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### FOREWORD

### FOREWORD

FOREWORD

This handbook has been written for the owner of the Lotus Elan. Please read it and keep it in the car. It is not intended to give all the technical information required for servicing, and should any adjustment become necessary which is not detailed in the handbook, owners are strongly recommended to contact a Lotus dealer.

In order to comply with emission regulations, emission control servicing must be undertaken at the mileage stated in the Maintenance Schedule. Owners must ensure that all servicing occurs at the correct interval, otherwise the Warranty could be invalidated and the legal requirements of emission regulations contravened.

In line with Lotus policy of continuous product improvement, it is recommended that you keep in regular contact with your Lotus dealer, in order that he may inform you of any technical developments to improve the specification, performance or safety of your vehicle.

Lotus reserves the right to change specifications and equipment at any time without notice. The specification of some export models may differ from the text and illustrations contained within this handbook.

### Safety

The Elan has been designed to comply with all applicable safety regulations and incorporates built in safety features, which include occupant protection structural beams, bust resistant door locks and a collapsible stering column. Other features include gowelful for wheel dic as basis griving regeated high performance, high pagend stering requiring little movement to change direction, excellent road holding with very high correming ability, and rapid acceleration to permit swift and as diverativity. The divers should enrember that there is a limit, even to the super Lotus road holding, and should drive within his/hr own capabilities, particularly on write roads, or under adverse weather conditions.

### Vehicle Identification

The Vehicle Identification Number (VIN) is stamped on the right hand end of the chassis rear crossmember, viewable over the stamped on the forward facing rear flange of the cylinder block, alonguide the clutch housing jointace. Both these numbers are duplicated on printed labels faced to the body at the front of the engine both numbers are quoted in the correspondence concerning the vehicle.





### Type Approval

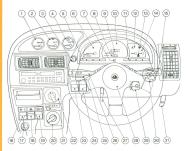
Owners should note that the use of unauthorised parts or modifications that cause the vehicle or its components to cease to comply with National Type Approval requirements could be in breach of the Road Traffic Act.

### Precautions

Owners should note that the only approved extras and conversions are those which are specified by the Factory and carried out by the Factory or by an authorised dealer. Lotus Cars Ltd. does not accept any liability whatsoever for defects which arise from extras or conversions which are not factory approved. Inexpert modifications or additions to the electrical or fuel system may leopardise safety.

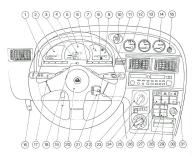
On cars fitted with an exhaust system catalytic converter to reduce the noxious content of the exhaust gases, it is essential that ONLY UNLEADED FUEL is used. The use of as little as one tankful of leaded fuel will cause irreparable contamination of the precious metal catalysts and the exhaust gas sensor used by the computer controlled engine management system.

It is important that the Maintenance Schedule at the back of the handbock is followed at the specified time and millings intervals, and that the vehicle is kept in proper operating condition. Failure to do so will result not only in a loss of fuel conomy and emission control, but also cause damage, on cars so equipped, to the catalytic converter. If an engine mail:nuction should occur, particularly involving engine mailire or other nocibael loss of performance, do not continue to operate the vehicle in that condition but have the fault diagnosed and repaired promptly. If the Check Engine Ital leal may comes on whiles driving, or skaps on after engine start should be taken to a Lots is baller without delay for restification. On cars no input while a taking converter, continued operation of the vehicle with a severe mailuration could cause the converter to overheat, with possible damage to the converter and the vehicle.



- Boost gauge (Turbo) or analogue, clock (N.A.)
- 2. Oil pressure gauge
- 3. Panel illumination rheostat
- 4. Voltmeter
- 5. Left hand tell tale bank
- 6. Tachometer
- 7. Trip reset knob
- 8. Trip distance recorder
- 9. Total distance recorder
- 10. Speedometer
- 11. Right hand tell tale bank
- 12. Water temperature gauge
- 13. Low fuel tell tale
- 14. Fuel gauge
- 15. Windscreen wash/wipe control

- 16. Air conditioning switch
- 17. Cigar lighter
- 18. Hazard warning lights switch
- 19. Rear fog lamps switch
- 20. Heater temperature control
- 21. Fan speed switch
- 22. Airflow distribution control
- 23. Switch blank
- 24. Switch blank
- 25. Digital clock (Turbo)
- 26. Beam/dip & turn indicators
- 27. Column height clamp lever
- 28. Horn button
- 29. Ignition/starter/steering lock
- 30. Main lighting switch
- 31. Bonnet release lever



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- 30. Cigar lighter
- 31. Air conditioning switch

As with any vehicle, do not park or drive the car in areas where combustible material, such as dry grass or leaves, can come into contact with a hot exhaust system. Under certain wind and weather conditions these materials could be ignited by a hot exhaust system.

DO NOT tamper with any electrical components with the battery connected. DO NOT attempt to use the lifting jack until you have read the relevant information in the handbook.

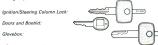
DO NOT check or adjust any underbonnet equipment with the engine running. DO NOT use the car if for any reason fuel leakage occurs, indicated by a persistent smell of fuel, until the fault has been traced and rectified.

DO NOT touch or approach, any part of a hot exhaust system or turbocharger. Some other parts of the engine, such as the EGR pipe, may also be very hot.

### ENTRY & COMFORT

### Keys

In the interests of maximum security, three different lock sets are used on the car, with the ignition switch/steering column lock using a different key to that which operates the doors and bootlid, and a third key opening the glovebox. A spare key of each type is supplied with the vehicle, and should be kept safe for use in an emergency.



The ignition key and guovebox key numbers are recorded on plastic tabs attached to the heads of the keys, and the door key number is stamped on a 'knock out' insert in the key head. Make a note of these numbers before removing them from the keys. Keep a record of the numbers with your vehicle documents, or in your diary, to enable your dealer to have replacement keys made if necessary.

### Doors

To unlock either door from outside, insert the key smooth side uppermost, into the lock, and turn clockwise (HH door) or counterclockwise (HH door) as appropriate. The central door locking will operate to unlock the opposite door. Squeeze upwards the concealed latch handlio on the rars that face of the door, and pull the door fully open. A spring catch, incorporated on the check link, is designed to hold the door in thig) open position for convenience whills tentering or exiting the vehicle. The catch should not, however, be considered secure in windy conditions, or if the vehicle is parked on a sloce. From the inside of the car, pull the door firmly shut, and lock if necessary by pressing down the lock button at the top area of the door panel. The central door a similar mamner. Unlock by railing the lock button, and pull the door release lever to open the door. Shut the door from outside by using firm hand pressure towards the rear of the door, and lock both doors either by turning the lay counterclockvise in the right hand door.

Lock the doors only when both doors are closed. If a door is locked when either door is open, the central locking system will, after a few seconds, operate to unlock the doors again and prevent the possibility of inadvertently locking the keys inside the car.

In the event of a flat battery, the central door looking will not operate, and each door must be locked or unlocked manually by using the key from the outside, or the lock button on the inside. In the event of an accident, the safety inertia switch will, in addition to switching off the fuel pump, trigger the central locking to unlock both doors.

WARNING: Keep fingers well clear when closing a door.

### Seats

On delivery of your car, first remove the protective plastic seat covers, if this has not already been done, and dispose of safely.

Both driver's and passenger's seats are fitted with integral head restraints and have adjustments for fore/aft position, and backrest angle.

Fore/aft: To adjust the fore/aft position, raise the lever at the front of the seat (inboard side), and slide to the position required. Ensure that the catch is fully engaged after adjustment by attempting to slide the seat with the catch lever released.







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Backrest Angle: Turn the large handwheel at the base of the seatback (outward side) to adjust the backrest angle as required.

WARNING: Do not attempt to adjust the seat whilst driving.

### Seat Belts

COMFORT

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ENTRY

Seet bets provide added safety and comfort for both driver and passenger. Notwithstanding any laws compaling the sector of the bets fitted give the vector at litimes, no matter how short the journey, particularly since the inertir cell seat bets fitted give the vector at litimes, not any sector of the sector of the lock automatically whenever the vehicle is titled, or its speed or direction is suddenly changed, as will occur on collision.

To use the belt, take the buckle tongue in the outer hand, and drawing the belt through the top slide, pass the belt across the body and push the tongue into the buckle lock at the inboard side of the seat, until a positive 'click' is heard. Pull on the belt to check for correct latching.

On fastening the seat belt, ensure that no part of the belt is twisted, or is entangled in the door or in the seat mechanism, and that the belt is pulled upwards through the buckle tongue so that the belt fits snugly against the body with all the slack taken up by the real.

WARNING: Seat belts are designed to bear upon the bone structure of the body and should be worn low across the front of the pelvis, and across the chest and shoulder.





Wearing the lap section of the belt across the abdominal area must be avoided. The buckle lock is anchored to the seat frame rather than the vehicle body, in order to maintain correct seat belt positioning irrespective of seat fore/aft adjustment.

The belts are released by pressing the red button on the buckle lock, and will retract automatically for tidy storage and to permit easy access to the passenger compartment.

Each seat belt assembly is designed for use by one occupant of adult build, and should not be used by children under six years old except in conjunction with a suitable child seat or harness. Never use one belt around two people, or around a child being carried on a passenger's lap.

No modifications or additions should be made by the user which will prevent the seat belt adjusting devices from operating to remove slack. Do not attempt to adjust the seat bett tension by altering the mechanism.

It is essential to replace the entire seat belt assembly after it has been worn in a severe impact, even if damage to the assembly is not obvious. The belt should be replaced if webbing becomes fraved, contaminated, or damaged.

Care should be taken to avoid contamination of the webbing with polishes, oils or chemicals and particularly battery acid. Cleaning may be safely carried out using a mild soap and water solution, since terylene does not absorb water to any extent and therefore will dry quite quickly.

The seat belt tell tale lamp in the fascia will glow red when the ignition switch is switched on, as a reminder to fasten the seat belt. The lamp will go out when the driver's seat belt is fastened.

### Steering Column

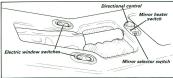
The steering column height may be adjusted after pulling down the clamp lever at the left hand side of the column. Move the steering wheel to the desired height position, and push the clamp lever fully upwards.

Do not attempt to adjust the column height whilst driving.

### Door Mirrors

To release column clamp

The rear view mirrors fitted on both driver's and passenger's doors, are electrically adjustable, and incorporate heating elements to aid de-frosting in icy conditions. The mirror control switches are located on the centre tunnel, to the rear of the gearchange lever, and are operative only with the ignition switched on. Use the rocker switch to select the mirror to be adjusted, and press the dished button to one of its four positions, to adjust the plane of the mirror glass. The small



button alongside the rocker switch, energises the heating elements in both mirror glasses, for a period of approximately fifteen minutes before automatically switching off, to avoid unnecessary battery drain. A small amber tell tale light adjacent to the button indicates when the circuit is operating.

### Door Windows

Raising or lowering of the electrically operated door windows is controlled by two switches on the centre tunnel, one each side of the parking brake lever. The windows operate only with the ignition switched on, when a white dot marker on each switch is illuminated to help locate the controls. Press the front, domed end of the rocker switch to lower the window, and the rear, dished end to raise.

If difficulty is experienced in lowering or raising a window in extremely cold conditions, use a windscreen de-icer spray along the door to glass seal. Do NOT use radiator anti-freeze solutions, as these could seriously damage the paintwork.

WARNING: - Take care not to trap fingers when closing a window.

 Do not leave children or animals in a parked car with the windows closed, in weather conditions where suffocation and/or heat exhaustion could ensue.

 Do not leave small children unattended in the car with the ignition key in position as careless window operation could be dangerous.

### Interior Rear View Mirror

The mirror can be dimmed to reduce headlamp glare from following vehicles by pressing the lever on the underside of the mirror away from the windscreen. Press the lever towards the windscreen for daytime use.



### Interior Lamps

Two interior lamps are incorporated in the underside of the rear view mirror, one to illuminate the driver's compartment, and one for the passenger compartment. To switch on both lamps, pull out the light switch knob on the fascia. To switch on an individual lamp, press the rear of the rocker switch adjacent to that lamp.

