few drops of engine oil through the aperture in the contact breaker plate to lubricate the governor weights.

DISTRIBUTOR -LUBRICATION

Clean the contact breaker points, using a fine carborundum stone. Do not use emery paper or fine files. It is recommended that the points should be removed from the distributor for this purpose. To remove the contact breaker points, slacken off the nut on the terminal post and lift off the spring. Ensure that no insulation parts are mislaid during removal. Remove the two screws securing the second half of the contact breaker points to the baseplate.

DISTRIBUTOR - CONTACT BREAKER POINTS

After cleaning, refit to the specified gap, as already described in the section dealing with 500-mile servicing.

If pitting is too bad to be removed, fit new contacts.

Give the ignition coil, distributor cap, and high tension leads a thorough cleaning. Make certain that all wiring connections are clean and tight.

Refit the rotor arm, and, after ensuring that the distributor is clean and the central carbon brush is free in its housing, refit the cap and secure it to the distributor.

BRAKE ADJUSTMENT

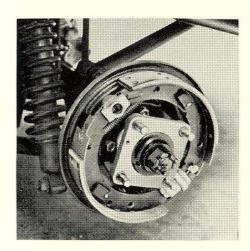
Servicing at the 500 mile "After Sales" check includes a functional examination of the braking system, adjustment of brakes; and bleeding the hydraulic system if necessary.

No servicing is required for the front disc brakes.

To adjust the rear drum brakes. Chock the front wheels and jack up the rear wheels. With the handbrake released, ensure that the brake drums are cold. Turn the square-headed adjuster at the rear of the back plate in a clockwise direction, until resistance is felt. Then slacken the adjuster until the wheel rotates freely. Two clicks are normally sufficient. Spin the wheel as rapidly as possible and apply the brakes hard, in order to centralise the shoes in the drum.

Carry out this operation on both rear wheels.

For detailed instructions on bleeding the hydraulic system, see page 34.



Testing the clutch pedal free movement, and the carrying out of any adjustment necessary, are also included in the "After-Sales" schedule for the 500 mile period.

CLUTCH PEDAL ADJUSTMENTS

When the clutch mechanism is correctly adjusted, there should be just perceptible clearance between the pedal push rod and the master cylinder piston; clearance of $\frac{1}{16}$ in. (1.6 mm) between the clutch release arm and the operating cylinder push rod; and the pedal should return to its stop without any sign of hesitation. All adjustments can be quickly checked at the clutch pedal. Very slight movement of the pendant-type pedal should be sufficient to take up the initial clearance between push rod and master cylinder piston.

There should be approximately $\frac{1}{2}$ to $\frac{3}{4}$ in. free travel before the clutch begins to be released.

To adjust, disconnect the release arm spring; slacken the operating rod locknut; and turn the domed adjusting nut. Turning in a clockwise direction increases the free movement; turning anti-clockwise reduces it. Ensure that the locknut is fully tightened, and re-engage the return spring.

With engine at normal operating temperature, screw in slow running adjusting screw, to obtain fast idle. Unscrew volume control screw until engine "hunts". Screw in until engine runs evenly. Adjust slow running screw if necessary. Repeat operation until engine runs satisfactorily.

ADJUSTMENT OF CARBURETTOR SLOW RUNNING

The sparking plugs (Autolite AG 22) should be set to a gap within a range of 0.023 to 0.028 in. (0.548 mm to 0.711 mm). (Replace at 10,000 miles).

SPARKING PLUGS

FRONT WHEEL TRACKING

The toe-in of the front wheels should be checked at the same time as the car is in for "After Sales" servicing, since specialised equipment is necessary in order to carry out this operation accurately. Your SCIMITAR G.T. toe-in adjustment should be from zero to $\frac{1}{16}$ in. (1.6 mm).

ENGINE OIL FILTER

The oil filter is a replaceable unit; to fit new filter remove sump drain plug, allow oil to drain and replace plug. Unscrew filter in an anti-clockwise direction.

