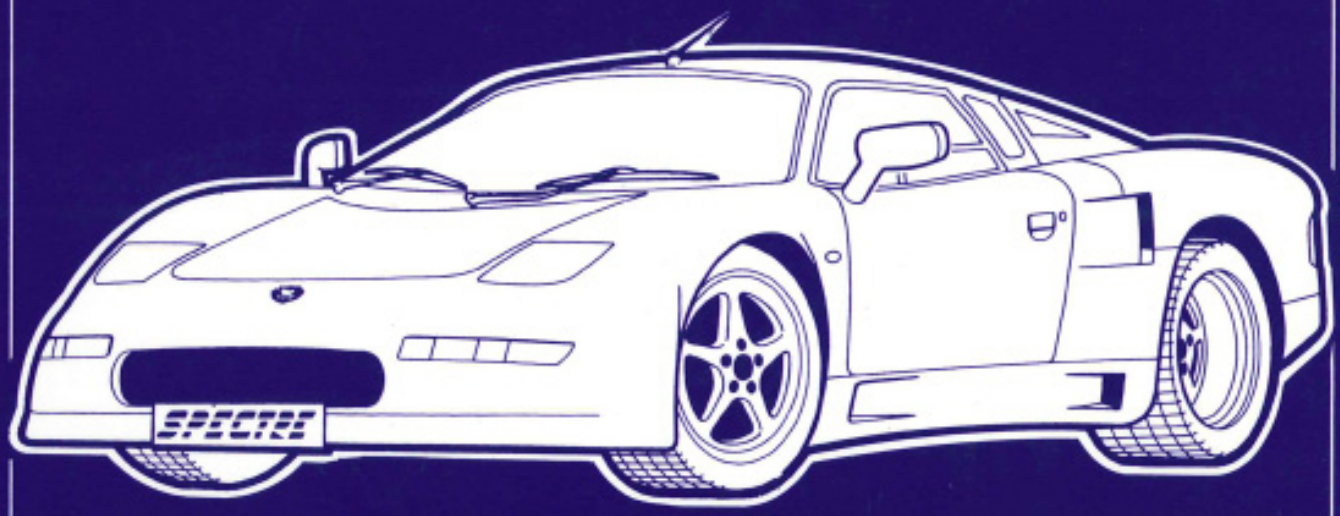
SPECTRE



Owners Handbook

SPECTRE

Designed by Ray Christopher

OWNERS HANDBOOK

Second Edition. Issued June 1996.

Spectre Supersports Ltd

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Prepared by Reece Documentation and Alan Dixon Illustration.

Revisions

When this handbook is issued with the new car it will already incorporate any revisions that have been necessary since it was first printed. Any revisions that are necessary subsequent to delivery of the car will be sent to those owners who have returned a Registration form to Spectre Supersports Ltd. The Registration forms will be found at the back of this handbook.

Amendment Record

Rev. No.	Issue Date	Date Installed	Section No.	Subject

Spectre Supersports Ltd. reserve the right to continually update their vehicles, products and manufacturing processes in the interests of reliability, durability and performance.

Preface

This Owners Handbook is provided to familiarise the new owner with the layout, controls and simple maintenance procedures that the driver needs to know about the car. It is recommended that some time should be devoted to reading this handbook before going out for the first drive. Throughout the handbook it is assumed that the owner is already an experienced driver.

The section on Starting and Driving introduces features of this car and the manufacturer recommends that the owner or driver should have first completed a course in driving a high powered supercar before driving on the public road. The section on Environmental Protection is of particular relevance today and is of importance to all drivers.

It has been assumed throughout that the owner knows little about technical matters, except what any driver should know, and that any problems will be referred to experienced engineers for attention. However, an expert engineer is not always available and should the car fail to operate properly this handbook may provide sufficient information for the owner to carry out brief checks and possibly locate the source of a problem; if this is of a minor nature perhaps the fault can be found and rectified using the information provided.

The most technical information included here is for changing a faulty bulb or fuse so that a journey can be continued in safety. There are also the checks that all drivers are expected to carry out such as, checking levels in reservoirs and topping up. There is also advice on watching out for problems arising. By carrying out the Owner Maintenance Checks and having the car serviced at regular intervals as recommended in Sect.16, the car should give a lot of pleasure and little trouble.

Sometimes problems arise, before or during a journey, when the driver is unsure whether it is wise to continue driving after a fault has become evident. The recommendation to contact your dealer before driving is stressed in various places in this handbook for particular problems that may arise. However, it is impossible to anticipate all occasions when expert advice should be called for and therefore it has to be left to the experience and wisdom of the driver to decide.

CONTENTS

INTERIOR EQUIPMENT

Section 1
INTRODUCTION

SAFETY

Spectre Supersports cars incorporate built-in design features to ensure that the users are carried safely and comfortably. They comply with all the relevant safety regulations with burst-resistant door locks, side impact bars and a collapsible steering column to protect the driver.

The Spectre R42 has an extremely rigid composite monocoque chassis with a body fabricated from carbon-reinforced composite sandwich materials featuring racing-style suspension.

The compact, aerodynamic functional design is based on the modern "Ground Effect Theory" to maintain maximum road adhesion depending on surface and weather conditions. Specially designed AP road-racing brakes on all four wheels match the high performance of the car. Rack and pinion power assisted steering is provided for positive road holding and safe cornering.

DRIVING CAUTION

Owners should be aware that a much higher level of skill than normal is required to drive high powered cars safely. They should always drive within their own capabilities and be especially vigilant under poor weather conditions and on wet roads.

Spectre Supersports recommend that a specialist course of advanced driving tuition should be undertaken before driving high powered cars on the road.

JACKING

WARNING

Only two specific points are provided for jacking up the car and reference MUST be made to the relevant section of this handbook before starting. This particularly applies to any garage and roadside emergency aid agencies who will not be familiar with the car. The owner MUST insist on them referring to Sect. 13 of this handbook before they attempt to tow or effect repairs.

OPERATING PRECAUTIONS

The precautions listed here are extremely important and should be followed at all times to ensure that damage to the car does not occur:

- **WARNING - DO NOT USE LEADED PETROL,** only use unleaded fuel. Any use of leaded petrol will irreparably damage the exhaust catalytic converters. Refer to the Technical Data section for information on grades and types of petrol permitted.
- Should the engine develop a misfire, switch off immediately to prevent damage to the catalytic converters.
- Never attempt to push-start the car.
- Conversions and extras - only the manufacturer's approved changes and additional equipment should be fitted. The integrity of the car and its safety may be compromised by unapproved alterations. Apply to the manufacturer or the approved agents for advice.
- ***Spectre Supersports* will not accept any liability for damage or defects arising from conversions and extras that they have not approved.**
- Maintenance - the recommended maintenance schedule included in this handbook should be followed closely and servicing checks, adjustments and replacement of lubricants and parts should be carried out at the intervals specified.
- Any detected fault or loss of performance should be investigated immediately. Damage may result if the car continues to be used.
- Electrical components - it is advisable to disconnect the battery before working on electrical equipment.
- Always turn off the engine before opening the engine compartment.
- Take great care with the engine compartment open. The engine and exhaust components will be extremely hot after running and may cause severe burns if touched.
- Always check for suspected petrol leaks and rectify immediately.

Section 1
INTRODUCTION

VEHICLE IDENTIFICATION

These locations are indicated on the diagrams and should be quoted in all correspondence when ordering spares.

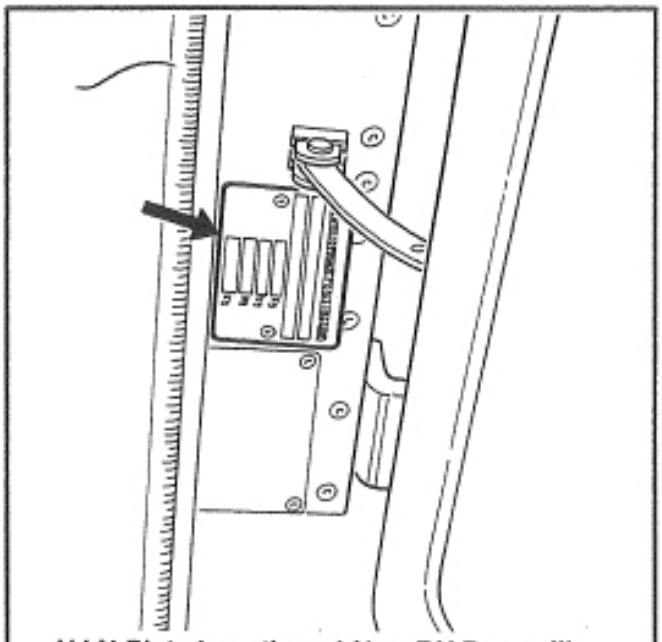
The VIN identification label is fitted on a door pillar and records the vehicle chassis number.

The chassis number is also recorded on a chassis strut at the bottom of the engine compartment near the rear end of the engine.

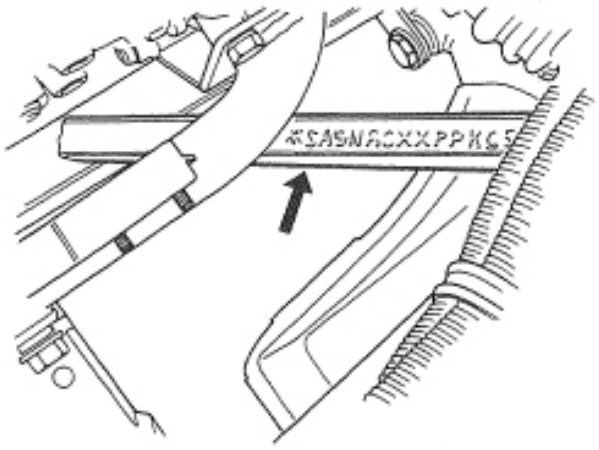
The engine number is marked on the lower edge of the aluminium casting, forward of the bell housing, on the left-hand side of the engine.

The gearbox number is marked on the top of the gearbox

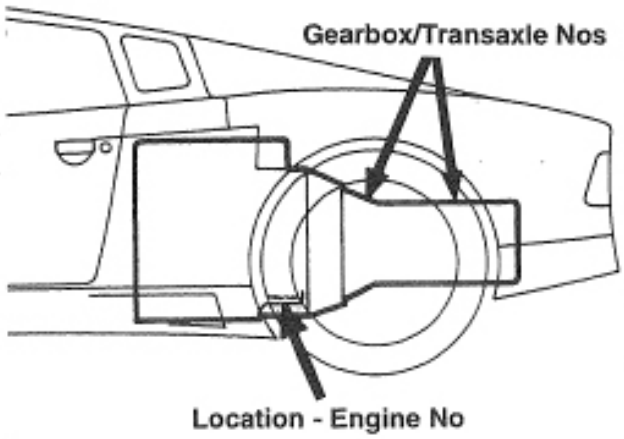
The number of the transaxle is marked on the top of the housing.



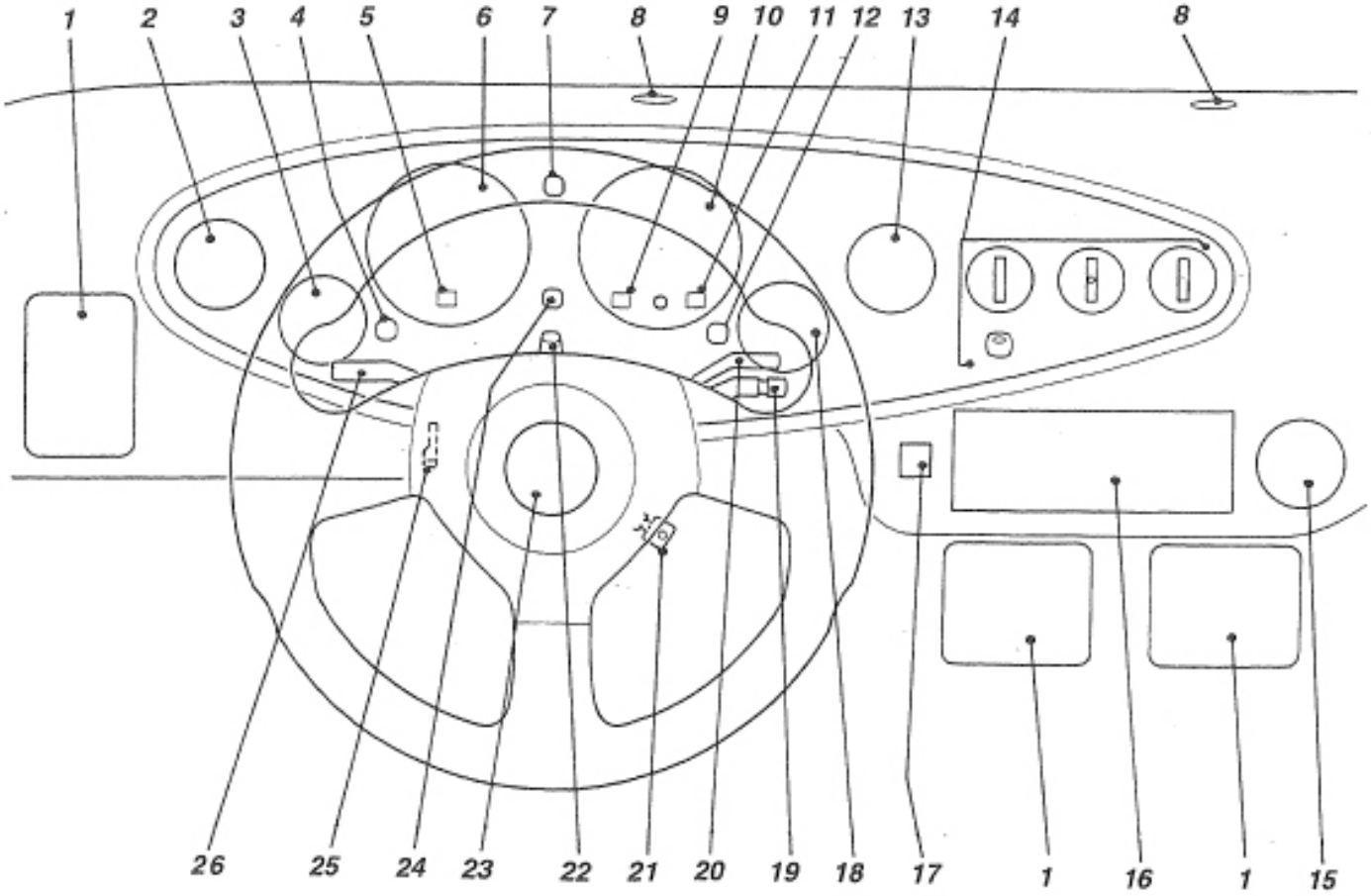
V I N Plate Location - LH or RH Door pillar



Chassis No Location - Engine Bay (RHS)



INSTRUMENTS AND CONTROLS



LEFT-HAND DRIVE CAR

1. Air vents.

2. Fuel gauge.

Indicates the amount of fuel remaining shared between the two tanks.