With the lamps switched off, a courtesy function operates as follows: when either door is opened, both lamps will light, and remain lit until about ten seconds after both doors are closed; or immediately the ignition is switched on. This delay allows time for the ignition key to be inserted into its switch.

### Glovebox

To open the glovebox, insert the key and turn counterclockwise (slot vertical), before lifting the lower edge of the latch handle.

Press the glovebox shut, and lock with the key, turning clockwise (slot horizontal).

### Sunvisors

Fold down sunvisors are provided for both driver and passenger, with a vanity mirror incorporated on the passenger's sunvisor.

### INSTRUMENTS & SWITCHES

### Ignition/Starter Switch/Steering Lock

The switchflock is located on the right hand side of the steering column. Insert the key into the slot, and turn clockwise to position 1' to unlock the steering column, and to position 1' to switch on the ignition and operate auxiliary equipment. Do not leave the ignition switched on for long periods without the engine running, since although the ignition steem liself draws no current when the engine is stopped, a small

battery drain will occur even without auxiliary equipment operating.

Turn further clockwise to 'III' against spring pressure to operate the starter motor. As soon as the engine starts, allow the key to return to position 'II'. For the correct starting procedure, see the



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### later chapter 'Starting Procedure & Running In'.

To stop the engine, turn the key back to 'I', and to remove the key, turn fully counterclockwise to 'B' and withdraw. The steering column will be locked automatically when the key is withdrawn from the lock.

WARNING: - Do not push or tow the car unless the key is first used to unlock the column.

- Never withdraw the key until the vehicle is stationary.

Do not leave the ignition key in position when leaving a parked car, to protect
against theft, and to ensure the safety of any children remaining in the vehicle.

### INSTRUMENTS

### Speedometer

SWITCHES

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**INSTRUMENTS** 

This instrument displays road speed in either MPH or km/h according to market, and incorporates a total distance recorder and a trip recorder. The trip recorder may be zeroed by pressing the small knob protruding through the instrument glass.

### Tachometer

The tachometer indicates engine speed in revolutions per minute. Maximum safe engine speed is 7,700 rpm on naturally sapitated modes and 7,200 rpm on Turbo variants. These speeds are those at which the engine management system operates to ut of the fuel supply, and safegued the engine from overspeeding. Maximum to ut of the fuel supply, and safegued the engine from overspeeding. Maximum to ut of the number of the strain strain strain and the speed to a strain the second strain strain strain strain strain strain strain the power park for optimum enformance and strains.

Do not run the engine continuously at its maximum speed, or allow overspeeding to occur on the overrun by changing down through the gears too early, as this imposes very high loads on engine components, leading to premature wear and possible failure.

### Water Temperature Gauge

This instrument registers engine coolant temperature, and is operative only with the ignition switched on. When the engine has reached normal running temperature, the gauge needle should stay around the central portion of the scale, with slight floctuations occurring as the operating conditions change. If however the gauge needle rises into the top quarter of the scale, the engine is in danger of overheating, and driving style should be modified accordingly. If the temperature remains high, a problem in indicated and the engine should be stopped and the cause established by referring to "Cooling System", or to your dealer.

Note that the needle will rise and fall from its reading position quite slowly as the ignition is switched on and off.

### **Fuel Gauge**

The fuel gauge is operative with the ignition switched on, and indicates the proportion of fuel remaining in the 46 litre (10.2 imp.gall) tank. A low fuel tell tale glows when the tank level drops to approximately 9.0 litres (2.0 imp.gall).

Note that the needle will rise and fall from its reading position quite slowly as the ignition is switched on and off.

### Voltmeter

The voltmeter is calibrated from 8 to 15 volts, and indicates battery voltage when the janiton is switched on, and the charge being applied to the battery by the alternator when the engine is running. The normal position of the pointer is between 12 and 14 volts. If the gauge reacks excessively high or low for more than a short period, a fault in the charging circuit is indicated which should be investigated by vour dealer without delay.

### **Oil Pressure Gauge**

This gauge registers the pressure of the oil supply in the engine lubrication system, and is calibrated in bar units. Readings will be higher when the engine oil is cold, and at high engine speeds, and there is no cause for alarm if very high readings are indicated when the engine is started in cold conditions.

Under normal running conditions when the engine is warm, oil pressure should be greater than 0.35 bar at idle, and be between 1.4 and 7.0 bar during normal driving, dependent on engine speed.

### Boost Gauge (Turbo models only)

This gauge is marked in bar units, and indicates turbocharger boost pressure. The amount of 'boost' developed by the engine is dependent on engine speed and throttle opening, but is controlled by both mechanical and electronic means to prevent excessive boost pressure causing internal engine damage.

Maximum boost pressure readings will be seen with wide throttle openings at normal running temperature, and will be up to 0.6 Ber (8 Bin?). The system allows a controlled amount of overboost for short periods only, following rapid accelerator pedal movement. The indicated figures will rise with increasing altitude or where the atmospheric pressure is lower than normal, although the actual pressures applied to the engine remain unaffected.

An electronic safeguard operates to cut out the fuel pump if a boost control system failure occurs, and excessive boost pressure is detected.

### Analogue Time Clock (Naturally Aspirated models only)

The quartz analogue clock is adjusted by pressing in and turning the serrated button at its centre.

Do not attempt to adjust the clock whilst driving.

### Digital Time Clock (Turbo models only)

The digital LCD time clock displays at all times, but is back illuminated for greater clarity when the ignition is switched on. The illumination is dimmed to prevent distraction when the lights are switched on.

Two buttons are provided to adjust the time setting, the upper button for hours, and the lower button for minutes. Use the push key provided on the key ring to cently depress each button in turn. If the battery is disconnected for any reason, the time setting will need adjusting after re-connection.

### Instrument Illumination

All the instruments, and the analogue time clock (N.A. only), are back illuminated when the vehicle sidelights are switched on.

### TELL TALE LAMPS

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INSTRUMENTS

### Left Hand Tell Tale Bank



### Low Screenwash Level Tell Tale

This amber tell tale will glow, with the ignition switched on, when the fluid in the screenwash reservoir needs replenishing.

### Parking Brake Tell Tale (P)

With the ignition switched on, this tell tale will glow red as a reminder that the parking brake is applied. Check that this occurs, and that the light goes out when the brake is released

### Brakes Tell Tale (1)

As a lamp test function, this red tell tale will light together with the parking brake tell tale. If this does not occur, see your dealer without delay. If the lamp lights at any other time, or fails to go out when the parking brake is released, stop immediately as a loss of brake fluid is indicated. Do not proceed until the fault has been investigated and rectified

### Turn Tell Tale 🗇 🗘

When the left hand or right hand turn indicators are operating, this green tell tale flashes in unison. If the tell tale fails to light, or flashes at an unusual rate, check the operation of the turn indicator lamps immediately.

### Oil Pressure Tell Tale

This red tell tale is provided to indicate when oil pressure is below a specified level. Check that the lamp lights when the ignition is switched on. The lamp should go out when the engine is started, although it may flicker at idle in very hot conditions.

If however the lamp lights at any other time when the engine is running, stop the engine immediately, and do not restart until the fault has been investigated and rectified. Continuing to run the engine with little or no oil pressure will cause major internal damage, possibly resulting in seizure.

Note: On Japanese market cars, the lighting of this tell tale will be accompanied (as a bulb check function) by the catalyst overheat tell tale.

### **Right Hand Tell Tale Bank**



### Battery Non-Charging Tell Tale

This will glow red when the ignition is switched on and will normally go out when the engine is started.

Although the lamp may glow when the engine is idling, if it lights at engine speeds above idle, a fault in the charging circuit, or a broken alternator belt is indicated, and the car should not be driven until the fault has been rectified.

### Main Beam Tell Tale

This lamp glows blue whenever the headlamp main beams are operating.

### Sidelamps Tell Tale 3D05

This green tell tale is provided to indicate when the sidelamps have been selected

### Seatbelt Tell Tale

This will glow red when the ignition is switched on, and go out when the driver's seathelt is fastened

### Catalyst Overheat Tell Tale (Japan only)



This tell tale will glow red if an engine fault occurs which results in the temperature of the catalytic converter rising to a level liable to cause damage to the converter and/or engine. Stop the vehicle in an area free of combustible materials (dry grass, leaves etc.) and allow the converter to cool for several minutes before proceeding with caution. Have the fault investigated by your dealer.

As a bulb check function, this lamp will light in conjunction with the low oil pressure tell tale when the ignition is switched on. Only if the catalyst lamp comes on separately to the oil lamn is there an indication of catalyst overheat

### Check Engine Tell Tale

The check engine tell tale is provided to:

- i) inform the driver that the engine management self diagnostic system has detected a fault:
- ii) assist the technician with fault diagnosis.

As a bulb and system check, the lamp will light with the ignition on, and should go out when the engine is started. If, however, the lamp remains on, or comes on whilst driving, this indicates that the self diagnostic system has detected a problem. information on which is stored in the system memory. The vehicle should be taken for check/repair as soon as is practicable. If the fault cures itself, or is no longer detected, the lamp will go out in most cases after about 10 seconds, but the fault information will remain stored in the memory for the next 50 starts to indicate to the technician that an intermittent fault has been detected. If no recurrence is recorded during this period, the stored information will be erased from the memory.

Certain types of detected fault will result in the system limiting engine speed to 4,000 rpm in order to protect the engine from damage.

### FASCIA SWITCHES

### Lights Switch

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**INSTRUMENTS** 

This three position rotary/pull switch controls sidelamps, headlamps, panel lamps and interior lamps with or without the ignition key in position.

- i) turned fully counterclockwise to 'O', all lights are off.
- ii) turn to cDQE to switch on the side/parking lamps and instrument/switch illumination.
- iii) turn fully clockwise to D to raise the headlamp pods and switch on the headlamps.
- iv) In any of the three rotary positions, the knob may be pulled outwards to switch on the interior lamps.

The three rotary switch positions are illuminated when the lights are switched on.

### Panel Lights Control

This rotary rheostat controls the brightness of the instrument and switch symbol illumination. Turned fully counterclockwise, the illumination is switched off. Turn clockwise to progressively increase the brightness.

### Air Conditioning Switch (if fitted)

This rocker switch controls the air conditioning, which functions only whilst the engine is running. The switch symbol is illuminated with the lights switched on, and the adjacent amber tell tale indicates when the circuit is operating. For further information, see "Interior Climate Control".

### Hazard Lamps Switch

This push switch operates with or without the ignition key, and causes all turn indicator lamps to flash in unison. The switch symbol is illuminated with the lights switched on. The red tell tale in the switch button is backlit with the ignition switched on, and flashes when the circuit is operating.

### Rear Fog Lamps Switch

The rear fog lamps, incorporated into the rear lamp clusters, operate only in conjunction with the headlamps, and should be used only in conditions of seriously reduced visibility. The fog lights symbol for this rocker switch is illuminated with the lights switched on, and an adjacent amber tell tale lights when the circuit is operating.

Be aware that indiscriminate use of rear fog lamps can cause distraction to following traffic.

### **Cigar Lighter**

The cigar lighter, which functions only with the ignition switched on, is operated by pressing in fully. When the element has been sufficiently heated, the lighter will soring outwards ready to be withdrawn for use.

Care should be taken when handling the hot lighter to avoid accidental damage or burns.

WARNING: Do not leave small children unattended in the car since careless cigar lighter operation could be dangerous.

### COLUMN SWITCHES & HORN

### Headlamp Dipswitch/Flasher/Turn Indicators

The steering column left hand lever switch controls the headlamp dipswitch, headlamp flasher and turn indicators.



Headlamp Dipswitch: The headlamps must be selected via the master lighting switch before the pods will rise with the headlamps lit. The left hand lever switch is then used to select main or dip beam. Main beam is obtained with the lever turthest forvard, away from the stearing wheel, and dip beam with the lever moved back towards the wheel. The main beam tell tale lamp in the fascia lights when main beam is operating.

Note that the outer pair of headlamps supply the dip beams, and remain lit when the inner pair of main beam headlamps are operating.

Headiamp Flasher: The headiamp flasher is operative at all times. If the lever is briefly pulled towards the steering wheel against spring pressure, the headiamp pods will rise and the dip beams light for a few seconds before the pods descend. If however the lever is held pulled towards the steering wheel, the pods will rise and the main and dip beams operate until the lever is released and the pods descend.