Screw in new unit, ensuring correct location of rubber sealing ring. Refill engine to correct level with new oil of the grades specified on page 41.

FAN BELT TENSION

Free movement of $\frac{1}{2}$ in. (1·3 cm) measured midway between alternator and fan pulleys. If required, adjust by slackening the front lower mounting bolts and the front adjusting bolt. Move the unit to give the correct amount of tension and re-tighten the bolts.

AIR CLEANER

Remove the top cover, withdraw the element, shake out and replace. Refit top cover. Renew at first 21,000 miles (35,000 km.) and every subsequent 18,000 miles (30,000 km.)

FUEL PUMP SEDIMENT BOWL AND FILTER

Unscrew clamp nut on top of pump, detach glass bowl and clean sediment from pump body and screen using petrol. Check gasket. Replace filter, screen and glass bowl. Tighten clamp nut.

The alternator is belt driven from the crankshaft pulley. The mechanical construction of the alternator differs from a generator in that the field rotates (the rotor), and the generating windings are stationary (the stator).

ALTERNATOR

Wipe away any dirt or oil which may collect around the slip ring end cover ventilating apertures.

The bearings are packed with grease during assembly and do not require attention.

Check the condition of the rear brake linings. First remove the road wheels and the wire wheel adapters. The adapters are removed by unscrewing four adapter retaining nuts. When refitting the adapters, the nuts must be tightened to 90 lb. ft. (13·39 kgm.) torque.

BRAKES

Then remove the rear brake drums and check the condition of the linings.

At the same time as the rear brake linings are being checked, examine the brake hydraulic cylinders. If there are any visible signs whatever of leakage past the seals, contact your authorised dealer immediately. The seals will probably require renewing.

BRAKES -HYDRAULIC FLUID CYLINDERS

Refit the brake drums. Check the movement of the brake pedal.

RE-ADJUSTMENT OF REAR BRAKES

Adjustment of the rear brakes automatically affects the handbrake.

HANDBRAKE ADJUSTMENT

To take up superfluous movement, jack up both rear wheels and lock the shoes by means of the handbrake adjusters provided, with the handbrake in the OFF position. Adjust the cable length by means of the cable adjuster until all slack is taken out of the linkage. Release the adjusters until the wheels turn freely. Check the handbrake to ensure that it is now in required adjustment.

The handbrake operates mechanically and is quite independent of the hydraulic system. It is applied by means of a cable and compensating linkage mounted on the rear axle casing. It operates the rear brakes through levers incorporated in the back plates.

FRONT BRAKES

The $10\frac{5}{8}$ in. disc brakes fitted to the front wheels, require no manual adjustment, since they are automatically self-adjusting. However, the brake pads should be inspected at this stage in order to determine the amount of lining wear.

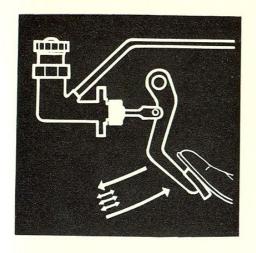
To examine the brake pads, remove the road wheel and measure the distance between the contact face of the disc and the adjacent face of the brake pad support plate to which the lining material is attached.

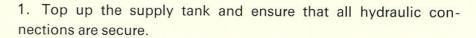
Ask your authorised dealer to renew the pad if measurement of the pad lining shows that the thickness of the linings has been reduced to no less than $\frac{1}{8}$ in. (3·18 mm). Mintex M69 pads should be specified when replacement is necessary.

BLEEDING THE HYDRAULIC SYSTEM

Bleeding — elimination of air from the hydraulic system — should only be necessary when any part of the system assembly has been disconnected or damaged; or if the fluid level in the reservoir has fallen so low that air has been introduced into the master cylinder.