3. Engine temperature.

Max. coolant temp. not to exceed 110 deg. C.

4. Left turn indicator.

5. Computer fail light.

6. Tachometer.

Indicates engine speed x100 in revolutions per minute. DO NOT allow the engine revs to exceed 6800 or damage to the engine may result. Always change to a higher gear should the pointer near the maximum revs.

7. Handbrake / brake fluid.

Lights red when handbrake applied and light extinguished when released. If it lights red during journey it is to warn of low brake fluid level. Refer to Sect. 10 for information.

8. Adjustable demisters.

9. Low oil level indicator light.

10. Speedometer.

Indicates mph and kph with odometer total distance recorder and trip recorder.

11. Ingnition / battery charging warning light.

Warning indicator lamp, extinguished when engine running and battery charging.

12. Right turn indicator.

13. Oil temperature gauge.

Max. oil temp. not to exceed 120 deg.C

14. Air conditioning / heater controls.

Refer to Sect. 6 for operation.

15. Clock

16. Radio.

See maker's handbook for details.

17. Rear fog lights switch / indicator.

Refer to Sect. 7 for operation.

18. Oil pressure gauge.

Pressure to be between 1.3 and 3 bar.

19. Windscreen wash wipe switch.

Refer to Sect. 8 for operation.

20. Lighting main switch.

Refer to Sect.7 for operation.

21. Ignition switch.

Refer to Sect. 9 for operation.

22. Hazard warning light / switch.

23. Horn button.

24. Headlight main beam.

Lights blue when headlights on full beam.

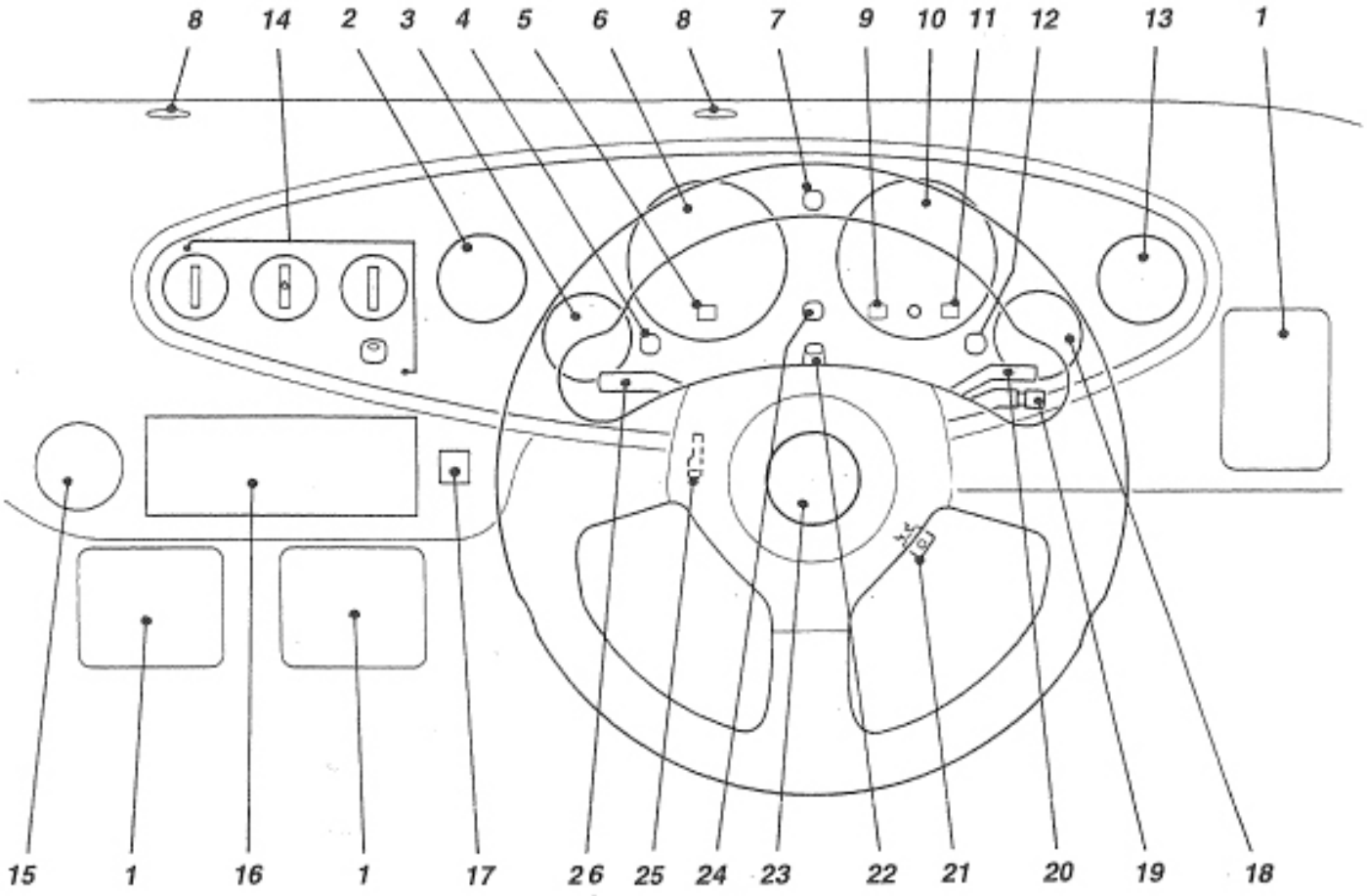
25. Steering column adjustment lock lever.

Refer to Sect. 9 for operation.

26. Headlight / indicator switch.

Refer to Sect. 7 for operation.

INSTRUMENTS AND CONTROLS



RIGHT-HAND DRIVE CAR

1. Air vents.

2. Fuel gauge.
Indicates the amount of fuel remaining shared between the two tanks.

3. Engine temperature.
Max. coolant temp. not to exceed 110 deg. C.

4. Left turn indicator.

5. Computer fail light.

6. Tachometer.
Indicates engine speed x100 in revolutions per minute. DO NOT allow the engine revs to exceed 6800 or damage to the engine may result. Always change to a higher gear should the pointer near the maximum revs.

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Lights red when handbrake applied and light extinguished when released. If it lights red during journey it is to warn of low brake fluid level. Refer to Sect. 10 for information.

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Max. oil temp. not to exceed 120 deg.C

14. Air conditioning / heater controls.
Refer to Sect. 6 for operation.

15. Clock

16. Radio.
See maker's handbook for details.

17. Rear fog lights switch / indicator.
Refer to Sect. 7 for operation.

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Pressure to be between 1.3 and 3 bar.

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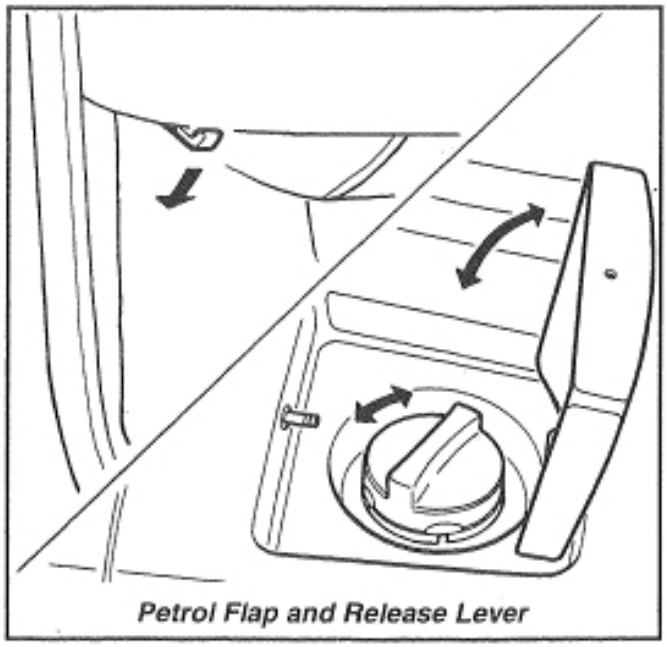
24. Headlight main beam.
Lights blue when headlights on full beam.

25. Steering column adjustment lock lever.
Refer to Sect. 9 for operation.

26. Headlight / indicator switch.
Refer to Sect. 7 for operation.

BODY FEATURES

Door Open/Lock Lever



Petrol Flap and Release Lever

DOORS

Each door is fitted with an external flap-type recessed door handle with an adjacent lock. The inner recessed door-opening lever is pulled to open the door to exit. When the door is closed from the inside the same handle should be pushed inwards to lock the door closed. It is this position that is engaged when the doors are locked from the outside by the key.

Cars fitted with central locking lock both doors automatically when either door is locked by key. Similarly, both doors lock automatically when either inner door lever is pressed in to lock a door before moving off.

The arm-rest of each door is provided with small receptacles for coins etc. A swivelling ashtray is also fitted forward of the door handles. At the lower front of each door a radio speaker pod is fitted.

The doors are constructed with side-impact protection bars for the safety of the occupants.

KEYS

One key and a duplicate is provided to open either door. The key is identified by a number and it is important that the owner records this number and keeps it in a safe place in case a replacement is required later.

PETROL FILLER FLAP

The petrol filler flap secures the filler cap and it should be kept closed at all times except when filling the tank. The flap is opened by a lever fitted beneath the facia and it locks automatically when the flap is pressed closed. The petrol cap is a twist-on, twist-off type and after filling should always be tightened securely before closing the flap..

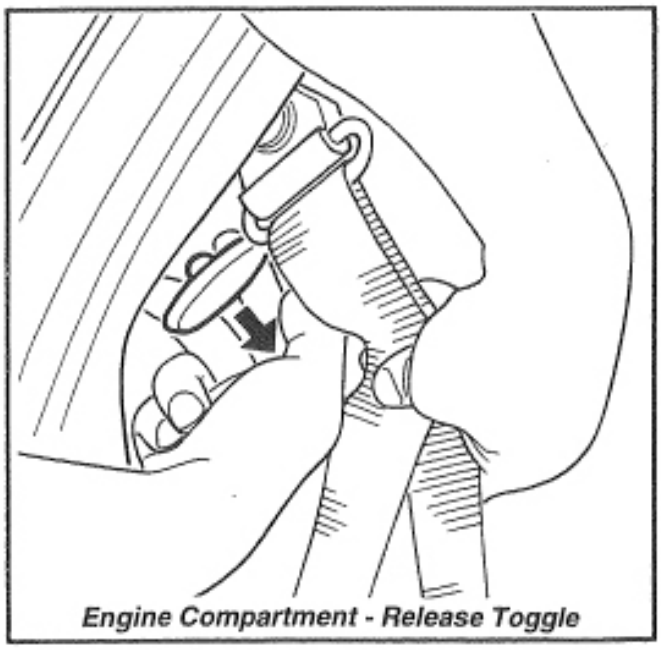
LUGGAGE AND ENGINE COMPARTMENTS

The luggage and engine compartment covers are both opened from inside the car. The luggage compartment is opened by pulling a lever located on the door side of the right-hand foot well of the passenger compartment. After lifting the cover it may be held open by unclipping the stay and engaging it firmly in the keep on the side panel.