Turn Indicators: The turn indicators operate only with the ignition switched on. Move the lever down to indicato a left hand turn, and up for a right hand turn. The switch will be cancelled when the steering wheel is returned to the straight ahead position after executing the turn. If the switch is pressed up or down only lightly, the switch will return under spring pressure for convenience when signalling a lane change.



### Windscreen Wipers/Washers

The steering column right hand lever switch controls the windscreen wipers and washer, and is operative only with the ignition switched on.

Windscreen Wipers: The wipers are controlled by the up/down position of the lever switch, which operates as follows:

- moved fully down, the wipers are switched off.
- move up to the first position for intermittent wipe. The wipers will make one sweep about every five seconds.
- move to the next position to select normal wiper operation.
- move fully upwards for high speed wipe, for use only in heavy rain. Do NOT at any time use the wipers on a dry screen.

Windscreen Washers: Pulling the lever towards the steering wheel will operate both the washers and the wipers. When the switch is released, the wipers will continue for a further four sweeps.

### Horn

The horn button is located in the steering wheel centre boss, and is operative at all times.

### INTERIOR CLIMATE CONTROLS

The interior climate controls are located in the centre console, and comprise two rotary controls for hwater temperature and air distribution, and a horizontal slider for fan speed. Cars with air conditioning have an additional rocker switch controlling this function, alongside the rotary controls. The engine must be running for either the heater or air conditioning to perate.

### Fan Speed Control

Fan speed is controlled by a horizontal slider between the two rotary controls. With the lever fully to the left, the fan is switched off, and only minimal airflow will be obtained from the vents. Moving the slider to the right, provides four increasing fan speeds to boost air circulation.

### Heater Temperature

The heater temperature control is the lower of the two rotary controls in the centre console. For ambient (unheated) air, turn the control knob counterclockwise. As the knob is turned clockwise, the temperature of the air supplied is progressively increased, until at the fully clockwise setting, maximum heat is available. Recirculation — air conditioned cars only: On cars fitted with a.c., if the temperature control is turned fully counterclockwise, the air lateket flag will close of the fresh air intake, and open the recirculation vent. This position should be used with the air conditioning operating for maximum cooling, or in heavy traffic to avoid drawing furnes into the car. As the control is turned away from the fully cold setting, the fresh air intake will open.

Air distribution control Fan speed control Hester control

### Air Distribution

The air distribution control is the upper of the two rotary controls in the centre console. Four basic positions are marked by symbols on the control panel, and the knob is provided with detents at these positions in order that settings may be selected by 'feel'.

With the knob turned fully counterclockwise, airflow is directed to the windscreen. For optimum defrost performance, select maximum heat and fan speed. On cars with air conditioning, it may be beneficial under cars with air conditioning ambient conditions, to switch on the a.c. to help de-humidify the air and speed demisting.

Face Level Vents: At this position, air is directed to the four face level vents.

each of which is provided with its own volume and direction controls (see later). Use this position with a cool temperature selection and fan speed as desired.

Footwell: At this setting, the face level vents are shut off, and air flow is directed to the footwells with a small amount to the screen. Use with a warm temperature setting and fan speed as desired.

Bi-Level: With the control turned fully clockwise, temperature stratification is provided, so that cool air may be obtained through the face level vents, with warmer air supplied to the footwells. Use a central temperature control setting, and fan speed as desired.

### Air Conditioning (if fitted)

Cars fitted with air conditioning, are provided with a rocker switch on the centre console, and an adjacent amber tell tale to indicate when the circuit is operating.

To select refrigerated air, press the rocker switch, turn the temperature control to cold for normal cooling, or fully counterclockwise (recirculate) for maximum cooling. Turn the distribution control to face level vents, and for maximum cooling efficiency  $\widetilde{\mathbf{v}}$ 

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keep the windows closed. Note that the slow fan speed will be activated automatically when the a.c. rocker switch is pressed, but a faster speed may be selected if desired.

### De-Humidified Heating (cars with a.c.)

To supply de-humidified warm air to the footwells, press the air conditioning rocker switch and select a warm temperature setting. Switch the fan to a high speed and turn the distribution control to the footwell setting.

### Important Notes on Use of Air Conditioning

- It is not recommended that the airflow from the face level vents be directed at persons during maximum refrigeration, as this can cause discomfort (e.g. cramp).
- Under certain ambient conditions (especially high humidity) a white vapour may issue intermittently from the face level vents. This is quite normal and should cause no concern.
- To ensure that the internal components of the air conditioning compressor are kept adequately lubricated, the air conditioning should be switched on for at least a few minutes every week to permit the oil to circulate.
- Some extreme conditions of engine operation (e.g. full throttle) will automatically switch off the air conditioning for as long as those conditions apply.
- When air conditioning is selected, the radiator cooling fans will cycle on and off even at low engine temperatures.

### **Face Level Vents**

Four face level vents are fitted: two in the centre console, and one at each end of the fascia. The central vents, and on left hand drive cars, the outer vents, are fitted with a volume control thumbwheel, the turning of which opens or closes the vent, and a centre knob by which the direction of airflow may be aimed.

On right hand drive cars, each of the two outer vents comprises of separate upper and lower outlots, each with its own directional control knob. A thumbwhel above the vents enables the airlow from both upper and lower outlets to be shut off (O), or opens the lower vent only (b), or opens both vents (ba).



### Ventilation

When the soft top is raised, air is able to vent from the cabin interior via one way flap valves in the rear bulkhead hinge recesses, into the boot. Ventilation of the boot is achieved by ducting air through the boot lid reinforcing channels to outlets over the rear number plate. Take care not to obstruct the ventilation system with luggage or clothing.

### **DRIVING CONTROLS**

### Foot Pedals

The clutch pedal, brake pedal and accelerator pedal are arranged in the orthodox position, and are grouped closely together for ready access and refined driving technique. Drivers are recommended not to wear heavy boots, high heels or other unsuitable footwear.

After negotiating a ford, or when driving on flooded roads, it may be necessary to dry out the brakes to restore full braking power by a few light applications of the brake podal. It also advisable to do this after or during prolonged driving in we weather, under circumstances where the brakes are rarely used, such as may occur on motorways, etc.

The practice of driving with the left foot resting on the clutch pedal should be avoided, as rapid clutch release bearing wear will result. Also, never 'hold' the car on a slope by slipping the clutch, but apply the parking brake.

### **Parking Brake**

The parking brake is mounted on the centre tunnel and is applied by pulling upwards. If the ratchet clicks more than 7 times, have the mechanism adjusted by your Lotus dealer. To release, pull the lever slightly upwards, press the button in the end of the hand grip with the thumb, and lower the lever.

Wear of the rachet mechanism can be reduced, by adopting the practice of holding the release button in whilst the lever is pulled upwards, and releasing the button to hold the lever once in the fully applied position.

The parking brake operates on the rear wheels only and is totally independent of the hydraulic footbrake system.

When the ignition is switched on, a parking brake tell tale lamp on the fascia will glow red, as a reminder that the parking brake is applied. Check that the light goes out when the brake is released.

### Gear Lever

The gear lever is spring biased towards the 3474th gear plane, and must be moved against light spring pressure to the left before selecting first or second gear, or against similar pressure to the right before selecting 5th or reverse. Note that a safety feature prevents reverse gear being selected directly from 5th, by requiring that the



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lever is first moved across the gate to release an interlock. Do not attempt to engage reverse gear until the vehicle is at a complete standstill. The reversing lights are switched on automatically when reverse gear is engaged.

When changing gear, it is essential that the transmission is not abused by 'power shifting', the clutch pedal must be fully depressed during each gear shift, and the throttle pedal eased during upshifts. Gearshifting without correct operation of the clutch and throttle controls can result in severe damage to the transmission and engine.

### STARTING PROCEDURE & RUNNING IN

### WARNING: CARBON MONOXIDE

Be aware of the danger of carbon monoxide! Never run the engine in an enclosed space. The exhaust gases contain carbon monoxide, a deadly gas which is particularly dangerous, as being colourless odourless and tasteless, its presence is very difficult to detect.

### Starting Engine Above -20°C (0°F)

The fuel injection and engine management system controls fuel delivery and engine settings under all operating conditions. When starting the engine, do NOT depress the accelerator. Operate the starter until the engine starts and runs continuously. The engine idle speed will be raised automatically at low ambient temperatures.

### Starting Engine Below - 20°C (0°F)

Operate the starter without depressing the accelerator pedal. If, after five seconds, the engine does not start and continue to run, depress the accelerator pedal 12-20mm (1/4-3/4 in.) and operate the starter again.

Note:

STARTING PROCEDURE

- If the engine fails to start at the first attempt, avoid risk of damage to the starter mechanism, by always ensuring that both the engine and starter motor have come to rest (pause one or two seconds) before operating the starter again.
- If the accelerator is pressed fully to the floor whilst the starter is operated, a lean air/fuel mixture is provided to help clear a fuel flooded engine.
- iii) The use of wide throttle openings and/or high boost levels before the engine has reached normal running temperature will result in premature wear, and should be avoided.

### Stopping Engine

On Turbo engines, before switching off after fast driving, allow the engine to idle for 2 – 3 minutes in order to allow the turbocharger to cool off and prevent the oil in it from carbonising. **Do not** 'rev' the engine and immediately switch off, as premature wear of the turbocharger bearings will result.

After stopping a warm engine, a coolant circulation electric pump may be heard running, or in certain conditions, start running a few minutes after engine switch off. This feature helps control engine temperature and prevents coolant loss in conditions of 'heat soak'. The pump will switch off when coolant temperature has fallen to a specified level.

### **Running In**

The progressive running in of a new car is very important to ensure the attainment of smooth and reliable performance with economy and durability, throughout the life of the vehicle.

It is important during the engine's early life, to limit the amount of engine heat generated, which is dependent on threation gening and engine speed. For the first 600 miles (1000 km) the car should be driven genity with only moderate throtten genings and amaximum engine speed of 4,500 mm, making lul use of the gentox to avoid beduring the engine. Thereafter, the engine speed and throtted peering may be gradually increased, and higher engine work loads used to longer predicts. Vary increases of optimizing and amaximum pering speed and the other speed of the other speed of the speed

Maximum braking efficiency will be achieved if, for the first few hundred miles, needless heavy braking is avoided, and the brake pads are allowed to 'bed-in' fully before being used to their full potential.

### EXTERNAL OPERATIONS

### Fuel Requirement

### Cars without catalytic converter:

Unleaded Fuel - minimum octane rating 95 RON

Leaded Fuel - minimum octane rating 97 RON (4 star)

The engine has been designed to run on 95 RON unleaded fuel, but if necessary 97 RON leaded fuel may be used without any adjustments to the engine being required.

### Cars with catalytic converter:

Use only UNLEADED fuel. Where available, unleaded fuel with a minimum octane rating of 97 RON ('Super Unleaded') should be used for optimum performance and economy, but the vehicle will operate perfectly satisfactorily on 95 RON unleaded (regular unleaded in U.K.).

If 95 RON or higher rated fuel is not available, 91 RON unleaded fuel may be used, but vehicle performance and economy will be reduced.

### Fuel Filling

WARNING: Be aware of the danger of explosion when dealing with petrol and its attendant fumes. Before stopping at a filling station, ensure that all cigarettes are extinguished, and that no naked flames or other potential ignition sources are present. Switch off the engine before refuelling.

A single fuel tank is fitted ahead of the left hand rear wheel, with a filler concealed by a flush fitting flap, in the left hand rear wing. To release the filler flap, open the left hand door, and pull the release handle in the door jamb; the flap will

**OPERATIONS** 

spring ajar. Open the flap fully, and turn the filler cap counterclockwise to remove. Select the correct fuel grade before inserting the pump nozzle fully into the filler neck. The fuel tank capacity is 46 filters (10.2 imp, ajll). Note that cars equipped with a catalytic converter are fitted with a restricted filler neck so that only the smaller diameter nozzle used on an UNEADED pertor pump may be inserted.

After filling, replace the filler cap, and turn clockwise until the torque limiting ratchet mechanism is heard to 'click', indicating that the cap is fully tightened. Press the filler flag shut.