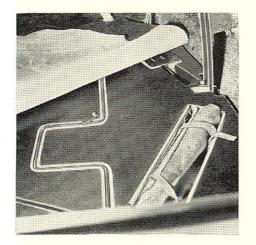
The procedure can be carried out readily by your SCIMITAR G.T. dealer. If you carry out the operation yourself, an assistant will be needed.





- 2. Fit a bleed tube over the left-hand rear wheel cylinder bleed valve with the free end of the tube immersed in a clean glass jar containing clean CASTROL GIRLING BRAKE FLUID (AMBER).
- 3. Unscrew the bleed valve about three quarters of a turn. Your assistant should now operate the brake pedal. The operation of the brake pedal is important. The pedal should be pushed down hard through the full stroke, followed by three short rapid strokes and then the pedal should be allowed to return quickly to its stop with the foot right off.

This action should be repeated until the air is dispelled at each bleed screw. Always remove the floor mat or any other object which may obstruct the full stroke of the pedal.



The tool kit, including the jack and jack handle, are contained in the boot, under the boot floor covering. Lift the floor covering. Remove the jack and handle and assemble. A wheel brace is also included in the kit. To gain access to the spare wheel, lift and remove the tool kit holder complete from the floor of the boot.

Before changing a wheel, ensure that the car is on level ground and that the handbrake is applied. WHEEL CHANGING

COOLING SYSTEM

The cooling system incorporates a pressurised radiator, belt-driven four blade fan, and water pump with thermostatic heat control. The use of the pressurisation allows the engine to operate at slightly higher temperatures without boiling. Remember this when you remove the radiator cap. Turn it slowly; or if the system is very hot, allow it to cool first, otherwise you may get scalded.

Frost precautions. Protect the system by using the approved anti-freeze mixture. Ethyleneglycol or glycerine are satisfactory and are readily available from your authorised dealer. Ensure that they are mixed in the recommended proportion. Bluecol is recommended by the Manufacturer.

Test the solution periodically, or ask your authorised dealer to do so. Top up the system as necessary, being careful to use the solution in the correct proportion.

UNDER NO CIRCUMSTANCES USE A SALT SOLUTION AS AN ANTI-FREEZE MEDIUM.

Anti-freeze solution gives rise to greater danger of seepage through inadequate joints. After anti-freeze has been added therefore, it is always a wise precaution to re-examine the hoses, clamps, and cylinder head, for any signs of leakage.

ELECTRICAL SYSTEM

Fuses.

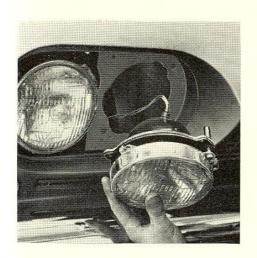
To change fuse, lift off cover and replace blown fuse. If a fuse blows repeatedly, a circuit fault is indicated. If you cannot trace the source, consult your dealer.

Alternator. The only attention the alternator is likely to require is the occasional changing of the brushgear commutator.

Dirty commutators can be cleaned by holding a petrol-moistened cloth (ensure that it is non-fluffy) lightly against the armature, while the latter is rotated.

A badly scored commutator will require the attention of your dealer.

Brushes that are too worn down to allow the spring pressure to hold them firmly against the commutator should be replaced.



Headlamps

These are of the sealed beam type. If a unit fails, the whole unit must be replaced. To remove the lamp cowling, remove the two retaining screws from the cover in the front wheel arch and lift off. Two wing nuts can then be unscrewed from the rear of the lamp cowling, which can then be removed from the vehicle. To remove the sealed beam unit, undo the three securing screws and turn the unit so that it can be drawn away.

Sidelamps and flashing indicators

Rim and glass are retained by two screws. To replace either bulb, remove the cover by undoing the two screws. The side lamp bulb can then be removed and replaced in the conventional way. To replace flasher bulb, first lift off covering bowl which is simply held in position by spring clips.