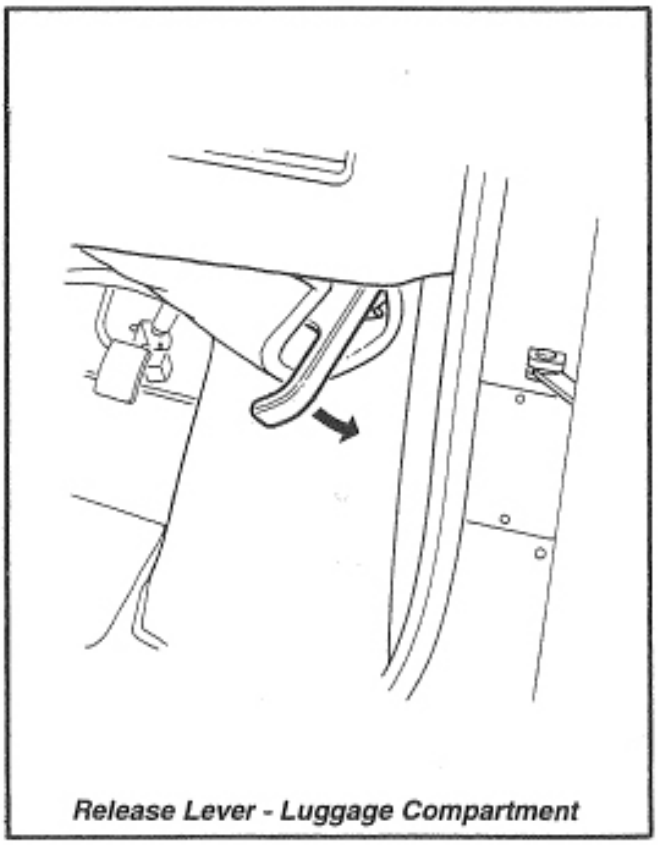
The engine compartment is opened by pulling two toggle handles located one on each side of the passenger compartment rear bulkhead near the driver's and passenger's upper seat belt anchorage points. The engine cover is held in the open position by hinged stays that lock when the cover is lifted fully open. The hinged stays fold downwards when the engine cover is lowered to close.

BODY FEATURES

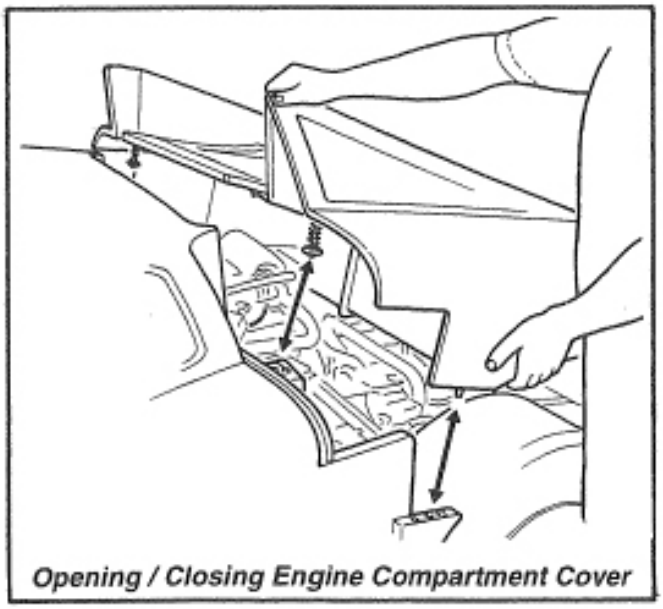
Both covers lock automatically when pressed down. **DO NOT** slam these covers down to close but lower them gently and then apply firm pressure with the flat of the hands above the fastener locks to latch.



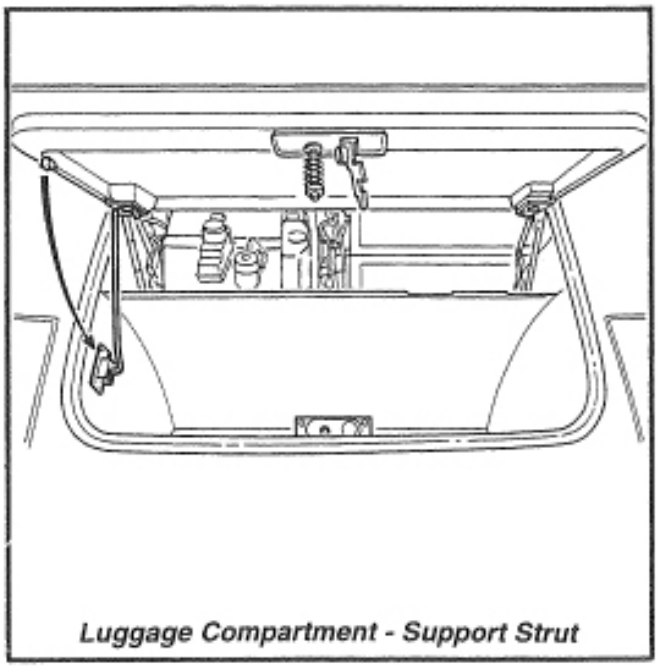
Engine Compartment - Release Toggle



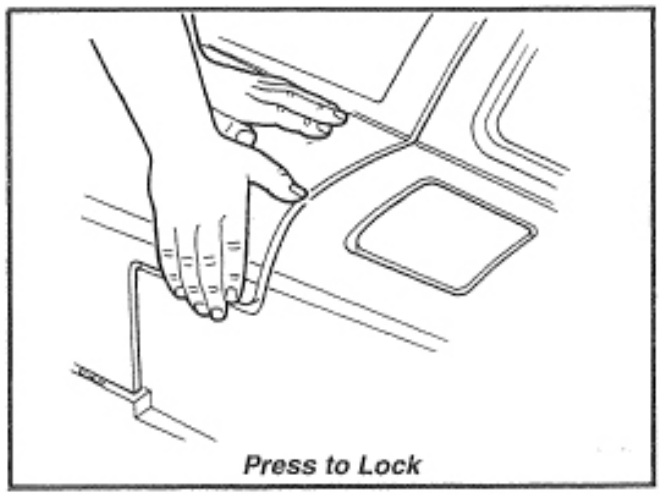
Release Lever - Luggage Compartment



Opening / Closing Engine Compartment Cover



Luggage Compartment - Support Strut



Press to Lock

SEATS and SEAT BELTS

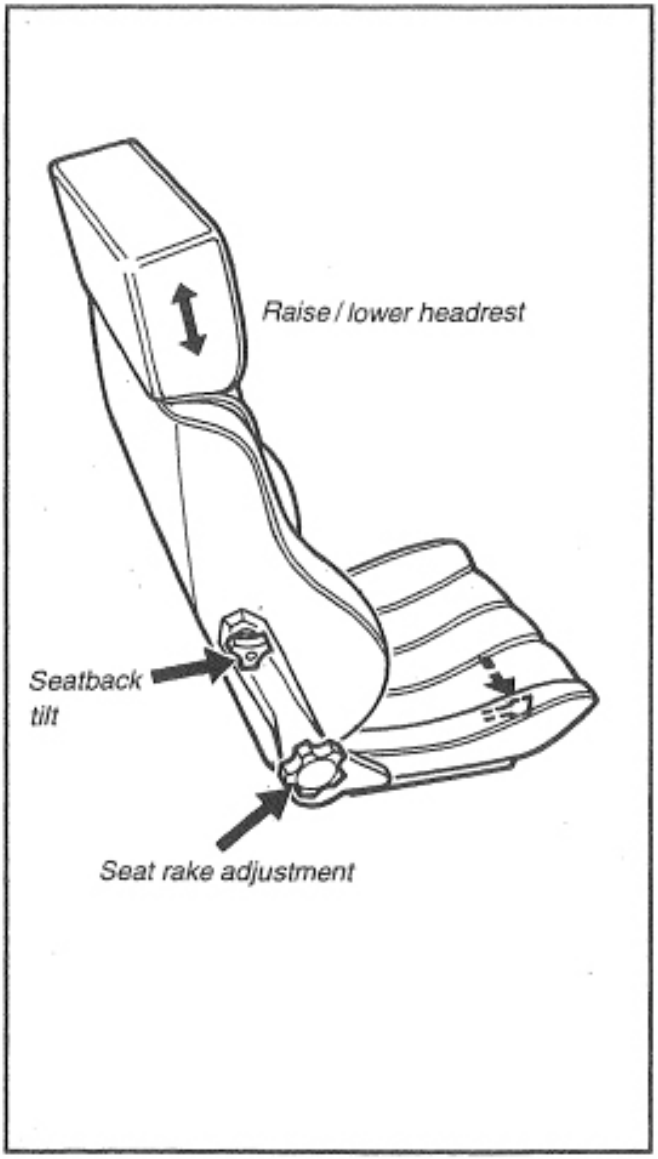
SEATS

Both seats are identical in operation. Underneath the front of the seat there is a lever that must be moved sideways to release the seat lock so that it can be moved backward or forward to adjust for leg length. When the seat is in the correct position release the lever and move the seat a little so that it locks into place.

An adjuster wheel at the bottom of both sides of each seat back can be turned to adjust rake for comfort and it should always be in an upright position when travelling. The seat can be adjusted to a relaxing position but remember that the seat belts are not effective when the car is being driven with a seat at a steep angle of rake. The higher knob on the outside of each seat is twisted clockwise, against spring pressure, to release the seat back locking mechanism. This allows the seat to be tilted forward for access.

The head restraint built into these seats is adjustable for height. It should be level with the head **NOT** the neck when correctly adjusted. Always ensure that the head restraint is properly adjusted for both driver and passenger before starting a journey. If properly adjusted they can effectively reduce the risk of neck and head injuries in case of accident.

Between the seats the vertical part of the centre console has a stowage pocket with a hinged lid on the top. A flap pocket on the face of the console at this point provides stowage for documents.



SEAT BELTS

Seat belts are provided to protect the driver and passenger when the car stops suddenly, especially if involved in an accident. Unrestrained occupants would continue to travel forwards when the car stops with the result that they may be severely injured by impacting with the windscreen, facia and steering wheel.

Fasten/Release Seat Belts

- Pull the belt over the shoulder and across the body and insert the metal tongue plate into the lock nearest the wearer.
- After fastening, pull the belt to check that it is securely locked.
- To release, press down the red release button.

SEATS and SEAT BELTS

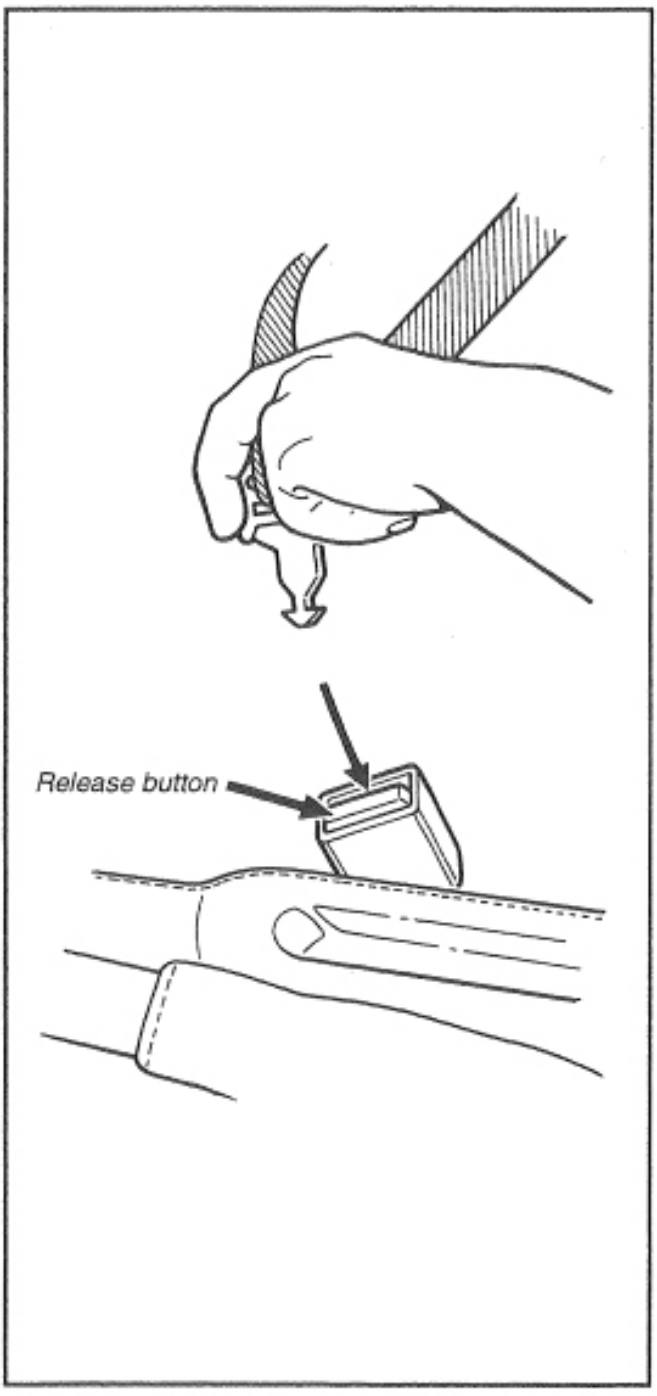
Always ensure that the passenger knows how to release the belt before moving off in case the driver is unable to give instructions should an accident occur.