### Bonnet

**OPERATIONS** 

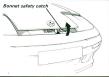
EXTERNAL

To open the bornet, pull the release laws, located in the diver's foxvell, put at haad of the door hinge post. The rear hinged bornet will spring air, with a safety catch preventing it opening further in case of accidental release. Release the safety, catch by squeezing upwards a tab located to the lift of the cental catch (nore: this is to the right when standing in front of the car). Raise the bornet fully, uncipe the prop from the bornet underside, and fit the end of the prop into the bornet catch.

To close the bonnet, unhook the prop and fit into its retaining clip. Lower the bonnet, keeping fingers well clear of entrapment, and press firmly over the catch to ensure it is fully engaged.







### Boot Lid

The boot lid is opened using the door key. Insert the key into the slot (smooth side to the right), turn clockwise to unlock, and raise the lid to its fully open position, where it will be supported by torsion springs. Note that in order to prevent paint damage, an interlock mechanism prevents the boot lid from opening fully unless the roof stowage lid is closed.

To close the boot lid, keep fingers well clear of entrapment, pull the lid down, and press firmly above the latch to ensure it is fully engaged.

### Soft Top Roof

WARNING: Do not attempt to lower or raise the soft top whilst the vehicle is in motion. Take care not to trap fingers in the roof mechanism.

### To Lower:

- Transfer any bulky items from the rear shelf to the boot, and close the boot lid. Lower the door windows.
- Release the two over centre latches at the windscreen header rail by pulling down the latch handles.



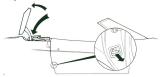
iii) Pull back the front of the soft top to release the tensioning mechanism.



 Lift up the rear edge of the soft top whilst assisting the rear window to fold inwards in one smooth fold.



- Release the roof stowage lid by pulling the release handle in the right hand door jamb and raise the lid fully.
- ) Fold the soft top down into the stowage compartment by pushing back on the front edge.



vii) Secure the soft top by buckling the retaining strap.





 viii) Close the stowage lid, pressing firmly on the front edge to fully engage both catches.

It is not recommended that the soft top be stowed for long periods when wet, as degradation of the fabric will be accelerated. Before stowing a wet soft top, wipe over with a soft cloth or sponge to remove most of the water, and raise the roof after the iourney to allow the material to dry off.

For instructions on the care and cleaning of the soft top, see 'Bodycare' section.

### To Raise:

- Close the boot lid and lower the door windows.
- Release the roof stowage lid by pulling the release handle in the right hand door iamb.
- Raise the lid fully, release the retaining strap, and pull out the soft top in its folded state, from the stowage compartment.
- Raise the rear edge of the soft top and close the stowage lid, pressing firmly on the front edge to fully engage both catches.
- Push down the back edge of the soft top, and pull the front edge to the windscreen header rail.
- At both of the header rail latches, engage the hooks of the latch into the recesses on the header rail brackets, and push the latch handle fully upwards and back.

### BODYCARE

### **Body Features**

The body structure comprises a moulded composite floorpan reinforced with steel in key areas to form aff hox sections. The floorpain is bload at sketeen points to the box section steel backbone chassis, with further rigidity and occupant protection provided by a high strength aluminum allow vindoczen frame, a tubular steel scattle beam, and steel beams in the doors and rear builkhead. Most composite dearlor prands are bonded to this structure using al flowing boylumetham endineses, and collision repair. The front bumper/spoler and rear bumper/salmon, are floxible reinforced polyturehame mouldings resistant to damage from minor knocks.

Composite structures have the ability to absorb high impact loads by progressive collapse, with impact damage bring localised. In accident situations this feature protest the occupants from injurious shock loads and greatly reduces the danger of antrapment by deformation of body pranes. This behaviour also facilitates repair by either replacing the damaged bolt on or bonded on panels, and/or integrating replacement body sections with the undamaged area, using recognised approved methods which restore the body to its original condition without residual strain or distortion.

The outer surface of a composite panel is sealed by a thin layer of 'gel coat'. If the panel is deflected beyond its level of flexibility the gel coat will be overstressed and

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BODYCARE

cracks will result, although the panel will return to its original shape. A steel panel similarly treated would become permanently dented. The carcking may be confined to the surface gel coat, with no reduction in panel strength, but if damage is more severe the composite structure below the gel coat may be weakened. Localised repairs can be made in either case. Gel cracks may not appear immediately after overstressing because the effect can be masked by the floxibility of the paint finish which covers the gel coat. In some instances gel cracks can take as long as three months to appear.

Gel cracks can be caused by:

- sitting or leaning heavily on the bonnet or any other flexible panel;
- knocking doors against obstructions when opening;
- dropping a sharp or heavy object on a panel;
- allowing unsecured items to slide about in the boot;
- closing the bonnet or boot lid onto projecting objects, e.g. luggage or tools;

 applying excessive force to parts attached to composite panels e.g. mirrors, locks, aerial etc., (action by vandals).

Note that the bumpers are elastomeric components, which by absorbing light shock loads, protect the body from damage. Exceeding the bumper design loads however may cause gel crazing of the body panels.

### Paint Care

The finish of your Lotus is extremely resistant to all normal forms of atmospheric attack. Provided the simple maintenance procedure summarised below is followed, it will retain its gloss, colour and protective properties throughout the life of the vehicle.

However, car finishes are not chemically resistant. Severe local contamination of an acid or an alkaline character can occur. If it is left in contact with the paint film for any length of time it may cause pitting and colour change.

### Washing:

Caution: Lotus does NOT recommend that the Elan is subjected to a mechanical (automatic) car wash. Some types of brushes used in these devices may cause scratching of the flexible rear window, and accelerated ageing of the roof fabric. The car should be hand washed, using the following instructions:

Many contaminants which will attack a paint film are water soluble. They will be removed before any harm occurs through washing with plenty of water, to which is added a few drops of liquid detergent. Frequent washing is the best safeguard against unseen contaminants; at the same time ensuring the regular removal of dirt, dust and traffic film.

If washing with cold water is not effective, warm water and detergent will remove the gummy deposits exuded by some trees in the summer months. Petrol or white spirit will remove stains of the tar, bitumen and grease type. Polishing: Eventually some loss of gloss, and an accumulation of traffic film, will occur. At this stage, after normal washing, a polish with a good quality liquid polish will restore the original lustre of the paint film.

Higher gloss of the paint film, and added protection against contamination, can be obtained by wax polishing. But it must be remembered that a wax polish can only be used successfully on a clean surface, and that the previous application must first be removed with white spirit or a liquid polish cleaner before re-waxing.

Ventilation: Water lying on the paint surface for lengthy periods will penetrate the paint film. Although the effects will not be visible immediately, this will in fact cause a deterioration in the protective properties of the paint film.

If a car is garaged, good ventilation must be provided. Otherwise storage outside on a hard standing or under a carport is preferable.

### Summary:

- Wash frequently, using cold water with a few drops of liquid detergent added.
- Inspect after a normal washing, and remove any local contamination with warm water, petrol or white spirit as appropriate.
- Use a good quality liquid polish infrequently say twice a year to restore high gloss and to remove accumulated traffic film and scum.
- Park on a hard standing, and under conditions of good ventilation if a covered area is used.

### Windscreen Cleaning

When washing the windscreen, the wiper arms may be pivoted forwards to clear the wipers from the glass and provide unrestricted access to the windscreen. Wash the wiper blade with clean water.

### Alloy Wheels Cleaning

It is recommended that these are washed with the preparation as is used to wash the bodywork. Use a brush having only nylon bristles. During the winter months, particularly when sait has been used on the roads for the dispersal of snow and ice, remove all the wheels, and wash thoroughly to remove all accumulated road filth from the wheels and tyres.

### **Registration Plate Cover**

Keep the clear acrylic cover over the rear number plate clean at all times (in accordance with traffic law) using a scap and water solution, and replace the cover if it becomes damaged or excessively scarchchd. If necessary, the cover can be removed for cleaning of the inside surface, by releasing the four fixing screws along the top edge (from outside), and the four screws along the bottom edge (from inside the bott).

## MAINTENANCE

### Soft Top Roof

The soft top and rear window should be washed using only warm soapy water. Do NOT use any sort of proprietary cleaner or rub with a dry cloth. Rinse with clean water and wipe with a soft cloth or sponge to remove the surface water. Allow to dry off before stowing.

### Upholstery Cleaning

Normal cleaning consists of an occasional light wipe over with a cloth dampened in a mild soap and water solution; it is important that the cloth is only dampened, not soaked.

### Leather Upholstery

MAINTENANCE

The leather should be wiped over occasionally with a cloth dampened in warm soapy water. Repeat the operation using a fresh cloth and water only – avoid flooding the leather – finish by drying and polishing with a soft dry cloth.

It is important to use a mild, non caustic toilet soap (or soap flakes), and to avoid the use of petrol or detergents, furniture creams and polishes.

The occasional use of a hide food is recommended after the leather has been in use for a year or two.

### Seat Belt Cleaning,

The most suitable cleaner for seat belts is a mild soap and water solution since terylene does not absorb water to any extent and therefore will dry quite quickly.

Fluids which are harmful to terylene are those containing mineral acids and MUST NOT be used.

### MAINTENANCE

WARNING: When the engine is running or is warm, be aware that in addition to the more obviously hot components, the exhaust gas recirculation (EGR) pipe running from the exhaust manifold to the intake manifold may be very HOT



### **Jacking Points**

Four jacking points are provided on the car; one just ahead of each rear wheel arch, and one just behind each front wheelarch. Each jacking point is fitted with a conical location dowel, in order to engage the hole in the wheelchanging jack. The car should not be raised by jacking under any other point.

### CAUTION: Do NOT allow a jack to be used beneath the engine hav

underframe, as it is not designed for this purpose, and may be damaged or distorted by a jack.

### Tool Kit

A toolcase containing open ended spanners, plug spanner, screwdrivers and pliers, is stored beneath the left hand side of the boot floor. Always restow correctly to prevent the unrestrained case from causing damage to other items in the boot, or to the body.



### Towing Eye

A towing eye is provided in the radiator air

intake aperture for use in an emergency if the vehicle has to be towed.

- WARNING: Use only towing equipment designed specifically for this purpose, or damage to the vehicle may be caused, or safety jeopardised,
  - Ensure that the key is used to unlock the steering column, the parking brake is released, and the transmission is in neutral.



 Without the engine running, the brake servo will not operate and a much firmer pressure will be needed on the brake pedal to produce the same stopping force.

 Ensure that all State and local laws which apply to cars being towed are followed.

### Engine Oil Level Check

The engine oil level should be checked regularly, such as every two or three fuel stops, and the oil level maintained near the top mark on the dipstick. It is especially important to keep a check on the oil level during the first J.000 miles (1,700 km), as both the fuel and oil consumption will be prone to some variance until the engine components have 'bedded in'.

The best time to check the level is when the oil is warm, such as during a fuel stop. Ensure that the car is parked on a level surface and that a few minutes have elapsed since stopping the engine to allow the oil to drain back into the engine is cold, do not run the engine first, as the cold oil will not readily drain back into the sump, and an artificially low reading will be obtained.

Withdraw the dipstick located at the right hand front of the engine, and wipe with a non-fluffy cloth. Replate the dipstick, pressing firmly to make sure it is fully seated, and withdraw again to inspect the oil level. The correct level is to the upper mark on the dipstick.

Top up if necessary, via the filler on the camshaft cover. Turn the filler caps counterclockwise to remove, and use only a recommended lubricant listed in the Technical Data section at the back of the handbook. Do NOT overfill, or the oil will become aerated and its lubrication properties degraded. The difference between high and low dipatick marks is equivalent to 1.0 litre (1.8 imp.pt). Refit the filler cap and tighten securely.



### **Engine Oil Change**

The oil should be renewed at intervals specified in the Maintenance Schedule at the back of the handbook.

The sump plug is located at the right hand side of the sump, and should be removed to drain the sump immediately after a run when the oil is warm and the impurities are held in suspension. Allow to drain thoroughly before cleaning the drain plug (replace the sealing washer if



necessary), and refitting securely. Fill with a recommended lubricant to the top mark of the dipstick.



### **Oil Filter**

The oil filter should be renewed at intervals specified in the Maintenance Schedule at the back of the handbook.