Rear Lamps

The indicator lamps, stop/tail lamps, and reversing lamps, are all in similar type fittings, each secured by two screws. To gain access to any of the bulbs, undo the two screws and remove the glass. The stop/tail lamp is a double filament type. All others are single filament lamps. Separate reflectors are fitted.

Headlamp Adjustment for Focus

This should be carried out by your dealer.

BULB TYPES AND RATINGS	Function	Bulb Rating and Type	Lucas No.	Indicator Lamps	Bulb Rating and Type	Lucas No.
	Headlamp Inner No. 1A (2 off)	Sealed Beam Unit 5¾'' dia. Single Filament type 1A 12·8v 37·5w		Main Beam 1 Direction Indicator 2	M.E.S. 12v 2·2w (Minature Edison Screw)	
	Headlamp Outer No. 2A (2 off)	Sealed Beam Unit 5¾" dia. Double Filament type 2A 12·8v 37·5/50w		Ignition Warning 1		987
	Direction Indicator (4 off) Stop/Tail (2 off)	12v 21w SCC (Single centre contact) 12v 21/6w Index Pin SBC	382 380	Panel Lights Tachometer 1 Speedometer 1		
	Side Lamp	12v 6w Miniature Centre Contact (MCC)	989	Ammeter 1 Fuel Gauge 1	M.E.S. 12v 2·2w	987
	Reversing Lights (2 off)	12v 6w SBC Double Contact Small Bayonet Cap.	209	Water Temperature Gauge 1		
	Bonnet/Boot Light	12v 6w MCC Miniature Centre Contact.	989	Oil Pressure Gauge 1		
	Interior Light (1 off)	Festoon 12v 6w (38 x 12 mm)	254	Clock 1	12v 2w Peanut	281

The body fitted to the SCIMITAR G.T. is manufactured from glass fibre. This is a completely inert material impervious to weather conditions and highly resistant to impact damage. Severe impact will not dent the material, it will crack or shatter, still retaining its original form.

CARE OF BODYWORK

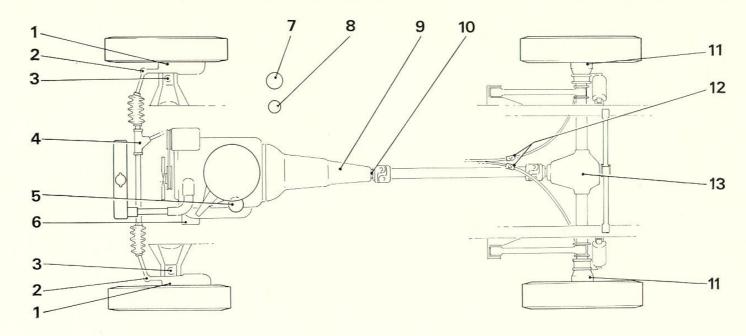
Repairs can be carried out quite easily, and require no skilled labour such as panel beating.

Cleaning is carried out in the normal manner with water, sponge, and chamois leather, finishing off with an approved polish.

The chrome parts should be kept free from rust. During winter months take care that the salt or calcium chloride solutions used to treat icy roads are removed from the chrome as quickly as possible. A chrome cleaner can be used periodically, but this must be a recommended preparation which is non-abrasive.

Minor repairs to the bodywork can be carried out quite simply. Repair kits for such work are available either from your SCIMITAR G.T. dealer or the manufacturers. The kit comprises a small sheet of glass fibre mat, a small tin of resin, and a small bottle of catalyst which acts as a hardening agent for mixing with the resin.