Make sure that the seats are in a normal upright position when driving. When the seat is in a steeply inclined position the seat belt may not be effective in case of accident.

Inspection Of Seat Belts

- Inspect the seat belts regularly for wear and abrasion; unreel them to the full extent to inspect properly. The unreeling action should be free from snatching and smooth in operation. When about half unreeled give the belt a sudden pull and ensure that the mechanism locks automatically and prevents any further unreeling until after the tension is released again.
- Check the adjusters and fixing points and ensure that the fixing bolts are tight.

Replace any seat belt that shows signs of wear, or if it has withstood the strain of a severe impact.



Section 5
WINDOWS AND MIRRORS

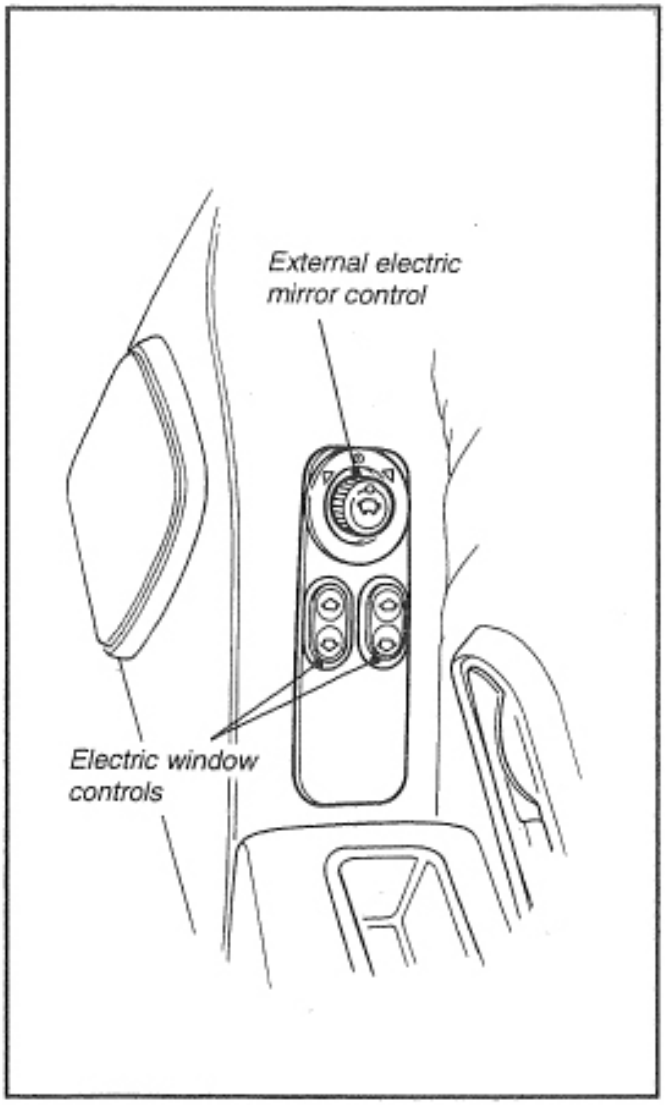
WINDOWS

Each door has a large fixed window with a small electrically-operated section in the lower half. The controls for the windows are rocker switches which operate the window when the ends of the switch are pressed down. Two are recessed into the handle of the driver's door, one for the driver's door window and one for the passengers door window. The passenger's door has one rocker switch only for that door window.

Each switch is marked with arrows to show the direction of window operation, up or down. The driver's second switch enables the passenger's window to be operated without having to reach across the car when driving alone.

Pressing the switch to lower or raise the window only operates as long as it is held down. Ensure that the windows are not obstructed during operation.

DO NOT let children play with windows because they could be trapped and injured. The electric windows are isolated when the ignition is switched off.



MIRRORS

Each door is fitted with an external mirror that can be adjusted electrically from a 'joystick' control switch fitted on the driver's door handle adjacent to the window operating switches. In its off position this control is centred - when rotated clockwise or counter-clockwise it switches on the power to operate the right-hand or the left-hand door mirrors. After selecting the mirror to be adjusted the control should be moved as a joystick to move the mirror until it is correctly focused. Switching back to the centre position switches off the power to the mirrors after adjustments have been completed. The external mirrors have demisting elements that operate when the ignition is switched on.

The door mirrors are spring loaded and can be folded inwards manually into a 'parked' position to prevent damage in restricted openings. To reset the mirrors push them out into the driving position and check the mirror setting.

The interior driving mirror may be adjusted to view to the rear through the small window in the rear bulkhead. Always ensure that this window is left unobstructed to provide a clear view.

A vanity mirror is provided on the back of the passenger's sun visor. Both visors may be unclipped and swung sideways to shield the occupants from bright sunlight through the side windows.

AIR CONDITIONING

CONTROLS

Air conditioning is controlled from the panel set in the facia. There are three controls and an air recirculation control switch:

1. The left-hand control is to adjust the temperature of air being drawn into the passenger compartment, either direct from the air intake, or via the air conditioning unit, or the heater:
- Turn to the left for cold air intake or cooled air.
- Turn to the right for maximum heating with all air passing through the heater.
- Set in any intermediate position and adjust to the desired temperature.

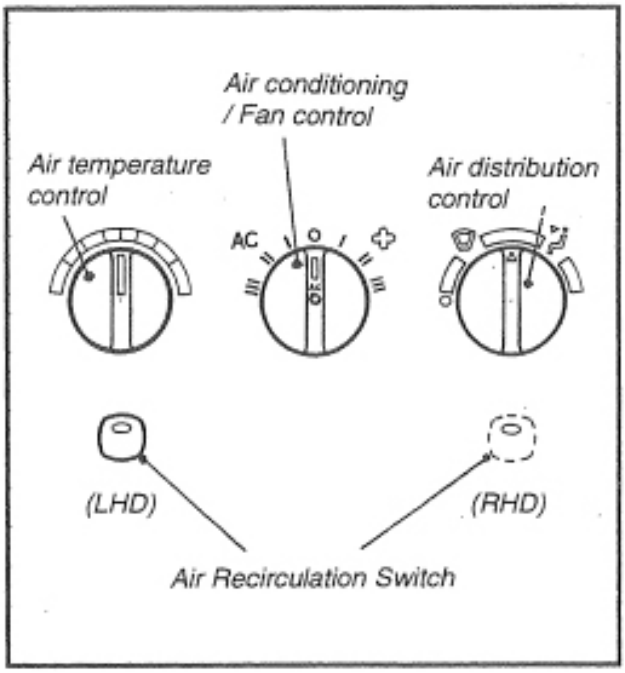
2. The centre control allows the selection to be made for heating or air conditioning for cooling and, when operating, a green light shows in the centre knob when air conditioning is on:
- Three positions to the left selects three levels of cooled air.
- Centre off.
- Three positions to the right selects three fan speeds - I and II for normal heating and ventilation and III for maximum ventilation and defrosting.

3. The right-hand air distribution control is provided to direct the air output:
- Turn to the left to direct air to the screen and for demist.
- Turn to the right for air to be directed to the inside of the car.

Positions in between the symbols allow a mixture of air distribution to be selected.

4. Air recirculation / fresh air control switch:
- Push switch for fresh air - indicator light shows green.
- Push switch again to turn off fresh air and resume normal recirculation of air conditioning. Indicator light off.

The air vents in the centre console and the facia are each provided with an on/off control and a directional control.



CONTROLS AND DRIVING

Lighting
Wipers and Washer
Starting - Driving
Brakes
Fuel System
Environmental Protection

LIGHTING MAIN SWITCH

The lights are switched on by the steering column control switch to the right of the steering wheel and nearest to the facia:
1. **Off.** In the horizontal position all lights are off.
2. **Parking.** In position 2 the front and rear parking lights and the instrument panel lights are on.
3. **Headlights.** In position 3, the upper position, the headlights are lifted and switched on.

HEADLIGHTS and DIRECTION INDICATORS

The column switch to the left of the steering wheel is used to control the headlights when they are switched on and to operate the direction indicators. For headlights control there are three positions:
1. **Flash.** Pull towards driver against spring return to flash lights. This also lifts the headlights for the duration of the flash if the main lighting switch is off. The flash also operates if the same switch is up or down to operate the indicators.
2. **Main beam.** Push the switch fully forwards for main beam; the blue main beam indicator on the facia lights.
3. **Dipped Beam.** Pull the switch back to the centre position for dipped beam.
4. **Direction indicators.** These are operated by lifting up the column switch to turn right and pressing it down to turn left. The switch automatically cancels the indicators and returns to the centre when the steering wheel is centred.

TAIL LIGHT CLUSTER

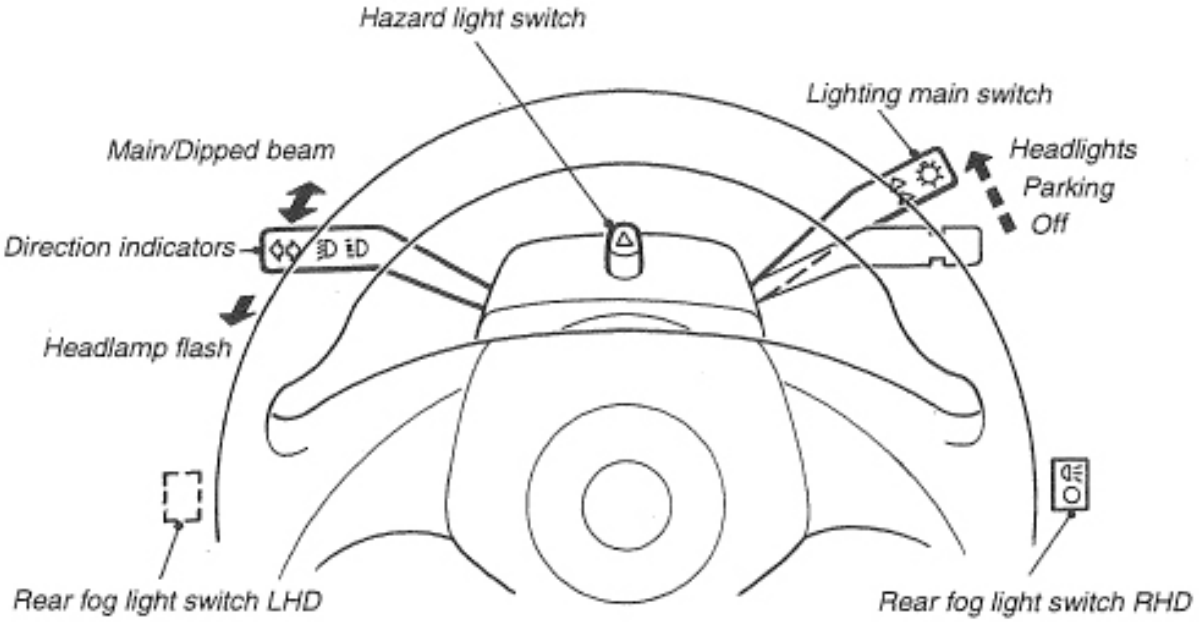
1. **Tail lights.** These are switched on when the lighting main column switch is at either the parking or headlights positions.
2. **Reversing lights.** With the ignition turned on, the reversing lights are switched on when reverse is selected on the gear lever and off again when neutral or a forward gear is selected.
3. **Fog lights.** The bright red rear fog lights are switched on by pressing the button switch located on the facia next to the radio - pressing the button a second time switches off the fog lights. An indicator light in the centre of the button lights when the fog lights are switched on. Always ensure that the fog lights are switched off when not required and at night when headlights are in use. To avoid "blinding" following drivers they should only be used at night in very dense fog or water spray when normal rear lights cannot be seen at a safe distance. These fog lights only operate when the headlights are switched on and therefore must be used in conjunction with the headlights during daylight fog.
4. **Direction indicator lights.** These are operated by the direction indicator positions on the left-hand column switch.

FRONT PARKING / INDICATOR LIGHTS

1. **Parking / sidelights.** These are switched on when the lighting main switch is at either the parking or headlights positions.
2. **Direction indicator lights.** These are operated by the left-hand column switch. Side repeater direction indicators are fitted on each side of the car forward of the doors.

HAZARD LIGHTS

The hazard warning lights comprise all the direction indicators flashing continuously until switched off. The switch is located on top of the column housing behind the steering wheel. The button is pressed to start flashing the lights and the button also flashes red to indicate it is operating. Push again to switch off the lights.

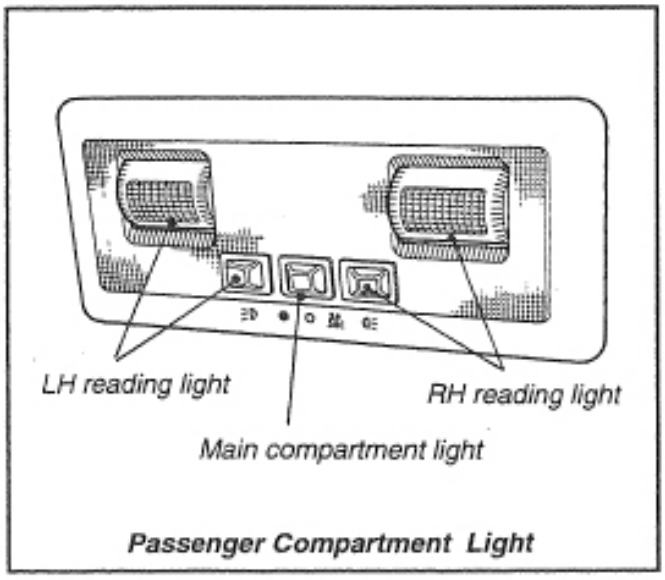


Steering Column Light Switches

INTERIOR LIGHTS

An interior light cluster is fitted in the centre of the passenger compartment in the roof above the windscreen and it is controlled by three switches located on the fitting and door pillar switches.