The oil filter is horizontally mounted at the back of the engine, and is of the disposable canister type. The filter is removed from beneath the vehicle by turning in a counterclockwise direction using an oil filter wrench if necessary. Discard the filter after removal.

Before fitting a new fitter, clean the mating faces on both the new fitter and engine, and smear both faces with clean oil. Add a small amount of clean oil into the fitter and screw on by hand sufficiently to make a firm seal, usually % to % of a turn after the

faces have made contact. Start the engine and check for oil leaks, tightening the filter further if necessary.

### Used Engine Oil

- WARNING: Prolonged and repeated contact may cause serious skin disorders, including dermatitis and cancer.
  - Avoid contact with the skin as far as possible and wash thoroughly after any contact.
  - Keep out of reach of children.

PROTECT THE ENVIRONMENT – It is illegal to pollute drains, water courses and soil. Use authorised waste collection facilities, including civic amenity sites and garages providing facilities for disposal of used oil and used oil filters. It in doubt, contact your local authority for advice on disposal.

### 'Severe Service' Conditions

Certain operating conditions can cause rapid degradation of the oil guality, either by the accumulation of dirt particles, or by the absorption of water from condensation. The oil and filter change intervals in the Maintenance Schedule should be adhered to when the vehicle is NOT subjected to one of the following 'severe service' conditions:

- driving in dusty areas (e.g. on unmetalled roads)
- stop/start city driving with frequent short trips where the engine never warms up thoroughly (especially in cold weather): and/or frequent or prolonged idling.

In either of the above conditions, it is recommended that the oil and filter be changed twice as frequently as is listed in the Maintenance Schedule. Change the oil and filter as soon as possible after driving in a dust storm.

### Cooling System

MAINTENANCE

WARNING: When the ignition is switched on, the radiator cooling fans will cycle on and off dependent on coplant temperature and air conditioning system status. Do not allow fingers or clothing to encroach in the cooling fan area at any time

Under normal operating conditions, the engine cooling system, being a closed circuit, should not require any topping up between services. As a precaution however, every week, the level of coolant in the engine cooling header tank should be checked. The transluscent header tank is marked with a cold level indicator. The level of coolant will rise as the engine warms up and the coolant expands, and will fall again as it cools down

WARNING: Do NOT remove the cap from the engine cooling header tank when the engine is warm, as serious scalding could result from boiling water and/or steam.



When fully cold, the level of coolant should be up to the 'cold' mark on the header tank. If overfilled, the excess coolant will be elected when the engine is warm, and if the level is allowed to fall too low, overheating may result. If necessary, top up the system, being sure to use an approved coolant mixture (see below) in order to maintain full protection from freezing damage and corrosion. Extremely hard water (hardness exceeding 250 parts per million) should not be used in the cooling system. In such areas, distilled, de-ironised or filtered rain water should be used.

At service intervals, the matrices of all the cooling radiators (especially the close finned oil cooler radiator) should be checked externally for clogging by insects, leaves or other debris, and if necessary, a water iet used from behind to clear the finning.

To drain the engine cooling system, set the heater temperature control to 'hot', remove the header tank cap, and disconnect the radiator bottom hose.

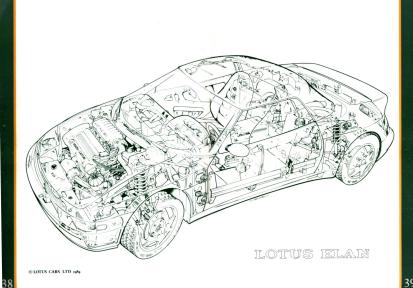
To refill the system, reconnect the bottom hose securely, set the temperature control to Cooling system air bleed plug hot, and fill with coolant via the header tank. until up to the cold level indicator mark. Bleed air from the radiator by removing the bleed plug in the left hand headlamp pod well (raise headlamps), and refit when all air is bled. Bun the engine, and ton up the header tank as necessary until the level stabilises or starts to rise. Stop the engine and allow to cool fully. Bleed the radiator again, top up the header tank to the cold indicator level, and fit the pressure cap.



Note that after stopping a warm engine, a coolant circulation electric pump may be heard running, or in certain conditions, start running a few minutes after engine switch off. This feature helps control engine temperature and prevents coolant loss in conditions of 'heat soak'. The nump will switch off when coolant temperature has fallen to a specified level.

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# MAINTENANCE

### Anti-Freeze/Corrosion Inhibitor

It is important that the coolant should contain an anti-freeze with corrosion inhibitor to protect the engine and heat exchanges from both frost damage, and corrosion of the metallic elements. Use of a good quality ethylene glycol anti-freeze protects against these dangers as well as improving the cooling efficiency of the system. When nex, the system is filled with a 40% anti-freeze concentration which is suitable for all there very collest clarates, which should use concentrations by to 60% strength. In warm climates it is recommended that the concentration is advored to all below 25%, in order to maintain full corrosing protection.

The effective level of mono-ethylene glycol in the system may be measured using a hydrometer, but the level of corrosion inhibitors, whose effectiveness diminishes over a period of time, can only be assured by the renewal of the coolant mixture every year.

For recommended anti-freeze products/specification, see 'Technical Data'.

### Washer Reservoir

MAINTENANCE

The windscreen washer reservoir is situated at the right hand side of the boot, and should be kept topped up with clean water and a suitable proprietary solvent. Do NOT use radiator anti-freeze in the reservoir as this could seriously damage the paintwork.



If the washer fluid level becomes low, and needs replenishing, an amber tell tale reminder in the instrument panel will glow.

### Brakes

Hydraulically operated front and rear disc brakes are used, with vacuum servo assistance. The brake circuit is a 'diagonaly split' system, with the right hand front and left hand rear brakes operated from one conpartment in the tandem master (yinder, and the reaning two brakes, from a second compartment. In this way, in the unikity event of a component failure or loss of fluid, one of the two circuits will still function. Pressure proportioning valves are incorporated into each of the rear circuits, to reduce the likelihood of the rear wheels locking first on heavy braking, and aid which stability and corritor.

The servo unit uses engine supplied vacuum to reduce the pedal effort needds. If the engine is not running, no vacuum will be generated and the servo will not function. The brakes will therefore need a harder push for a given stopping distance. Never cosst downhill with the engine switched off, built if this situation should arise, avoid repeated application of the brakes, or the stored vacuum will be rapidly used up.

The parking brake is mechanically actuated by a cable linkage, and operates on the rear wheels only.

### **Brake Pads**

Brake adjustment to compensate for pad wara, is automatic, but the brake pad thickness should be checked at every service, and under no circumstances should the thickness be allowed to fall below 2.0 mm (front) or 1 mm (rear). If the brakes are in very frequent or arduous use, as when driving in mountainous terrain, it is recommended that they be examined at more frequent intervals.

### Brake Pipes & Hoses

At the recommended service intervals, the brake pipes and flexible hoses should be carefully examined for signs of damage, corrosion or perishing, especially in areas where salt is used on the road surface in the winter months.

### **Brake Fluid Reservoir**

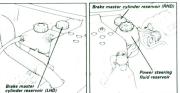
Under normal circumstances, there is no requirement for routine 'topping up' of the brake master cylinder reservoir. A visual safety check is all that is required,

Every week, check the level of fluid in the brake fluid reservoir located at the diver's side rare of the engine bay. Without disturbing heilf filer cap, check that the level lies between the 'max' and 'min' marks moulded on the translucant reservoir boy. As the brake gads wear, the level will or op gradually from the 'max' mark towards the 'min'. but if the level drops rapidly over a short period, have your Lous likely there has been some fluid locat, and that it will have entered the hydraulic system. The car should not be driven until the fault has been investigated and rectified.

Brake fluid is hygroscopic, and absorbs water from the atmosphere over a period

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of time, resulting in the lowering of the boiling point of the fluid, and corrosion of the hydraulic system. For optimum safety and brake performance, the brake fluid should be renewed every twelve months by your Lotus dealer.



### Power Steering Fluid Reservoir (if fitted)

On cars fitted with power steering, the hydraulic fluid reservoir is located at the right hand rear of the engine bay. When other fluid levels are being checked, wipe clean the cap and top of the steering reservoir before unscrewing the cap and inspecting the fluid level shown on the dipstick integral with the cap.

The two marks on the digatick correspond to the correct hot level (top mark — use when the car has been driven several miles, and the reservoir is hot to the touch), and to the correct cold level (lower mark). If any topping up is required, use ONLY the approved fluid — Nippon Oils "Besco A.T.E. Dexron" — available from your Lotus dealer under part number A 100EG08W. Refit the reservoir cap securely.

### Air Cleaner Element

The folded paper type air cleaner element is housed in a cylindrical boa tat the left hand front of the engine bay, and should be removed and inspected at each service. When the vehicle is operated in a relatively dust free environment. The element should be renewed at intervals specified in the Maintenance Schedule, but where a dusty or smog laden atmosphere prevails, more frequent replacements in required dependent on the level of pollution.



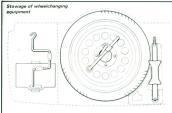
Before removing the filter element, the precaution should be taken of disconnecting the engine intake hoses from the filter box in order to prevent any possibility of dirt entering the hose and engine. The filter element may then be withdrawn from the housing after releasing the flour over-centre cilps, and removing the lid. Thoroughly clean out the inside of the filter box before fitting a new element, ensuring that its correctly seated. Refit the cover lid, and engine intake hose.

### Spare Wheel & Jack

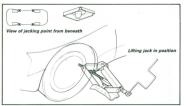
A 'compact' spare wheel is used on the Elan to enhance luggage space, and, through its light weight, makes mounting of the spare easier. A plastic bag is supplied in which to place the damaged tyre assembly.

In the event of a puncture, proceed as follows to fit the spare wheel.

 Ensure that the vehicle is parked on a firm level surface. Firmly apply the parking brake, engage first or reverse gear, and chock the wheel diagonally opposite to that being changed.



2. The spare wheel, wheelbrace and jack are mounted beneath the boot floor. Pull up the boot floor, and turn the wheel clamping screw counterclockwise to release the spare wheel and wheelbrace. Unclip the jack handle from the underside of the floor, and remove the jack from its location to the right of the spare wheel well.



- 3. Before jacking up the car, use the wheeltnoce to turn the four wheel both half a turn countercicdwise. Place the jack beneath the appropriate jacking point, entire just ahead of the near wheelach, or to the near of the front wheelach. Turn the jack screwthread clockwise to raise the jack, and position carefully so that the hole in the jack platform, engages with the conical both head in the body at the jacking point. Do NOT use the jack at any other position.
- Hook the jack handle into the screwthread, and operate the jack to raise the car only sufficiently for the tyre to clear the ground. Continuously monitor the security and stability of the jack during this process.
- WARNING: Do not get into the vehicle or run the engine whilst the car is supported by the jack. Under no circumstances must ANY work be carried out under the car when it is raised on the jack, unless a chassis stand is used to support the car.
- Remove the wheel bolts, and withdraw the wheel from the hub. Place the wheel into the plastic bag provided for carriage to a tyre depot.
- Mount the spare wheel onto the hub and fit the original wheel bolts turning clockwise. Tighten lightly using the wheelbrace.
- Lower the car using the jack handle to wind down the jack, and restow the jack in its location in the boot underfloor.
- Tighten the wheelbolts securely in a diagonal sequence. At the first opportunity, have the wheelbolt torque checked, and set to 80 – 88 Nm (59 – 65 lbf.ft). Check and set the spare tyre pressure to 4.0 bar (60 lbf)in<sup>7</sup>).

WARNING: The spare wheel supplied is for EMERGENCY USE ONLY, and must be replaced with the normal wheel and prive equipment as a soon as possible. Only one spare wheel may be used on the vehicle at any one time. When the spare wheel is in use differential type warw will be experimed and the handling characteristics of the car modified. It is therefore necessary to observe the following recommendations: then half the car's potential relative to the perturbing rout conditions assigned to a recommended maximum speed of 50 mph (80 km/h) under the most favourable conditions.

 When following other vehicles, Lotus recommend that you observe the U.K. Highway Code or the American Safety Council guidelines for vehicle spacing; this advice applies equally to spare wheel usage as to all other motoring situations.