LUBRICATION POINTS DIAGRAM



1.	Front hub	Кераск	
2.	Track Rod Ends	Grease	
3.	Upper Wishbones Lower Trunnions Lower Wishbones	Grease	
4.	Steering Rack & Pinion	Grease	
5.	Engine Oil Filler Cap	Oil	
6.	Engine Oil Filter	Renew	

7. Brake Master Cylinder

8. Clutch " "

9. Gearbox Oil

10. Propshaft splines Grease

11. Rear bearing Repack

12. Handbrake cables & linkage Grease

13. Rear axle Oil

APPROVED LUBRICANTS

(Summer and Winter)

Engine	Gearbox	Rear Axle
Castrolite	Castrol Hypoy Light	Castrol Hypoy
Duckham's Q5500 or Duckham's No.I Twenty	Duckham's No.I EP 80	Duckham's Hypoid 90
Esso Extra Motor Oil	Esso Gear Oil GP 80	Esso Gear Oil GP 90/140
Mobiloil Special or Mobil Arctic	Mobilube GX 80	Mobilube GX 90
Fina Multigrade Motor Oil 10W/30 or Fina 20/30 Motor Oil	Fina Pontonic MP SAE 80	Fina Pontonic MP SAE 90
Regent Advanced Havoline Special 10W/30 or Regent Advanced Havoline 20W	Regent Universal Thuban 80	Regent Universal Thuban 90
Shell Super Motor Oil or Shell X-100 20W	Shell Spirax 80 EP	Shell Spirax 90 EP
BP Visco-Static or BP Energol SAE 20W	BP Gear Oil SAE 80 EP	BP Gear Oil SAE 90 EP
Super Permalube or Permalube 20W/20	American Multi-Purpose Gear Lubricant SAE 80	American Multi-Purpose Gear Lubricant SAE 90

SCIMITAR GT 3-litre SERVICE SCHEDULE

Daily and Weekly attention

Check engine oil level — Daily
Check radiator contents level — Daily
Check level of electrolyte in batteries — Weekly
Check fluid levels of brake and clutch master cylinders — Weekly
Check tyre pressures — Weekly

500 miles Free Service

Top-up engine oil Top-up gearbox oil Top-up rear axle oil

Lubricate throttle linkage, handbrake linkage, door and boot locks, and bonnet safety catch

Top-up electrolyte in batteries

Top-up radiator

Top-up windscreen washer container

Top-up clutch and brake fluid master cylinders

Tighten cylinder head, sump and manifold bolts to correct torques

Check and adjust valve clearances

Check and adjust fan belt

Examine and adjust distributor points

Clean sediment from fuel filter

Check brakes

Check and adjust front wheel bearing

Check security of wheels and tyre pressures

Check front wheel toe-in and rear wheel to front wheel alignment

Check door operation and adjust striker posts if necessary

Check operation of controls, instruments, lights, horn and windscreen wiper, etc.

Check battery connections

Road test and adjust carburettor and ignition if necessary

1,000 Miles Service

Top-up engine, gearbox and rear axle oil levels

Oil or grease all lubrication points

Check brake pedal free travel and adjust brakes if necessary

Check brake pipes

Check and top-up clutch and brakes master cylinders

Check and top-up batteries, radiator and windscreen washer container

Check headlamp alignment

Adjust tyre pressures and check security of wheels

5,000 Miles Service

Top-up engine oil

Top-up gearbox oil

Top-up rear axle oil

Lubricate throttle linkage, handbrake linkage, door and boot locks, and bonnet safety catch

Top-up electrolyte in batteries

Top-up radiator

Top-up windscreen washer container

Top-up clutch and brake fluid master cylinders

Tighten cylinder head, sump and manifold bolts to correct torques

Check and adjust valve clearances

Check and adjust fan belt

Examine and adjust distributor points

Clean sediment from fuel filter

Check brakes

Check and adjust front wheel bearing

Check security of wheels and tyre pressures

Check front wheel toe-in and rear wheel to front wheel alignment

Check door operation and adjust striker posts if necessary

Check operation of controls, instruments, lights, horn and windscreen wiper, etc.

Check battery connections

Road test and adjust carburettor and ignition if necessary

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GENERAL DATA and SPECIFICATION

Power Unit V6, 3 Litre.

Maximum Speed 125 m.p.h. plus.

Seating Capacity Three adults or two adults and two children.

Coachwork Two-door all glass fibre body.