1. **Centre general light switch.** This is switched on by the centre three position rocker switch. With the switch operated to the left the light is lit continuously for general illumination and should only be used when stopped. When operated to the right the light is lit whenever either of the doors is opened releasing plunger switches located in the door pillars. After the doors are closed the internal light switches off automatically after approximately 20 seconds delay. In the centre position the light is switched off.
2. **Reading lights switches.** The two outer switches control the reading lights for the driver and passenger. These lights have rotatable lenses to direct the light where required.
3. **Instrument lights.** These are fitted in the facia to illuminate the instruments at night when the lighting main switch is on.



Passenger Compartment Light

Section 8
WIPERS AND WASHER

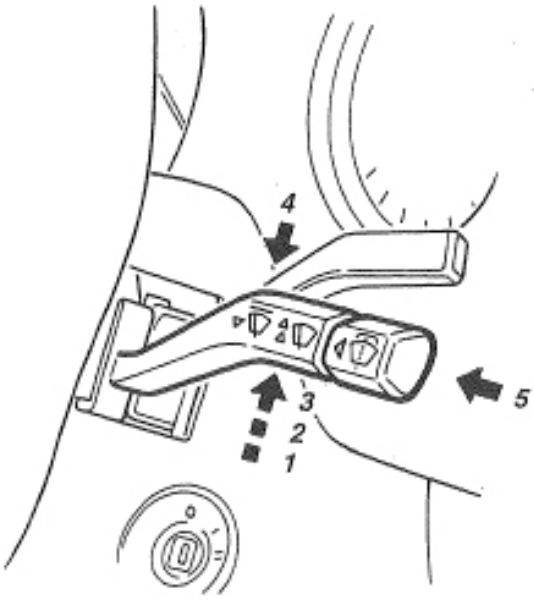
GENERAL INFORMATION

Never use the wipers on a dry window because the glass may be scratched and the blades damaged. When the weather is freezing always ensure that the blades are not frozen to the glass before switching on otherwise damage to the motor may result. Always remove accumulated snow and ice from the wiper blades, the washer nozzles, the windscreen and the heater air intakes before driving.

The wipers are controlled by the column switch closest to the driver on the right-hand side of the steering wheel:
1. **Off** - with switch horizontal.
2. **Normal speed** - with switch up at the first position.
3. **Fast wipe** - with switch in upper position.
4. **Intermittent wipe** - with switch fully down below the horizontal position it wipes about every 5 seconds.
- **Single wipe** - press switch down lightly from the horizontal position and release it to spring back up.
5. **Wash** - press end button inwards to squirt water onto the windscreen then release - the wipers are simultaneously switched onto normal speed and continue to wipe for a few strokes after releasing the button to clear the screen.

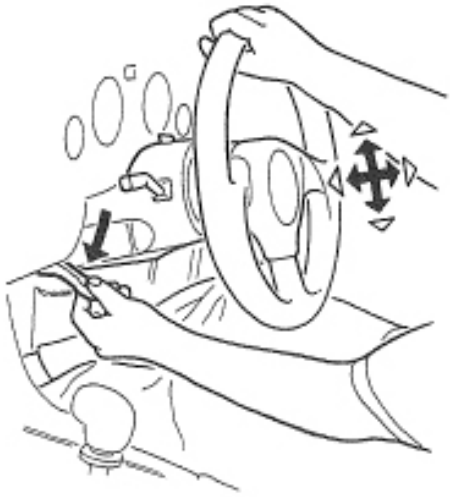
The windscreen washer water bottle is located in the front service area immediately behind the luggage compartment and it is accessed by lifting the luggage compartment cover. Refer to Sect. 14. Always check that the bottle contains sufficient water before starting a journey.

It is always advisable to add a good brand of windscreen washing agent to the water bottle and a winter-quality agent containing an antifreeze solution when freezing weather is expected.

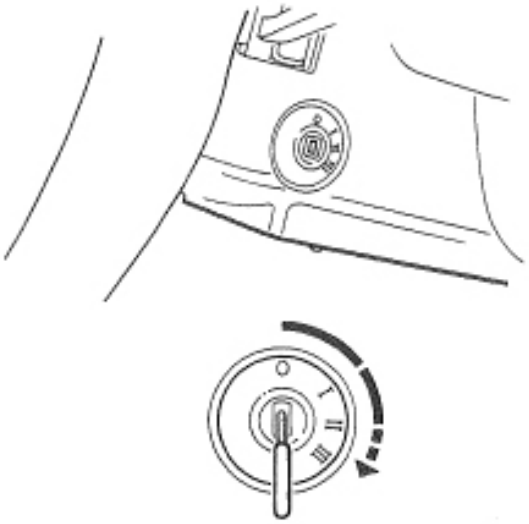


Wiper / Washer Control Switch

STARTING - DRIVING



Steering Column Adjustment Lever



Ignition Switch

STARTING

NOTE: This information is only provided to describe this car and some of its particular driving and starting features for the new owner. It is assumed that anyone using this car is already highly skilled in driving techniques.

STEERING COLUMN

An adjustable steering column is fitted and it can be adjusted for height and reach. A lever located on the left-hand side of the steering column is lowered to release the lock and then the wheel can be adjusted. Tilt up or down and move in or out until the most comfortable position is achieved. Lift the lever firmly to lock the adjustment.

- **DO NOT** drive with the adjusting lever unlocked.
- **DO NOT** adjust the steering column while driving.

IGNITION SWITCH

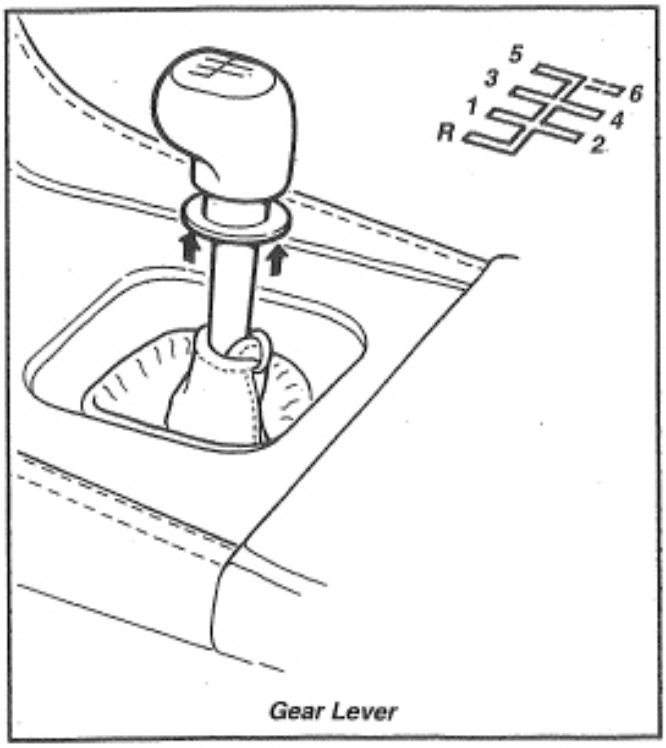
The key-operated switch, located on the steering column behind the right side of the steering wheel, provides a sequence of positions for starting and has four indicated points on the switch rim:

- 0 is the off position - with the ignition off, all electrical circuits are off except for the interior lights and the parking lights. The steering wheel lock is on.
- Position I - turning the key to position I and at the same time turning the steering wheel releases steering column lock. The key will not turn until the lock is released. With the key at position I some of the electrical circuits are switched on and the radio/cassette player can be operated.
- Position II - turning the key to position II switches on all electrical switches and the instrument panel indicators and gauges begin to operate. This is the normal running position.
- Position III - turning the key to position III against spring pressure operates the starter motor. Release the key immediately the engine starts, to allow it to spring back to position II.

When the car is stopped and the manoeuvre or journey over:

- Switch off the ignition switch to the 0 position to stop the engine, then remove key.
- Turn the steering wheel until the lock is engaged.

STARTING - DRIVING



Gear Lever

GEARS

The gear lever is located in the centre console and the positions for the gears are indicated on the top of the gear lever knob. Synchromesh engagement is provided on all forward gears and the lever is spring loaded to rest in neutral between 3rd and 4th gears.

Forward Gears

The clutch should be fully depressed each time when changing gear. When selecting first gear from a standing start always allow the engine revs to die down before moving the gear lever.

Reverse Gear

To select reverse gear with the car stopped and clutch pedal down:

- Lifting the ring beneath the gear lever knob allows the lever to be moved into the reverse position.
- When in reverse release the ring.

After completing the reverse manoeuvre with the car stopped and clutch pedal down:

- Change into neutral - there is no need to lift the ring.

DRIVING

WARNING

Should the engine develop a misfire, switch off immediately to prevent damage to the catalytic converters

Do not depress the accelerator during starting.

With the handbrake on and the gear lever in neutral:

- Insert key in ignition and switch on to position I and release the steering lock.
- Switch to position II and then turn to position III to operate the starter.
- If the engine does not start after a few turns release the ignition switch to position II to allow the battery to recover before trying again.

If the engine fails to start:

- Depress the accelerator pedal about half-way down. **DO NOT** pump the pedal.
- Try again to start.
- As soon as the engine starts running properly release the accelerator. **DO NOT** let the engine revs exceed 6800.

If the engine fails to start after a few attempts investigate the cause because there may be a fault.

NOTE: The starting procedures above for, 'engine fails to start', may have to be used sometimes to start a warm engine under certain atmospheric conditions and also when starting at high altitude.

Cold Weather

If starting in very cold weather, with the gear lever in neutral, it is advisable to depress the clutch during starting to reduce the load on the battery. Once the engine is running the clutch should be released.

Do not rev the engine to warm up with the car stationary because the engine fuel management system compensates for weather conditions. As soon as the engine is running smoothly the car should be driven.

Never run the engine in an unventilated building because the carbon monoxide exhaust gas is poisonous and would quickly cause unconsciousness and then death.

Section 9
STARTING - DRIVING

Selecting Gears
To engage a forward gear always fully depress the clutch pedal before moving the gear lever.

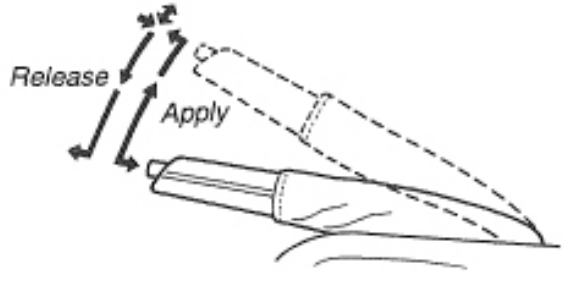
To engage reverse:
With the car stopped and the clutch pedal down pause for the engine revs to fall to tick-over speed:

- Lift the ring and move lever into the reverse position indicated.
- Release the ring
- Release the clutch pedal slowly to move off in reverse using the handbrake as required.

To disengage reverse:
With the car stopped, handbrake applied and the clutch pedal down, pause for the engine revs to fall to tick-over speed:

- Move the gear lever into neutral; there is no need to lift the ring.
- Release the clutch pedal.

Handbrake
The handbrake lever is located in the centre console and is pulled up to operate the rear brakes. When releasing the handbrake the lever should first be lifted slightly and the button depressed, to release the ratchet, and then lowered to the off position. It is also wise to depress the button when applying the brake and release it when the lever is fully up. This avoids wear on the ratchet mechanism, but check that the brake is fully on after the button has been released.



Handbrake

NEW CARS

The manufacturer recommends that the engine should not be taken up to maximum revs until the first 1000 miles / 1500 kilometres have been completed.

This high powered car should be driven carefully at all times and especially during the first 1000 miles / 1500 kilometres to allow the brakes, tyres, clutch and other components to "bed in". In particular, new tyres should always be driven within the manufacturers' advised speeds for the recommended distance to ensure that they are performing satisfactorily.

Heavy braking should be avoided at all times unless in emergencies and especially during the first 1000 miles / 1500 kilometres. If uneven braking is suspected at any time, have the adjustment checked by the approved dealer as soon as possible.

When your journey has been completed and the car stopped, apply the handbrake firmly and switch off the engine. **DO NOT** switch off the engine if it is running above a fast idling speed because unburned fuel in the system may damage the catalytic converters. **DO NOT** rev the engine and then switch off. No other special requirements for stopping the engine are necessary.

BRAKING SYSTEM

The hydraulic servo-assisted braking system operates through two tandem brake circuits. These are split and one circuit operates the front brakes, the other the rear brakes. If one circuit should fail the other will continue to function thereby allowing the car to be stopped. The brake pedal travel will be greater if one circuit fails and the stopping distance will be increased above normal.