- Spare wheel tyre pressure: 4.0 bar (60 lb/in2).

Before re-fitting the standard wheel, ensure that the mating face on both the wheel and hub is clean, and free from corrosion; otherwise a wheel vibration and/or loosening of the wheel bolts may occur.

Aways retow the spare wheel and wheel changing equipment in ther correct locations to prevert inaccurs times could agrange to other components or to the body. Place the spare wheel into the boot floor well with the outside of the wheel downnost, and a wheelbh the logestimoted over the security pitters hole in the body. Fit the clamping screw through the wheelbhase clip, and with the wheelbase positioned as shown in the diagram. With the socket and fed into one end of the wheel with these. Secure the wheel and wheelbase. Fit the jack handle into its clips on the underside of the boot floor, and the jack into its modeled housing.

### Tyres

The Michelin MXX-2 (Tucho) or Michelin MXV-2 (NA) pres fitted to the car from new, are engineered to provide the optimum balance of ride and handling characteristics, and are the ONIX' pres approved by Lotus for all year round use on whether. The years should be inspected regularly for grain of cuts, abarsions or other damage, and for any univen tread wear patterns. Uneven treadwear may deater. Softyr considerations have be paramound when assessing here condition and serviceability, and the yer esplaced if any doubt exists, or if the legal tread depth limits are approched.

The cold tyre pressures should be checked every week, or every 1,000 miles (1,000 km), whichever is the soone; and corrections maked as necessary. The spare tyre pressure should also be checked occasionally. See "Cerbinal Data" at the back of the handblood be for the pressures. Underfination will cause accessive wear, rapid of the non-thouse of the tyre pressures. The spare checked because and the main a hard rich and increased susceptibility to byre damage. It is important that the prepressures are adjusted only when the tyres are cold (or three less than one mile), as

MAINTENANCE

their pressure at other times is dependent on how warm the tyres are. It is usual for pressures to increase by 0.3–0.5 bar (4–8lb/in<sup>2</sup>) when the tyres are warmed to normal running temperature. Always replace the tyre valve dust cap to prevent the ingress of dirt and moisture into the valve, which could cause leakage.

At specified service intervals, the wheel and tyre assemblies should be balanced with the wheel located by the centre spigot – NOT by the wheel both balanced to maintain the correct handling feel and minimum steering wheel shake, it is very important that the radial and lateral run out of the tyres are to the high standard required by Lotus Cars. If any difficulty is experienced with replacement tyres, refer to the tyre manufacturer.

### Winter Tyres

Winter tyres provide enhanced performance in snow and in icy conditions, but cannot be expected to match the exceptional performance levels of the standard fitment tyres under all other conditions which may be encountered. Winter tyres should not therefore be used as a 'year round' fitment.

Michelin X M + 5 185/60 x 14 winter tyres, with or without atuds, may be fitted only in complete care sets, using approved 14 in. steel wheels (cogether with alternative wheel botts teen your dealer). For tyres without studs, a maximum speed of 118 mph (196 mth) must be boenewd. If studged byres are fitted, in countries that permit their tilts inth) must be boenewd. If studged byres are fitted, in countries that permit their the back of the vehicle by the tyre fitting depct. Dealed of the speed restrictions for studged tyre usage in European countries, are listed in "Enchard Data".

### Battery

### WARNING:

$$\label{eq:point_point} \begin{split} \text{POISON/DANGER} & - CAUSES SEVERE BURNS - KEEP OUT OF REACH OF CHURDER. Contains subploria call - avoid contact with skin, eyes or clothing. Andiote: External - flush with water, Internal - drink large quantities of water or milk. Follow with milk of magness, beaten egg or vegetable OI. Call physician immediately; Eyes - flush with water for 15 minutes and get prompt medical attention. \\ \end{split}$$

Batteries produce explosive gases. Keep sparks, flames and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.

### CAUTION:

- Disconnect the negative (earth; black; '-') battery cable first, and re-connect last, to minimise the possibility of an accidental short to earth of the battery positive connection.
- Before disconnecting the battery, wait for at least ten seconds after switching off the ignition to allow the engine management system to adjust the setting of some components ready for re-starting.

- iii) After battery re-connection, a change in the engine performance characteristics may be noted for a period whilst the computer controlled engine management system "re-learns" some of its settings. The duration of this period will depend on driving style, but may be shortened by steady cruising in 4th gear at about 40 mph.
- iv) Whenever the battery is re-connected, or a 'jump' start attempted, first ensure that the keys are removed from the vehicle, since under certain circumstances the central door locking may operate and lock both doors.
- v) If fitting electrical accessories of any description, note that these also must be of negative earth polarity.

The pattery is located beneath the floor of the roof stowage compartment on the right hand side, and is accessible as follows:

If the soft top is raised -

- Release the two over-centre latches at the windscreen header rail, and pull back the front of the soft top to release the roof tensioning mechanism.
- Raise the rear edge of the soft top sufficiently to enable the roof stowage lid to be raised (pull release handle in the right hand door jamb).
- At the right hand side of the roof stowage compartment, pull back the rear edge of the carpet to reveal the battery access cover. Use the tag provided to pull the cover from its four corner fasteners.

If the soft top is down -

- Open the roof stowage lid (pull release handle in the right hand door jamb), and pull out the folded soft top assembly.
- At the right hand side of the roof stowage compartment, pull back the rear edge of the carpet to reveal the battery access cover. Use the tag provided to pull the cover from its four corner fasteners.

A Delco Remy 'Freedom' maintenance free battery is fitted, which requires no routine topping up of the electrolyte; and no such provision is made. The battery is equipped with a built in hydrometer which provides a visual indication of the state of charge of the battery. This need be referred to only if engine cranking, or other electrical problems arise. Incorporated into the top of the battery casing, is a small round window, which should be wiped clean and viewed vertically with the aid of a lamp in poorly lit conditions (do NOT use a naked flame!). One of three possible conditions will be observed.



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Green dot visible within dark area - battery is sufficiently charged for normal use.

Dark with no green dot – battery is in a low state of charge and should be re-charged before use.

Clear or light yellow - electrolyte level is low due to battery or charging system fault. See your dealer.

### **Battery Charging**

If the hydrometer indicates that the battery needs recharging, the battery should first be removed to a well ventilated area to avoid a build up of hums in the battery compartment. Observe the safety precautions at the beginning of this section, before disconnecting first the negative battery cable, and then the positive cable. Use a casefully in the battery out. Take care when handling the battery to avoid sharp knocks or shocks, and keep as unprint as possible.

Charge the battery following the charger manufacturers instructions while observing these basic rules:

- If the green dot shows in the hydrometer, there is no need to charge the battery. Charging attempts will only increase the possibility of undesirable overcharge effects.
- Do not attempt to charge the battery if the hydrometer is clear or light yellow and there has been a cranking problem – replace the battery.
- Depending on state of charge, temperature and charger capacity, the battery will
  accept a charging rate of between 3 and 50 amps. However, at high rates the
  battery may eject electrolyte through the vents, and/or become hot over 52°C
  (125°F). Reduce the charging rate and/or stop for a time to allow the battery to
  cool.
- Continue charging until the green dot is visible in the hydrometer.

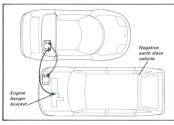
When the battery is fully charged, replace in its compartment and secure with the clamp plate. Re-connect the positive lead first and the negative last.

### 'Jump' Starting

If the battery becomes discharged to the extent that the engine cannot be started, proprietary good quality 'jumper cables' may be used to connect with the battery of a second vehicle in order to provide the energy necessary for starting.

WARNING: It is most important that the correct procedure is followed in order to avoid damage to either car's electrical system, and most importantly, to minimise the danger of a spark induced battery explosion. Check that the slave vehicle also has a NEGATIVE EARTH electrical system.

- With the engine of the slave vehicle running at a fast idle, use one jumper cable (red) to connect the positive (+) terminals of both batteries.
- iii) Connect one end of the other jumper cable (black) to the negative (-) terminal of the discharged battery.
- iii) A spark will occur when the other end of this cable (the final connection) is connected to an earth on the slave vehicle. This connection should therefore be made to a point away from the battery, and away from any fuel vapour area or moving parts. An engine hanger bracket is often ideal.



iv) Start the car in the usual way and run at a fast idle.

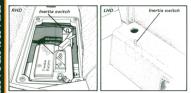
v) A spark will occur at the first disconnection of a jumper cable, so it is essential that the first disconnection is made from the slave vehicle earth. Both batteries (especially the discharged one) will be 'gassing' heavily at this time, and if the first disconnection is made at a battery terminal, there is a danger that the hydrogen gas may be ignited by the spark with a resultant explosion.

vi) Have the cause of the flat battery investigated and rectified.

### Inertia Switch

The safety inertia switch is designed to operate on impact, such as will occur in an accident, to cut out the fuel pump, and minimise any fire hazard. The central door locking system is also activated to unlock both doors.

On right hand drive cars, the switch is located in the battery compartment beneath the



right hand side of the roof stowage compartment floor, and on left hand drive cars, beneath the left hand speaker trim panel. The switch may be reset by pressing down the plunger which pops up when the switch is triggered, with an access grommet provided for this purpose on left hand drive cars.

### Fuses

The two main fuseboxes are located ahead of the passenger door hinge post, and in the top of the instrument binnacle.

For access to the former, use a small coin to release the quarter turn fastmer at the form lower edge of the tradeoux protective over, and unholds the tocore from the top and mar edges to reveal the 25 fuess. For those in the instrument binnach, remove the access panel on top of the binnach, by releasing the two panel relating sources. Each fusas are fitted at the right of the relaty panel, and on left hand drive care, fuses are fitted above the four relays fitted on the accutte beam.

In addition, the two fuses for the radio, together with two fuses and a connector block for a cellular telephone, are located next to the inertia switch: on RHD cars within the battery compartment; on LHD cars beneath the left hand speaker trim panel.

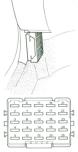
The fuses are coloured according to their amperage rating and may be pulled out from their slots using the fuse extractor tool clipped to the main fusebox bracket in the passenger footwell.

Fuse colours: 2A – Black; 3A – Violet; 4A – Pink; 5A – Orange; 7.5A – Brown; 10A – Red; 15A – Light Blue; 20A – Yellow; 25A – Clear.

Upgrading a fuse rating, or interchanging any of the relays or modules, could result in permanent damage to a circuit or electrical component. If in doubt, consult your Lotus dealer.

### Main Fusebox (A) - ahead of passenger door hingepost

	Rating	Circuit
1	15A	Horns
2	7.5A	Air Cond.
3	7.5A	Fuel Pump
4	10A	RHD Lighting
	7.5A	LHD CDL
5	10A	ECM
6	. 5A	LH Sidelamps
7	5A	RH Sidelamps
8	3A	Radio Relay
		Logic (USA)
9	-	
10	3A	VSV
11	10A	Hazard
12	3A	Batt Services
13	5A	Stoplamps
14	5A	Int. Lamps
15	15A	Rear Fog
16	10A	DI & Reverse
17	15A	Wash/wipe
18	3A	Ignition I
19	3A	Mirror Timer
20	3A	Ign. Relay
21	5A	Mirrors
22	3A	Window Switch
23	20A	Heater Blower
24	15A	Cigar Lighter
25	-	

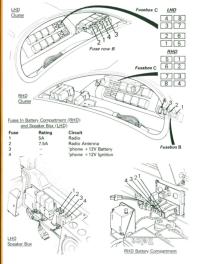


### Fuses Above Instrument Cluster

Vindow Lift
/indow Lift
ooling Fan
ooling Fan

e Rating	Circuit
e Hating abox C	Circuit
15A	LH H/L Motor
15A	RH H/L Motor
7.5A	RHD CDL
10A	LHD Lighting
5A	Coolant Pump
7.5A	LH Dip Beam
7.5A	RH Dip Beam
7.5A	LH Main Beam
7 5 4	DU Main Dann

Fus



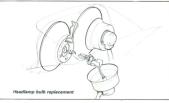
### **Emergency Headlamp Elevation**

Each headlamp pod is raised and lowered by an electric motor located behind the pod in the engine bay. For maintenance, or in an emergency, the pods may be raised manually by turning the motor shaft using the knob on top of the motor body. If necessary, unplug the electrical connector block.