Exterior Colours available Golden Sands. Silver Streak, Manhattan Blue, Exeter Green, Down White.

Engine V6 overhead valve, water cooled. Bore 93.66 mm. Stroke 72.41 mm. $(3.69 \times 2.85 \text{ in.}).$

Cubic capacity 2994 c.c. (182.7 cu. in.). Maximum b.h.p. 144 at 4750 r.p.m. Maximum torque 192.5 lbs/ft. at 3000 r.p.m. Compression ratio 8.9:1.

Fuel System Weber twin choke carburettor. A.C. Mechanical fuel pump. Paper element air cleaner. Fuel tank capacity 21¹/₄ gallons.

Lubrication System Full pressure feed, wet sump. Full-flow external oil filter with replaceable element. Capacity of system 9.5 Imperial pints.

Ignition System 12 volt coil and distributor with automatic control.

Cooling System Pressurised radiator, crankshaft mounted fan and water pump with thermostatic heat control. Capacity 22 pints.

Clutch Single dry plate 9 in. dia. diaphragm spring type. Hydraulically operated by pendant pedal.

Gearbox Four speed synchromesh with overdrive. Ratios—first 3.16:1; second 2.21:1; third 1.41:1; fourth 1.00:1; reverse 3.33:1. Remote control gear lever centrally mounted on shaft tunnel. Optional overdrive unit ratio 0.82:1.

Propeller Shaft Open, with needle roller bearing universal joints.

Rear Axle Hypoid, semi-floating. Ratio 3.58:1. Alternative ratios available.

Steering Rack and pinion, 3 turns lock to lock, friction damped. Two-spoke 15 in. dia. leather-covered steering wheel.

Suspension Front: independent through wishbone and coil spring and damper units and anti roll bar. Rear: coil spring and damper units to axle located by trailing arms and, laterally, by Watts linkage.

Road Wheels Pressed steel disc 5½ J x 15 in. wheels. Fitted with 165 x 15 Cinturato tyres.

Brakes Vacuum servo assisted four wheel hydraulic, pendant pedal operated, 10\(\frac{1}{2}\) in, dia. discs on front, 9 in. dia. 13 in. wide drums on rear. Fly-off lever type handbrake operating rear brakes through compensator.

Fascia Precision moulding, incorporating hooded glare-free instruments 140 m.p.h. speedometer with kilometer scale, trip mileage, ignition and "left flashing" indicator warning lights. 6000 r.p.m. tachometer with main beam and "right flashing" indicator warning lights.

Electric clock. Separate ammeter, oil pressure, water temperature and fuel gauges. Switches for lighting, self-cancelling flashing indicators, heater fan, dual speed windscreen wipers and windscreen washer control. Combined ignition and starter switch. Separate heater and ventilation controls. Fresh air ventilation through two large adjustable nozzles.

Electrical Two 6 volt 57 amp/hr. at 20 hr. rate capacity batteries. A.C. alternator, four headlamps (two dipping) with foot-operated dip-switch.

Side lamps combined with front flashers. Stop lamps, tail lamps, reflectors, and twin reversing lamps.

Rear number plate lamps. Twin flashing direction indicators.

Twin self-parking 2-speed windscreen wipers. Twin horns operated by lever switch. Interior light (with courtesy switch), cigar lighter.

Body All glass fibre coachbuilt Gran Turismo body. Wide-opening doors, with wind-up windows and swivel quarter lights. Fully curved, zone-toughened windscreen. Opening rear quarter lights, curved rear window. Aero type seats upholstered in foam rubber and leathercolth. Rear seat to accommodate 1 adult or 2 children.

General Dimensions Track—Front 51.5 in. Rear 50.5 in. Wheelbase 92½ in., length 168 in., width 623 in., height 501 in. Ground clearance 6 in. Turning circle 35 ft.

Optional Extras

Radio.

Sliding Roof, manual or electric. Heated Rear Window.

Safety Harness.

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