When the footbrake pedal is depressed it simultaneously applies the calliper brakes fitted on all four wheels. These are powerful brakes and new owners should practice by applying them during their initial test drives under various road conditions when it is safe to do so.

CAUTION.-The servo assistance to operate the brakes is inactive when the engine is not running, when under tow or if 'coasting'. If the car has to be moved with the engine off remember that the amount of brake pedal pressure to stop the car will be greatly increased.

Handbrake
The handbrake lever is located in the centre console and is pulled up to operate the rear brakes. When releasing the handbrake the lever should first be lifted slightly and the button depressed, to release the ratchet, and then lowered to the off position. It is also wise to depress the button when applying the brake and release it when the lever is fully up. This avoids wear on the ratchet mechanism, but check that the brake is fully on after the button has been released.

Brake Warning Light
The warning light for the brakes is located on the facia panel. When the handbrake is applied, and with the ignition switched on, the light shows red. Should this warning light show RED when driving:

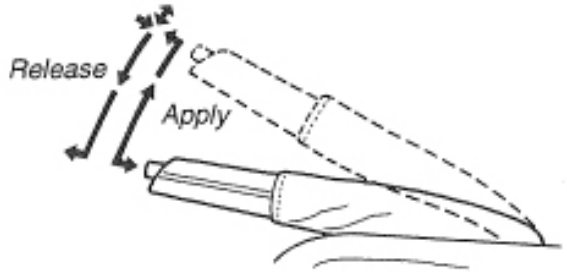
- Check that the handbrake is fully released.
- If handbrake is fully released and the warning light still shows RED, **stop the car** as soon as possible.
- Check the cause because it may be indicating a malfunction of the brakes.

Check for low brake fluid level; if necessary, it must be topped up. **DO NOT** continue to drive the car. If regular maintenance has been carried out, in accordance with the maintenance schedule, it may be low because there is a leak in the brake system; check for leaking fluid on all brake components. Refer to Sect. 14

DRIVING WITH CARE

A powerful car, with powerful brakes, does not always mean that it can be stopped safely. This is entirely the responsibility of the driver. Always drive with due consideration for others. Be especially careful in wet and icy conditions and remember that braking efficiency is reduced when the brake pads and discs are wet.

When driving in the wet, and when it is safe to do so, occasionally apply the brakes gently to dry the brake pads and discs. If braking suddenly under wet and icy conditions control of the car can be unpredictable if the driver is not careful. Always test the brakes in this way a short time before turning off main roads.



Handbrake

REFUELLING

WARNING
This car uses only unleaded fuel. Should any leaded fuel be used, even a small amount, the catalytic converters will be damaged. A label to this effect is attached near the fuel filler cap and this must not be removed. The tank filler hole only accepts the 'green' petrol filler nozzles on standard filling station pumps.

This car has two fuel tanks located one on each side of the engine bay. These are connected by a tube to transfer fuel from one tank to the other so that both are always at equal levels. The tanks are connected to an evaporation system incorporating a charcoal filter through which the tanks vent. Therefore the system is fully sealed from atmosphere.

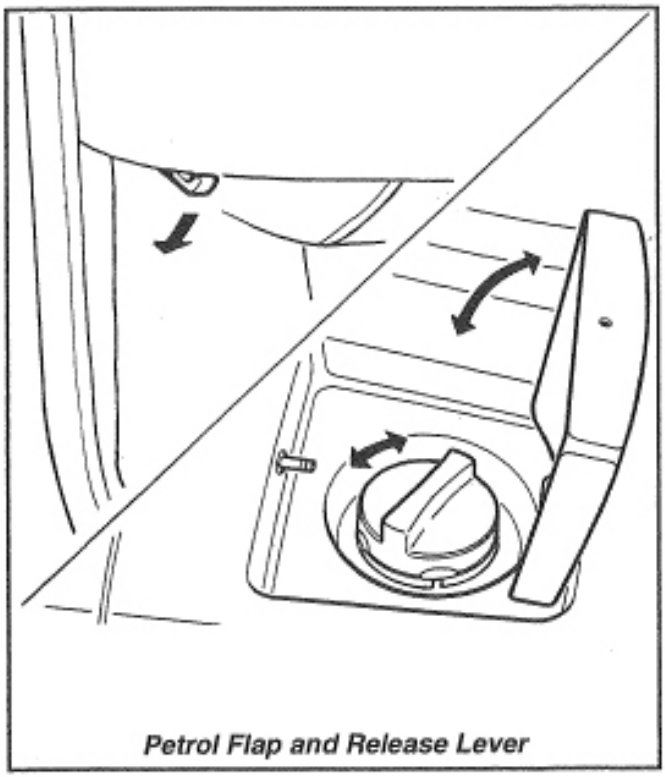
Filling The Tank
The fuel tank filler is located to the rear of the right-hand door near the front edge of the engine bay cover. The filler flap is opened by a lever fitted beneath the facia .

- Open the flap and twist off the filler cap.
- Insert the unleaded fuel filler nozzle fully into the neck of the tank and commence filling. **DO NOT** try to fill too quickly.
- When the level rises to the point that automatically shuts off the flow from the pump, release the filler control lever.
- **DO NOT** add any more. When the flow cuts off with the nozzle inserted fully into the tank it indicates that the correct amount of air space has been allowed inside the tanks.
- Remove the nozzle from the tank and twist on the filler cap firmly. Wipe any spilt fuel from the car and close the filler flap.

If the tank ever has to be filled from cans make sure that:

- The can contains only unleaded fuel.
- The tank is not overfilled; remember that the level should not be higher than the automatic cut-off point if filling from a pump nozzle.

For types of unleaded petrol that may be used refer to the Technical Data at the back of this handbook.



Petrol Flap and Release Lever

ENVIRONMENTAL PROTECTION

EXHAUST GASES

Catalytic Converters
Environmental protection is designed into the car exhaust system by the installation of twin catalytic converters that clean up the exhaust gases by converting poisonous emissions from the engine into carbon dioxide, nitrogen and water vapour. To ensure that the catalytic converters operate effectively the car must be operated **ONLY ON UNLEADED FUEL.** The use of only a small amount of leaded fuel would damage the converters permanently.

Should the engine develop a misfire, switch off immediately to prevent damage to the catalytic converters.

WARNING
Catalytic converters operate at very hot temperatures and drivers should remember this when parking. Because the car has very low ground clearance and the twin catalytic converters are located under the engine bay close to the ground, there is a danger of the heat setting fire to any combustible material such as dried grass that may come into contact with them.

EXHAUST NOISE

The silencer system includes a large transverse silencer box at the back of the engine compartment to reduce exhaust noise to a minimum. It should be remembered that a large powerful engine naturally produces a lot of noise if driven at high revs and if accelerating quickly. Drivers should remember this and drive carefully, with due respect for others, and moderate their noise emission when in built-up areas.

FUEL ECONOMY

When on the road, drivers should play their part in the protection of the environment by ensuring that the car is maintained and kept tuned properly in accordance with the recommended maintenance schedule.

- Tyres should be maintained at the correct pressures on grounds of safety and fuel economy.
- Always accelerate smoothly and limit engine revs by driving in the correct gear for the speed at which the car is travelling.
- Always switch off the engine when stopped.
- Do not switch off the engine if it is revving above a fast idling speed - unburnt fuel in the system may damage the catalytic converters. **DO NOT** rev the engine and then switch off.

OWNER MAINTENANCE CHECKS

General Information
Owner Checks
Emergency Information

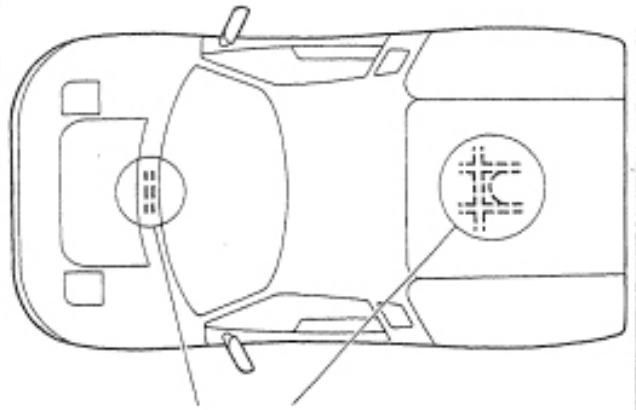
GENERAL INFORMATION

JACKING UP THE CAR

WARNING

THE CAR CAN BE DAMAGED IF THE FOLLOWING INSTRUCTIONS ARE NOT FOLLOWED.

The driver should be aware of the following information regarding jacking points and must draw the attention of tyre depots, roadside aid agencies and garages to the following information. Only the authorised dealer will have the necessary information on jacking up the car in addition to that provided in this handbook.



The Two Jacking Locations

Jacking Points

There are only two centrally located jacking points on the car and **NO OTHER JACKING POINTS MAY BE USED.** Reference should be made to the illustration which indicates the jacking points.

Because of the limited ground clearance of the car it will be necessary to run both wheels at the front or rear of the car up onto blocks to achieve the necessary ground clearance to insert a low trolley jack.

The jack must only be used at the two points in the centre front and centre rear of the chassis designed for jacking. **DO NOT** JACK ANYWHERE ELSE. With the car up on blocks (preferably wooden because bricks and other materials may break up) apply the handbrake firmly. Before jacking commences wedge the two wheels at the other end of the car, both front and back of the wheels, to ensure that the car will not run off the jack.

TYRES

Regular Inspection

The wheels and tyres fitted on this car are of two different sizes and specification details are provided in Technical Data. Tyres should be inspected regularly for damage, wear and nails and other objects trapped in the tread. Stones should be removed from the tread pattern and if damage is suspected have the tyre checked by a specialist tyre dealer. Nails and other objects embedded in a tyre should not be removed but the car **MUST** immediately be driven at a modest speed to a tyre depot for inspection and repair.

Impact Damage

If a wheel has struck a kerb or other object with some force, stop and check both tyres. Inspect the tread and side walls of both tyres on that side of the car. Any impact damage to a tyre tread or wall is potentially very serious and even if the tyre has not deflated it could deflate suddenly and without warning. It is advisable to call an aid agency for assistance if unsure whether it is safe enough to drive to a tyre depot. After impact damage has been sustained it will be necessary to refer the car to the approved dealer for inspection of the suspension parts and for the settings to be checked.

Uneven Wear

If uneven wear on a tyre is noticed it must be referred as soon as possible to the authorised agent for checks to be carried out and adjustments made to the suspension if necessary. It is preferable not to refer this type of fault to a general tyre dealer or garage because they will not have the necessary information to check and rectify it if a fault has occurred.

Punctures

A spare wheel is not carried on this car and it is recommended that a proprietary pressurized emergency tyre repair bottle is carried in the repair kit to inflate the tyre should a puncture occur. This will enable the car to be driven to a tyre depot for repair but the instructions on the bottle

should be followed for a satisfactory temporary repair to be achieved and the car must be driven at a modest speed.

WASHING CAR

General Advice
The car should be washed frequently using warm or cold water with a car shampoo added. Apply generous quantities of water with a sponge to lift off dust, grit and traffic film. Using plenty of water and frequently rinsing the sponge, ensures that the grit flows off the paintwork without scratching; do not 'scrub' the dirt into the paint. Rinse off, again using plenty of water and finally dry using a chamois leather. It advisable not to put this car through an automatic car wash because water may enter into the engine bay vents and over the engine.

During wintertime, when salt has been used on the roads, use a hosepipe to wash down the car first and hose the underside of the car and under the wheel arches to remove mud and salt. **DO NOT** use high pressure jets to clean car. When using a hose do not direct the jet of water into air intakes, brake mechanisms, door locks, or door and cover seals because high pressure jets can penetrate and may cause problems.

Use a little white spirit on a soft cloth to remove tar spots, grease and squashed flies not removed by normal washing. Wash afterwards with soapy water to remove the spirit and residue.

Paintwork
Always inspect the paintwork after washing and apply touch-up paint to cover stone chip marks. Contact the dealer for touch up paint for the colour chosen for the car. It is advisable to apply a polish to the paintwork occasionally to protect the paint.

Glass
A good quality glass cleaner formulated for cars should be used to maintain the windscreen, windows, mirrors and lights. Ordinary glass cleaners are not always suitable for cars because they may smear the glass under bad weather conditions and condensation. If wearing diamond rings ensure that the glass is not scratched when wiping the windows especially when clearing condensation when driving.

Interior
Vacuum the carpets regularly to remove dirt and grit. If the carpets are soiled use a good quality carpet cleaner following the maker's instructions regarding suitability, dilution, method of application and drying.

The leather upholstery should be wiped regularly using a damp cloth moistened with warm water. If any stubborn marks are found apply a little upholstery cleaner on the moist cloth to remove the soiling. It is advisable to check on the cleaner instructions whether it is suitable for leather and perhaps first try it on a part where it would not normally be seen. Wipe clean with a water-moistened cloth and finally use a dry soft cloth to finish and polish. **DO NOT** use petrol, furniture creams and other harsh polishes on the upholstery.