### **Bulb Replacement**

Headlamps: Raise the headlamp pods by switching on the headlamps, or winding up manually (see above). Unplug the electrical connector, pull off the rubber boot, and



unhook the wire spring clip securing the halogen bulb. NOTE - Do not touch any part of a halogen bulb glass envelope with the fingers, as the greasy deposit left behind will crastically shorten the bulb's life.

Fit the new bulb into position, retain with the spring clip, fit the protective boot and connect the electrical plug.



Rear Large Cluster: The rear large cluster bulbs are accessible from within the boot after removing the protective cover secured by two quarter turn fasternes. With the exception of the rear fog lamps, all the bulb holders may be twisted and pulled out from the lamp body, and the baynout fitting bulbs moved. The rear fog lamps, use halogen NED TE - Do nother the security of the grassy deposit left behind will drastically shorten the bulbs life.

Front Sidelamp & Turn Indicator: Remove the two screws securing the lens, and push and twist the bayonet fitting bulb.

Side Repeater Lamp: Access to the back of the lamp is provided via the space ahead of the open door. Twist the bulbholder counterclockwise to remove, and pull out the capless bulb.

Interior Lamp: Prise out the lamp from the interior mirror body using the slot at the outer edge of the lamp. Pull out the bulb holder and the capless bulb.

Instrument & Tell Tale Bulbs: The replacement of these bulbs should be entrusted to your dealer.

### VEHICLE WARRANTY

### United Kingdom:

Should you find it necessary to have repairs carried out under the terms of the Warranty, wherever possible return your car to the Lotus Car Dealer from whom it was purchased. If this is not practicable, any other Lotus Dealer can undertake Warranty Service if you provide proof of the car's Warranty, a convenient method being the presentation of the Owner's Handbook.

By observing the following points, you should not find any difficulty in having your claim handled.

- Explain the nature of your concern to the Lotus Dealer and make it clear that the car is within the Waranty period, evidence of this being provided by the Registration of Sale page at the back of this handbook. At the same time it is necessary to show that the recommended routine services have been carried out at the specified intervals by a Lotus approved dealer – which is, in fact, a requirement of the Waranty.
- 2. The Warranty covers only defects of material or workmanship, normal maintenance adjustments or replacements are excluded. Examples of normal maintenance, which are carried out during routine servicing are, adjustments i approach, tightening of nucl. bolic or hose cities, which are cardination of interior or exterior finish due to war and exposure, replacement of broken just. Phaters and radio and
- 3. Lotus Dealers can settle most claims including labour charges without pror reference to the factory. In some cases it is necessary for the daler to obtain authority from Lotus before proceeding with the repair. However, your Dealer will handle such matters for you with the minimum dealy. Where the Dealer is not satisfied that the claim is due either to faulty material and/or workmanthig, a charge may be made in respect for prepairs. The claim will then be submitted to Lotus Cars Ltd. for adjudication and will be dealt with as guickly as possible, if accepted you will be reimbursed by the Dealer.
- 4. Should it be necessary to have repairs carried out whils the car is abroad, the service of a Lotus Dealer should be sought. However, Lotus Dealers in Export Territories are not obligated under the United Kingdom Warranty scheme and may make a Charge for the repairs. In cases of this nature, retain your invoice may make a charge for the repairs. In cases of this nature, retain your invoice may make a charge for the repairs. In cases of this nature, retain your invoice may make a charge for the repairs. In cases of this nature, retain your invoice may make a charge for the repairs. In cases of this nature, retain your invoice may make a charge for the repairs. In cases of this nature, retain your invoice may retain the care of the retain the retain the care of the care of the retain the care of the retain the care of the retain the care of the care of the retain the retain the retain the care of the retain the care of the care of the retain the ca

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### Export Territories:

In order to give an expeditious service allied to local conditions. Lotus Cars Ltd., sell cars to Lotus Dealers/Importers who make and administer their own Warranty with their Dealer Network, which may well be in accordance with some, or all, of the foregoing. Owners of cars in Export Territories are therefore recommended to familiarise themselves with the procedure as it applies when purchasing the car.

Where an owner removes his place of residence to another Territory, while the car is still within the Warranty, he should apply to the selling Dealer/Importer for the recommended Warranty procedure.

### Personal Export:

LUBRICANTS

RECOMMENDED

Where an owner purchases a car under this scheme, for delivery in the United Kingdom, the United Kingdom Warranty shall apply only while the owner is resident in the United Kingdom. If the owner removes the car to his country of residence (named at time of purchase) or some other Territory during the Warranty period, he shall notify the Distributor/Importer for that Territory. The remainder of the Warranty period will be covered by the said Distributor/Importer, only after such notification.

This explanation is a guide to the Warranty procedure. For full details of the vehicle Warranty, refer to the Warranty Certificate.

### RECOMMENDED LUBRICANTS

### Engine

In order to ensure the longevity and reliability of the vehicle, it is most important that only the specified lubricants are used. Adhere strictly to both the quality standard and viscosity rating, for the temperature range in which the vehicle will operate before the next service. The two most common oil quality classifications to be found labelled on oil containers, are API (American Petroleum Institute) and CCMC (Committee of Common Market Constructors). If neither of these classifications, with the specified standard is quoted, do not use the oil.

Manufacturer	SAE Above -20°C	√iscosity Below –20°C	API	CCMC
Preferred Various	10W/30	5W/30	SF/CD or SG	G2 or G3
Alternatives Various	15W/40	5W/30	SF/CD or SG	G2 or G3
Mobil 1 Rally Formula	5W/50	5W/50	SG	G3

) whichever	6,000 miles (10,000 km)
) sooner	12 months (NA) 6 months (Turbo)
- N.A.	At 6,000 miles then every
	12,000 miles (20,000 km) or
	12 months (whichever sooner)
- Turbo	6,000 miles (10,000 km) or
	12 months (whichever sooner)
	) sooner - N.A.

\* In severe service conditions (dusty areas, or cold, stop/start driving), change twice as frequently.

Capacity - refill including filter - refill without filter change 3.5 litre (6.2 imp. pt.) 3.3 litre (5.8 imp. pt.)

SAE 5W/30

A100E6036V

Transmission (Gearbox & Final Drive Assembly) Only approved product Motor Oil

Viscosity Lotus part number Oil change interval Capacity - refill

### Steering

Only approved product Lotus part number

### Rear Hube

Lubricant type

Consistency

### **Brake System**

Hydraulic fluid

### Engine Coolant Additive

lend
pt.)

Mobil 1 BTS 9775 Fully Synthetic 30.000 miles (50.000 km) 1.8 litre (3.2 imp.nt)

Nippon Oils 'Besco A.T.F. Dexron' A100E6088V

Lithium Complex type wheel bearing grease NLGI No. 2

DOT 3 or DOT 4

### TECHNICAL DATA

Engine Type Designation - N.A. - Turbo Capacity Bore Stroke Compression Ratio - N.A. - Turbo Valve Actuation Firing Order Maximum Engine Speed - N.A. - Turbo Idle Speed - N.A. - Turbo Spark Plugs - Type - N.A. - Turbo - recommended - alternative - Gan - suffix '11' or 'U11' - others Fuel Injection Type Injection Timing - N.A. - Turbo Oil Pressure - Minimum

### Transmission

Type				Manu	al, 5 spe	ed + rev	verse
Gear	Internal ratio	Final	Drive	mph/1	000 rpm	km/h/1	000 rpm
		N.A.	Turbo	N.A.	Turbo	N.A.	Turbo
First	3.333 : 1	4.177	3.833	4.84	5.20	7.78	8.35
Second	1.916:1	4.177	3.833	8.41	9.04	13.5	14.5
Third	1.333 : 1	4.177	3.833	12.1	13.0	19.5	20.9
Fourth	1.027 : 1	4.177	3.833	15.7	16.9	25.3	27.2
Fifth	0.829:1	4.177	3.833	19.4	20.9	31.3	33.6
Reverse	3.583 : 1	4.177	3.833	4.50	4.85	7.24	7.78

### Dimensions

Overall Length	3803 mm (149.7 in)
Overall Width - excl. mirrors	1734 mm (68.3 in)
<ul> <li>inc. mirrors</li> </ul>	1885 mm (74.3 in)
Overall Height (roof erected)	1230 mm (48.4 in)
Wheelbase	2250 mm (88.6 in)

4 cylinder, in line 4XE1-M 4XE1-MT 1588 cm<sup>3</sup> (96.9 in<sup>3</sup>) 80.00 mm (3.145 in) 79.00 mm (3.110 in) 9.8.1 85.1 DOHC with hydraulic tappets 1342 7.700 rpm 7 200 rpm man 000 950 rnm NGK BKR6E-11 or ND K20PR-U11 NGK BKR6F or ND K20PB-U NGK BKR7E-11 or ND K22PR-U11 1 1mm (0.043 in) 0.8mm (0.031 in) Electronic Multi-Point Simultaneous double fire Semi-sequential double fire 0.35 bar at warm idle

al Drive		mph/10	000 rpm	km/h/1000 rpm	
	Turbo	N.A.	Turbo	N.A.	Turbo
7	3.833	4.84	5.20	7.78	8.35
7	3.833	8.41	9.04	13.5	14.5
7	3.833	12.1	13.0	19.5	20.9
7	3.833	15.7	16.9	25.3	27.2
7	3.833	19.4	20.9	31.3	33.6
7	3.833	4.50	4.85	7.24	7.78

Track - Front - Rear Ground Clearance Kerb Weight - N.A. - Turbo Gross Weight - N.A. - Turbo Maximum Luggage Capacity

### Canacities

Engine - Refill - Inc. Filter - Without Filter - Drv Add/Full Dipstick Mark Difference Transmission Engine Cooling System Fuel Tank

### Front Suspension

Ride Height (for geometry check)

- Camber
- Castor Steering Axis Inclination Scrub Badius Toe-out

### Rear Suspension

Ride Height (for geometry check)

Camber Toe-in

### Wheels

Type - Standard - For Winter Tyre - Temporary Spare Size - Standard - For Winter Tyre - Temporary Spare Wheel Bolt Torque\*

1486 mm (58.5 in) 1486 mm (58 5 in) 130 mm (5.1 in) 997 kg (2198 lb) )full fuel tank 1020 kg (2249 lb) ) 1215 kg (2679 lb) + inc occupants 1238 kg (2730 lb) > & luggage 40 kg (88 lb)

3.5 litre (6.2 imp. pt) 3.3 litre (5.8 imp. pt) 4 75 litre (8.4 imp. nt) 1.1 litre (1.9 imp. pt) 1.9 litre (3.35 imp. pt) 6.25 litre (11.0 imp. pt) 46 litre (10.2 imp. gall)

165 mm (forward inhoard pivot of lower wishhone)  $-0.25^{\circ}$ : + 0.25°  $+ 1^{\circ}; + 0.5^{\circ}, -0$ 10.5° - 3mm 0° to 0.25° total

174 mm (rear inboard nivot of rear wishbone)  $-0.5^{\circ} + 0.25^{\circ}$ + 2.0mm each side: ± 1 mm

```
Light alloy, 4 bolt fixing
Steel, 4 bolt fixing
'Compact' steel, 4 bolt fixing
614 Ly 15 H2E 60
6.J x 14
3.5.1 x 14 H2
80-88 Nm (59-65 lbf.ft)
```

\* Note that the wheel bolts for the winter steel wheels are shorter than those for

the standard alloy wheels. Torque remains unchanged.

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### Tyres Type

DATA

CHNICAL

 Type
 Standard
 NA.

 - Turbo
 Turbo

 - Winter Tyre

 - Temporary Spare
 Size

 Standard
 NA.

 - Winter Tyre

 - Winter Tyre

 Pressures
 Standard

 - Nandard
 NA.

 - Turbo

 - Winter Tyre

 - Winter Tyre

 - Winter Tyre

 - Torbo

 Winter Tyre Gover Unimitation

### Limitations on use of Studded Winter Tyre: Country Period

Austria	15th Nov - 7th April
Belgium	1st Nov - 31st March
Denmark	1st Oct - 30th April
Finland	1st Oct - 30th April
France	15th Nov - 15th March
Germany	NOT PERMITTED
Holland	NOT PERMITTED
Italy	15th Nov - 15th March
Norway	15th Oct-30th April
Switzerland	1st Nov - 31st March
Sweden	1st Oct-30th April
U.K.	NOT PERMITTED

### Brakes

Type

Disc Size - Front - Rear Operation

Circuit Parking Brake Michelin MXV – 2 Michelin XX – 2 Michelin XX – 2 Goodyear space saver 20550 VR15 20570 R14 22 bar (22 bin<sup>2</sup>) front 5 rear 18 bar (265 bin<sup>2</sup>) front 5 rear 2.0 bar (22 bin<sup>2</sup>) front 5 rear 4.0 bar (60 lb/m<sup>2</sup>) 18 mph (190 km/h)

	ed mph (km/h)
<b>Normal Roads</b>	Motorways
50 (80)	62 (100)
37 (60)	56 (90)
50 (80)	62 (100)
50 (80)	75 (120)
56 (90)	56 (90)
56 (90)	75 (120)
50 (80)	56 (90)
50 (80)	NOT PERMITTED
13 (70)	68 (110)

### Electrical

Voltage Alterna			
Battery	-	type	
	-	cold start perf. (DIN)	
	-	Euro size code	

12V negative earth Nippondenso 60A Delco Freedom Maintenance Free 842 255A L2

Light Bulbs	Wattage	Replacement Bulb Number	Туре
Headlamps - outer	55	448	H1
- inner	55	448	H1
Front Sidelamps	5	501	W10/5
Front Turn Indicators	21	382	P25-1
Stop Lamps	21	382	P25-1
Tail Lamps	5	207	B19/5
Rear Turn Indicators	21	382	P25-1
Rear Fog Lamps	55	453	H3
Reversing Lamps	21	382	P25-1
Side Repeater Lamps	5	501	W10/5
Interior Lamps	5	501	W10/5
Boot Lamp	10	258	SU8.5-8

### WARRANTY

- The Company will during the warranty period of 8 years from delivery new to the first setal curchaser, or first registration, whichever is the sooner, and subject to the car being properly submitted for examination to an authorised Lotus Deeler: replace or repair the steel chassis structure or composite body structure in the event of failure due to corrosion PROVIDING THAT the steal structure is inspected/retreated in accordance with the instructions contained in the separate booklet 'B year Arti-Corrosion Guaranter', and that the car has received normal and reasonable usage
- The Company will during the warranty period of 12 months with unlimited mileage from delivery new to the first retail purchaser, or first registration whichever is the sconer and subject to the car being promptly submitted for examination to an authorised Lotus Dealer replace or repair any other part which in their opinion is delective owing induxed will be refunded in accordance with the rating warranty rate and labour time schedule.
- Within the Wamaniv period of 12 months the Company will repair or replace on the terms of the foregoing clause any part susplied under that clause which in the Company's opinion is defentive owing to faulty workmanship or materials. Any replacement part fitted will be subject to the standard parts wenanty which epplies for a period of air months, or the remainder of the new cir warranty whichever is lowner.
- The Company's undertaking to repair or replace applies only to parts of Lotax design, that is, parts manufactured by Lotusi design, but during the Warranty period at the request of the purchaser (who shall reimburse the Company for may be defective.
- Two, radio/tape player and battery menufacturers operate their own warranty procedures by direct access by owners or dealers. Nevertheless the general conditions of the Company's Warsanty will apply.
- Should the Company in their discretion carry out any extra work or supply any extra parts free of charge, they shall be under no legal liability of any kind in connection therewith and the provision of the Wayaety shall not in any
- 7. This Warranty does NOT apply
  - a. If the delect is in any way attributable to fitting parts by way of replacement or addition not approved as direct replacements for those originally specified.
  - b. If the car has been used in connection with motor racing, tallying or any motor competition. If the detect is attributable to mishandling or misuse

  - s. If the car has not been properly serviced in accordance with the Company's economyriation
  - 1. If identification numbers have been altered or removed.
- In the case of alleged delects the Company shall be allowed access to the car.
- The Company reserves the right to call in for inspection at the Factory any parts alleged to be defective in the event of replacement parts being supplied the replaced parts will become the property of the Company.
- 10. The Warranty rights set out herein may be transferred to a second or subsequent owner providing that the made under Wananty from second or subsequent owners will be accepted on presentation of the Service
- 11. Persons dealing in the Company's products are not the agents for the Company and have no authority to assume
- 12. In the event of any disagreement between the Company and an Owner concerning the application of the Warranty or any claim arising hereunder it shall be referred to a single arbitrator to be apreed between the parties.
- 13. The Company accepts no responsibility or compensation liabilities other than those mentioned above.
  - This Wananty does not remove the purchaser's rights under statute.

### PRE-DELIVERY INSPECTION

### Engine Bay

Check engine & transmission oil levels Check security of engine oil filter Check coolant level Check brake fluid reservoir level Check clutch adjustment Check power steering fluid level (if fitted)

### Start engine:

Check cooling system for leaks Check engine & transmission for oil leaks Check fuel system for leaks Check power steering system for leaks (if fitted) Use 'Tech 1' tool to check data list & for stored trouble codes

### Eucl Tank

Completely fill fuel tank & check for leaks

### Wheels and Tyres

Check torque of wheel bolts Check tyre pressures inc. spare

### Electrical

Check security of battery terminals Check operation of all exterior & interior lamos Check operation of headlamp pod delay Check headlamp alignment Check operation of horns & hazard switch Check wiper operation in all modes & park position Check operation of windscreen washers & reservoir level Check operation of all instruments Check operation of door windows Check operation of heater/air conditioning & blower fan Check operation of door mirror controls & heaters Check operation of audio equipment

### Body

Check operation of doors, door locks & central locking Check bonnet and roof stowage lid release mechanism Check soft top roof erection & stowage Check interior trim for damage & cleanliness Check operation of seat belts Check all paintwork for damage Check presence of toolkit, jack & literature pack

### Road Test

Road test the vehicle and carry out any further rectification work as necessary.

# MAINTENANCE

Date of Purchase: Dealer's Stamp Doors. Ignition/Steering Column Lock: Glovebox:

Owner's Name:

Reg/Licence No: V.I.N. Engine No: Colour: Key Nos:

Address:

Date:

### PRE-DELIVERY

P.D.I. carried out by: Dealer's Stamp

Date:

WARRANTY ACKNOWLEDGEMENT/ CHANGE OF OWNER	WARRANTY ACKNOWLEDGEMENT/ CHANGE OF OWNER		
		Reg./Licence No.	
Second Owner's Name		V.I.N.	
Address		Engine No.:	
		Colour	
		Date of Transfer:	
Date of First Transfer:		Second Owner:	
Dealer's Stamp	Dealer's Stamp	Address:	
Date:			
	Date:	Second Owner's Signature	
	WARRANTY ACKNOWLEDGEMENT/ CHANGE OF OWNER		
WARRANTY ACKNOWLEDGEMENT/			
ACKNOWLEDGEMENT/ CHANGE OF OWNER			
ACKNOWLEDGEMENT/		NER	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's		Reg./Licence No.	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name		Reg./Licence No. V.I.N.	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name Address		NER Reg./Licence No. V.I.N. Engine No.:	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name		NER Reg./Licence No. V.I.N. Engine No.: Colour:	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name Address Date of		INER Reg./Licence No. V.I.N. Engine No.: Colour: Date of Transfer:	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name Address Date of Second Transfer:	CHANGE OF OW	INER Reg./Licence No. V.LN. Engine No.: Colour: Date of Transfer: Third Owner:	
ACKNOWLEDGEMENT/ CHANGE OF OWNER Third Owner's Name Address Date of Second Transfer: Dealer's Stamp	CHANGE OF OW	INER Reg./Licence No. V.LN. Engine No.: Colour: Date of Transfer: Third Owner:	

VOUCHER MAINTENANCE This partion to be returned to:

### LOTUS CARS LIMITED

NORWICH NORFOLK NR14 8EZ

This partion to be returned to:

### LOTUS CARS LIMITED

NORWICH NORFOLK NR14 8EZ

A SERVICE At 6,000 mls./10,000 km. or 6 months from registration (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
B SERVICE At 12,000 mls./20,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
A SERVICE At 18,000 mls./30,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
B SERVICE At 24,000 mls./40,000 km. or 6 months from last service (whichever sooner) Owner's Signature:	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp Signature:
Mileage: Date:	Signature:

A+C SERVICE At 30,000 mls./50,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp	A SERVICE At 54,000 mls./90,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:	Owner's Signature. Mileage: Date:	Signature:
B SERVICE At 36,000 mls./60,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp	B+C SERVICE At 60,000 mls./100,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:	Owner's Signature: Mileage: Date:	Signature:
A SERVICE At 42,000 mls./70,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp	A SERVICE At 66,000 mls./110,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:	Owner's Signature: Mileage: Date:	Signature:
B SERVICE At 48,000 mls./80,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp	BSERVICE At 72,000 mls./120,000 km. or 6 months from last service (whichever sooner)	This service has been completed in accordance with the Maintenance Plan Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:	Owner's Signature: Mileage: Date:	Signature:

A SERVICE	This service has been
At 78,000 mls./130,000 km.	completed in accordance
or 6 months from last service	with the Maintenance Plan
(whichever sooner)	Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
B SERVICE	This service has been
At 84,000 mls./140,000 km.	completed in accordance
or 6 months from last service	with the Maintenance Plan
(whichever sooner)	Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
A+C SERVICE	This service has been
At 90,000 mls./150,000 km.	completed in accordance
or 6 months from last service	with the Maintenance Plan
(whichever sooner)	Dealer's Stamp
Owner's Signature: Mileage: Date:	Signature:
B SERVICE	This service has been
At 96,000 mls./160,000 km.	completed in accordance
or 6 months from last service	with the Maintenance Plan
(whichever sooner)	Dealer's Stamp



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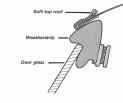
### SOFT TOP CARE

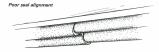
### CARE OF THE SOFT TOP ROOF

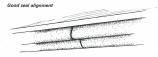
In addition to the soft top roof operating and care instructions contained in the handbook, the following notes are provided for further guidance in order that the maximum pleasure and longevity may be derived from your Lotus.

The Lotus Elan has been designed primarily to exploit the pleasures of open top motoring, experienced by driving with the soft top roof in its stowed position during fair weather conditions.

When exected, the soft top roof provides weather protection for the occupants and car intrior under the majority of normal circumstans. It is howevery possible that under certain adverse conditions, some water ingress will occur via the weathersatis, and in oder to inminise this risk is it worthwish enabling use the soals are seated correctly after raising the rood (do not forget to lower the windows before energing the roof). At the two availantsing priors slang the top of each door approvinc, neck the alignment of the seal ends and reposition if necessary so that there is continuous contact between the seal and top of the door glass when raised. <u>Optimum door</u> glass to roof seal alignment







Continued . . .

### Washing the Soft Top Roof

Caution: Lotus does NOT recommend that the Elan is subjected to a mechanical (automatic) car wash as some types of hrushes used in these devices may cause scratching of the flexible rear window, and accelerated ageing of the roof fabric. The car should be hand washed using the following instructions:

 Careful vacuuming of the soft top before washing may be helpful in removing excess dust and other foreign particles.

2. Wash in partial shade rather than strong sunlight, and wet the whole car before tackling the soft top.

Use a sponge (a chamois or cloth will leave lint, and a brush may abrade the threads) to apply a mild soap solution of lukewarm water. Do NOT use a detergent.

To avoid rings or spots, wash the entire top uniformly and let the soapy solution remain on the fabric for 2 to 5 minutes.

Rinse the whole car to remove all soap from the fabric and to prevent streaking on the car bodywork.

6. Remove surface water with a sponge and allow to air dry in direct sunlight.

Keeping the soft top clean by ngular washing will enhance the life and maintain the appearance of the nor, and facilities ubsequent cleaning. The use of stronger cleaners should be left to protessionals experienced in handling this type of fabrics as discoloration and diognation of the special protective inme layer may result. The application of twos finishes, dressing or preservatives will cause stains which are difficult to remove and therefore should be avoided.

TOP CARE SOFT

LSL 288