Instrument Facia Panel
Wipe over with a damp cloth moistened with warm water and dry off using a dry soft cloth. Take special care when wiping instruments especially the radio indicator panel if it is of the liquid-crystal type. Sometimes these can be damaged easily by even light pressure on the glass. Refer to the manufacturer's handbook for further information on the type fitted and recommended cleaning method.

Seat Belts
If these become soiled pull them out to the normal extent and tie temporarily to prevent them retracting. Clean using warm water and a non-detergent soap. Do not allow them to retract until they are thoroughly dry.

ELECTRICAL INFORMATION

Fuses and Relays
The electrical circuits and components are protected by fuses which are designed to 'blow' should a circuit become faulty causing excess current to flow.

If total electrical failure is experienced it may be a completely 'flat' battery (check if the lights have

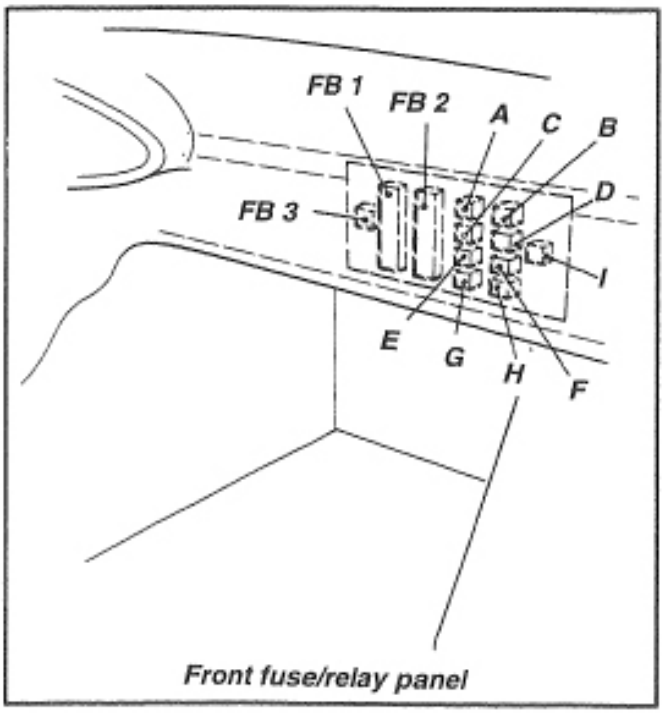
been left switched on for some time when the engine was not running), a faulty battery, or a disconnected battery lead. Check the battery terminals for tightness.

If the engine fails to start, check the inertia switch which may trip and cut off the petrol supply to the engine if the car is involved in a severe impact. See illustration opposite for the location of this switch and reset information in Section 14.

Fuses

These are mounted on a panel located behind the facia in front of the passenger and it can be seen by looking up behind the facia. This panel contains fuses and relays. The remainder of the fuses and relays are located in the engine compartment electrical bay next to the left-hand fuel tank. To see this electrical box the outer panel in the wheel arch and the electrical box cover must first be removed.

If an electrical circuit fails to operate, check the appropriate fuse. Before removing a fuse, switch off the circuit / component affected. The fuse for the circuit should be identified from the following list and removed; fit a new fuse of the correct current rating (10A, 30A, etc.). Switch on the circuit / component and check for correct operation. If the fuse blows again then switch off the circuit and take the car to the dealer or an auto electrical specialist for the fault to be rectified.



Front fuse/relay panel

DO NOT replace the fuse with one of a larger current rating because if the faulty circuit should operate with the larger fuse the wiring or the component could be damaged.

NOTE: The horn relay G incorporates a fuse and it should be checked if circuit not operating.
The abbreviation A is used for Amp.

Facia Panel Fuse Banks

FB1

1	30A	Flashers / headlight flash pod lift
2	10A	Stop lights / reverse
3	30A	Heater motor / air conditioning
4	20A	Wipers / washer
5	30A	Electric mirrors / elements on mirrors / pod lift relay
6	10A	Facia instruments / interior light delay
7	7.5A	Main beam left
8	7.5A	Main beam right
9	7.5A	Dip beam left
10	7.5A	Dip beam right
11	7.5A	Sidelights left
12	7.5A	Sidelights right / instruments / number plate lights

FB2

13	10A	Interior light delay / interior light
14	5A	Radio memory / clock
15	10A	Hazard warning
16	10A	Cigar lighter
17	20A	Central locking
18	10A	Telephone
19	30A	Pod lift module left
20	30A	Pod lift module right
21	15A	Left window motor
22	15A	Right window motor
23	10A	Fog light
24	15A	Auxiliary radio / telephone / aerial amplifier

FB3

25	30A	Alarm system
26	7.5A	Alarm system
27	10A	Alarm system

Facia Panel Relays

A	Electrically heated mirror delay relay
B	Wiper delay relay
C	Interior light delay
D	Flasher Relay
E	Dip beam Relay
F	Main beam relay
G	Horn relay - fused 15A
H	Not used
I	Headlight pod delay relay

GENERAL INFORMATION

Electrical Box Fuse Banks

F1

1	20A CCRM
2	10A CCRM
3	10A PCM
4	20A alternator fuse
5	15A IMRC
6	Spare
7	Spare
8	20A ignition coil feeds

F2

1	20A fuel pump
2	30A fan 1
3	30A fan 2
4	30A air injection reaction
5	10A data link
6	10A PATS battery feed
7	10A PATS ignition feed
8	spare

Electrical Box Relays

RB1

1	70A ignition relay; all equipment less PCM CCRM
2	Fan relay
3	Resistor block, ignition warning light

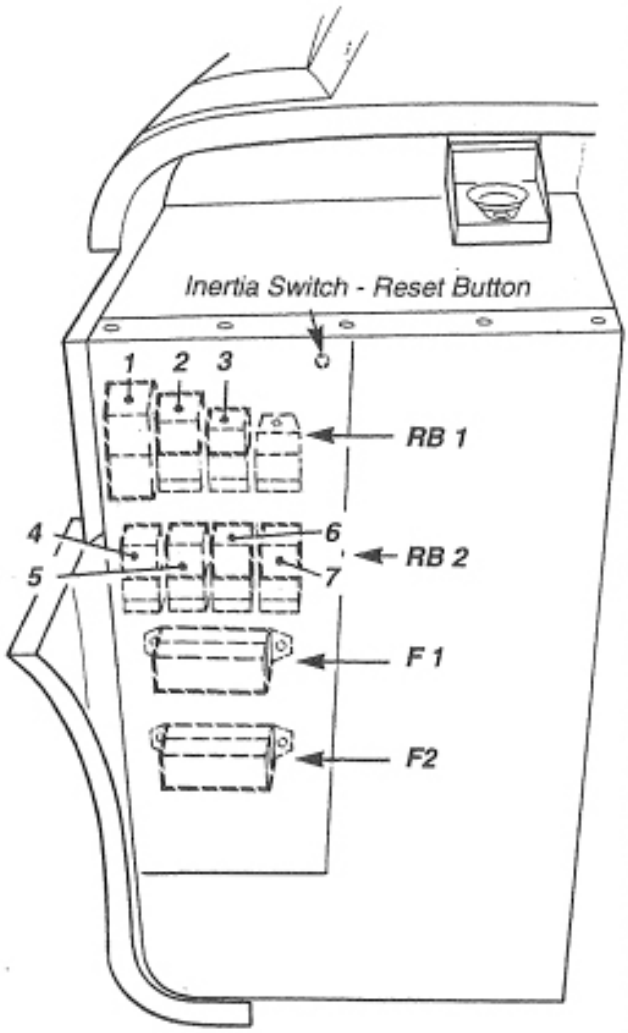
RB2

4	Fuel pump 30A
5	Charge / discharge 30A
6	Starter inhibit 40A
7	Low oil warning

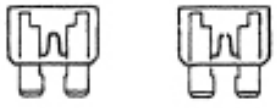
Abbreviations: CCRM = Constant Control Relay Module; PCM = Powertrain Control Module; IMRC = Intake Manifold Runner Control.

Spare fuses - It is recommended that the owner should carry a selection of different sizes of spare fuses for emergencies. These can obtained from your dealer.

Relays are provided in electrical circuits to remotely switch on / off heavy current components. Instead of the heavy current being routed through the operating switch a low current flows through it and in turn this operates the heavy current circuit at the relay. Owners are not expected to check relays for operation but do check the fuse for the circuit affected if a problem is suspected. Also check the fuse on the appropriate relay where fitted.



Rear fuse/relay panel



Good Fuse

Blown Fuse

Section 14
OWNER CHECKS

GENERAL

Weekly or after a long journey:
Certain simple checks should be carried out at intervals to ensure the car operates satisfactorily. All other maintenance operations are to be carried out in accordance with the recommended Maintenance Schedule provided in Section 16. These would normally be carried out by an approved dealer.

CAUTION.- Owners of all cars should be aware that they should always look out for deposits of oil, petrol and water on the floor beneath a parked car. Any such deposit may indicate that a problem is developing that should be attended to by the dealer at the earliest opportunity. Any suspected petrol leak must be investigated immediately before starting the car, especially if in a garage or other confined space.

ENGINE COMPARTMENT

WEEKLY CHECKS

With the car on level ground:

- Release the engine compartment cover locks by pulling the toggles located in the passenger compartment near the upper seat belt anchorage points.
- Lift the cover to the full extent until the stays lock in the open position.

WARNING

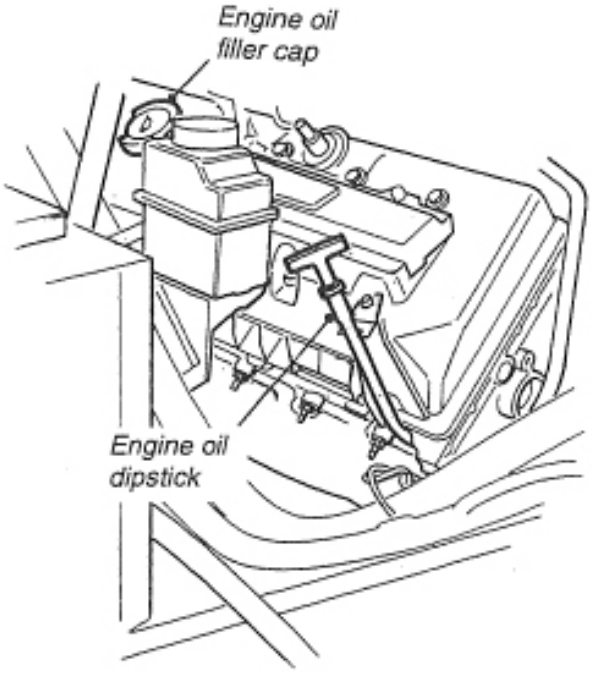
If the car has just been running, the engine and exhaust components will be extremely hot and may cause severe burns if touched. Great care should be taken whenever the engine compartment is open.

ENGINE OIL LEVEL

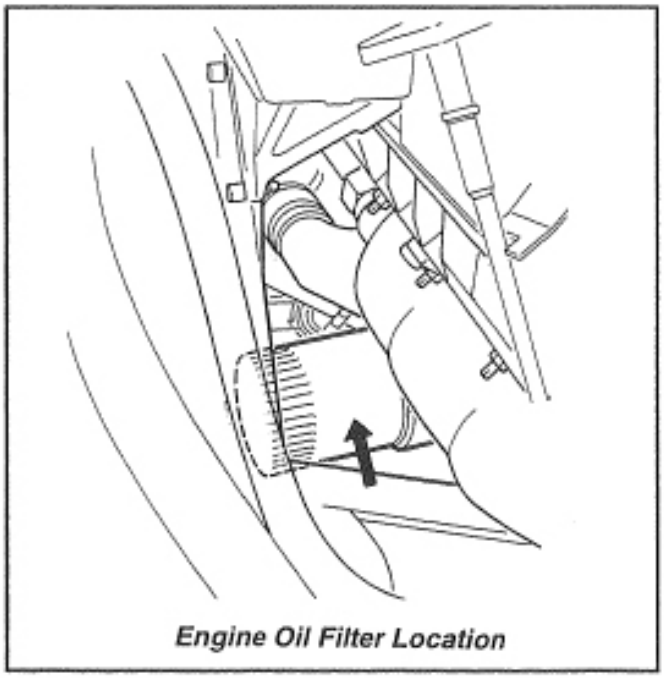
If the engine has just been running wait a few minutes for the oil in circulation to flow back into the sump:

- Withdraw the dipstick, wipe it, then re-insert fully. Withdraw again and examine the level of oil indicated. The correct level is when the oil is level with the full mark on the dipstick. If the oil is below this mark locate the oil filler cap on the engine and top up with oil of the correct grade (refer to Technical Data).
- Add approximately half a litre at first then recheck a few minutes later after the oil has had chance to flow down into the sump.
- If still not up to the mark add more oil until the correct level is indicated. **DO NOT** overfill.

Possible indications of problems. - The oil pressure gauge on the instrument facia should normally indicate 1.3 to 3 bar. If it indicates a lower pressure always check the engine oil level immediately. The normal oil temperature indication should not exceed 120 deg. C. If there has been a sudden drop in oil level, or the oil on the dipstick looks different than normal, or the pressure or temperature is abnormal, then ask your dealer to check it immediately.



Engine Oil Level



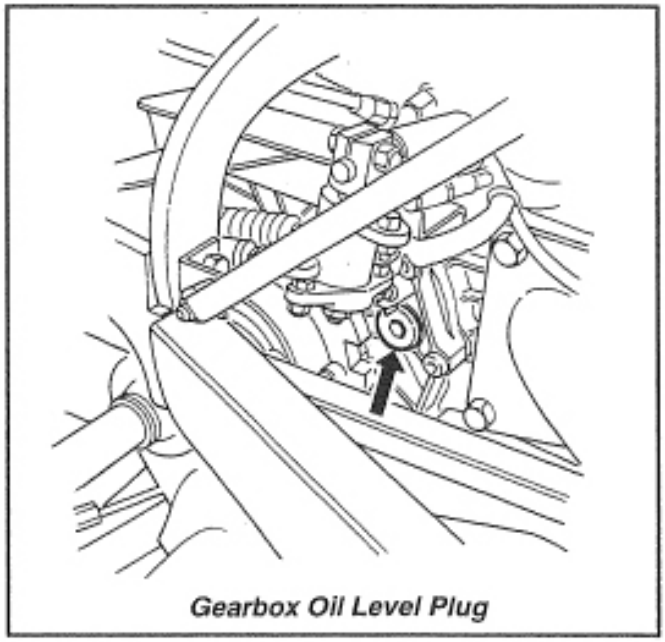
Engine Oil Filter Location

ENGINE OIL FILTER

The engine oil filter is located on the left-hand side of the engine below the exhaust manifold. This will be changed at the normal servicing intervals.

GEARBOX OIL LEVEL

There is no need for the owner to check this because it is an infrequent periodic maintenance task. A level / filler plug is located on the right-hand side of the gearbox for the purpose of checking the oil level and topping up.



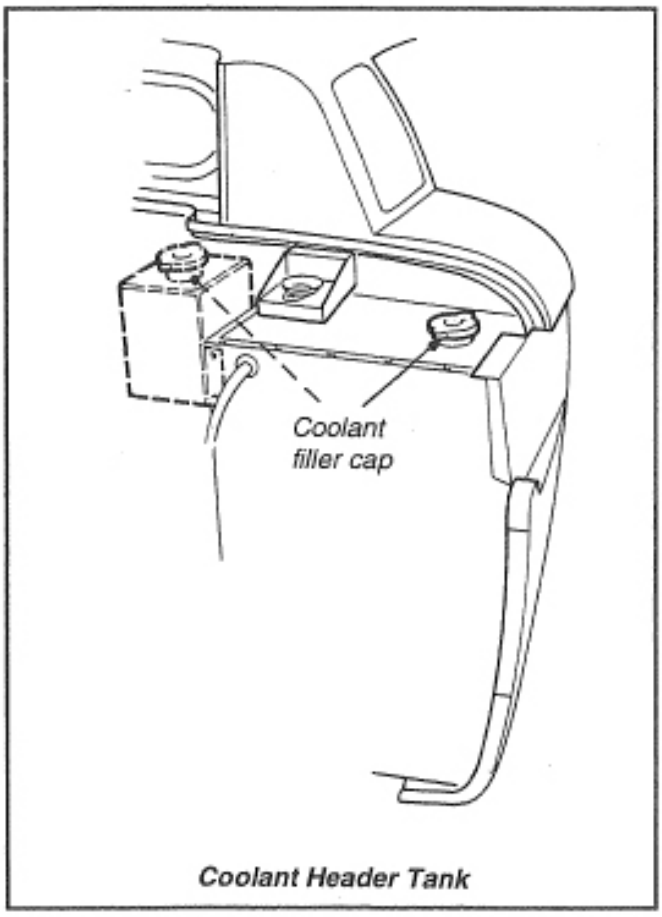
Gearbox Oil Level Plug

COOLING SYSTEM

WARNING

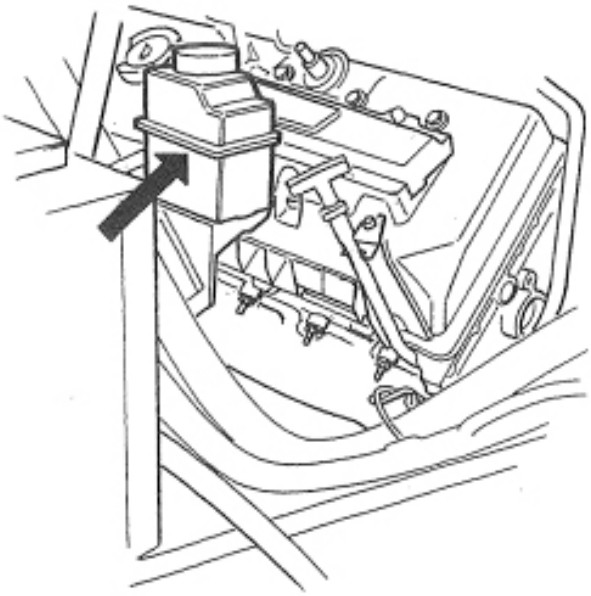
DO NOT attempt to top up the system when the engine coolant is hot because removing the cap may cause very hot liquid to spray out and cause injury. It is always wise to cover and turn the cap with a cloth in case coolant sprays out.

On some cars the engine coolant header tank is located on the right-hand side of the engine compartment but a later position is concealed next to the right-hand fuel tank with only the neck and the cap showing through the cover panel. The cap is a twist-off type. When the coolant is cold the normal level in the tank should be approximately half-full. If necessary, top up using the correct coolant mixture which is described in the Technical Data section. Twist the tank cap on firmly to secure.

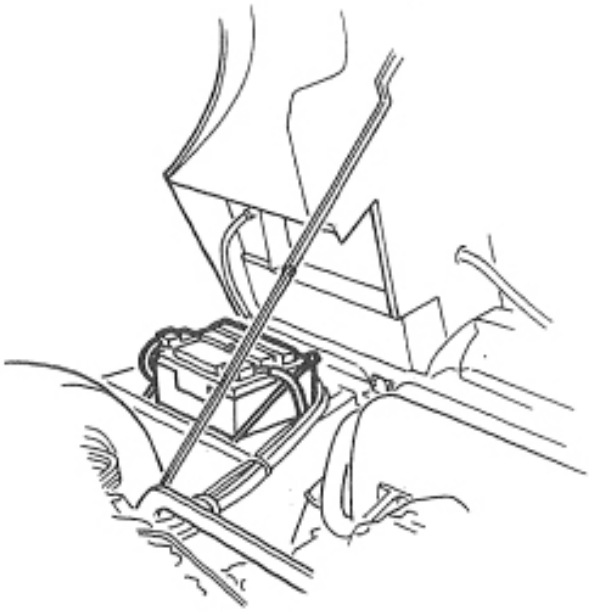


Coolant Header Tank

OWNER CHECKS



Power Steering Reservoir



Battery Location

POWER STEERING RESERVOIR

CAUTION. - Any spillage of fluid should be wiped off immediately with a water-dampened cloth because the fluid is corrosive.

The power steering reservoir is located in the engine compartment on the left-hand side of the engine near the compartment cover locking catch. It is a plastic container with a screw cap. The normal level for the fluid is marked on the side of the reservoir. If the level is low:

- Unscrew the reservoir cap and top up with the correct power steering fluid listed in Technical Data.
- Screw on the top cap firmly after filling.

BATTERY

The battery fitted is sealed for life and no topping-up is necessary. The cover is fixed and no attempt to remove it should be made. It is wise though to check the battery terminals from time to time to ensure that they are tight. The metal of each terminal should be coated with petroleum jelly to prevent corrosion and if the terminals are removed it should always be renewed.

WARNING

When working on a battery, or in its vicinity, DO NOT allow the terminals to be shorted out by tools or wires. A battery short circuit will cause an electric arc / flash that can burn badly and the hot or melting metal tool will burn the hand holding it. If such an accident were to happen droplets of molten metal could fly into someone's face and therefore it is necessary to ensure that the face is always shielded and protective goggles should be worn. The least that can happen is that the battery may be damaged.

Never stand over a battery on charge. If the battery leaks, is dropped, or cracks, the liquid electrolyte, which is corrosive acid, can cause injury. If skin or clothes come into contact with the acid wash immediately with copious amounts of water until clean. Avoid touching face, eyes and clothes after handling a battery until after hands are washed clean.

If acid enters the eyes, immediately wash out with copious amounts of clean water and seek medical help as quickly as possible.

Disconnecting the battery
Handling a battery and charging it is a routine and safe operation but care must be taken to observe simple precautions as described above to prevent mishaps and injury.

If there is a need to disconnect the battery, the engine must be stopped and all electrical equipment switched off. Always disconnect the black (-) negative earth lead first and reconnect it last. Ensure that when reconnecting the leads they do not foul other parts and are clear of the engine compartment cover when it is lowered. Before reconnecting the terminals, check that the battery lugs and the inside of the terminals are clean and free of corrosion. Tighten the bolts firmly until the terminals cannot be rotated. Renew the coating of petroleum jelly.

Jump Starting
To jump start from the battery of another vehicle follow the instructions provided in Sect. 15.

Battery Charging
Remove the battery from the car before charging by unscrewing the clamping bolts until the battery can be released. When refitting the battery, always ensure that it is securely clamped into position and the bolts fully tightened.

Recharge following the instructions provided for the charger being used. Always recharge a battery in a well-ventilated area free from sparks and naked flames. The reason for this is that a battery on-charge, and for a while after charging, emits flammable hydrogen gas which in a confined space can be concentrated and cause an explosion.

Always switch off the charger before removing the leads from the battery to prevent sparks from the terminals.

INERTIA SWITCH

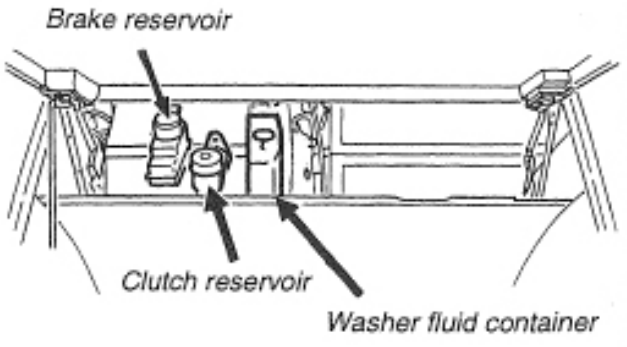
An inertia switch is fitted to isolate the engine management system and cut off fuel to the engine should the car be involved in an accident. It operates when a severe impact occurs, tripping the switch mechanism. If the engine fails to start after a severe impact the switch should be checked and reset. This is a task for an engineer checking over the car after an accident.

The switch is located in the engine compartment electrical bay next to the left-hand fuel tank. To see it, the outer panel and the electrical box cover must be removed. The inertia switch button position is at the top right-hand corner of the relay panel - see illustration in Sect. 13. If it cannot be seen in the hole in the panel it is set in its normal position, but if it can just be seen then it has tripped. Push it in to reset the switch.

FRONT SERVICE AREA

WEEKLY CHECKS

The front service area is located behind the luggage compartment and access is gained by opening the luggage compartment cover.



Front Service Area

WINDSCREEN WASHER

The windscreen washer water bottle is located in the centre of the service area. The water bottle is the large white plastic container with a prise-off filler cap. It should be checked for level of contents and topped up with water when necessary. It is advised that a screen cleaning additive be used in the water to assist in keeping the windscreen clean. In winter-time an anti-freeze

additive should also be used to prevent the water freezing.

BRAKE FLUID RESERVOIR

CAUTION.-Any spillage of brake / clutch fluid should be wiped off immediately with a water-dampened cloth because the fluid is corrosive.

The brake fluid reservoir is located in the service area, on the driver's side of the car (it is changed over for left- and right-hand drive). The reservoir is an opaque plastic container with a level mark on the side to show the minimum level for the fluid. Normally the reservoir should be kept filled. **DO NOT** let the level fall below minimum:

- Unscrew the reservoir cap and top up with the correct brake fluid listed in Technical Data.
- Screw on the top cap firmly after filling.

Should the brake warning light show red (Sect.10) when on the move, and the handbrake is not still applied, check the brake fluid level immediately.

Any problems noticed when braking and any sponginess, or other incorrect operation of the brake pedal, should be discussed with the dealer before driving the car any further. Check for any sudden drop in reservoir brake fluid level and immediately check with the dealer before driving the car again.

CLUTCH FLUID RESERVOIR

CAUTION. - Any spillage of clutch / brake fluid should be wiped off immediately with a water-dampened cloth because the fluid is corrosive.

The clutch fluid reservoir, located in the service area behind the luggage compartment, is a metal container with a screw cap. The normal level for the fluid is marked on the side of the reservoir. If the level is low:

- Unscrew the cap and top up to the mark with the correct clutch fluid listed in Technical Data.
- Screw on the cap firmly after filling.

Should any problems be noticed with clutch operation check the fluid level and top up if necessary. If there has been a sudden drop in reservoir level contact the dealer for advice.

EMERGENCY INFORMATION

FAULT FINDING

Simple fault finding comprises checking a list of possible symptoms that may be preventing operation of the car or its components. The following list covers the most frequent points that can easily be checked by the non-engineer owner with references to the relevant parts of this handbook.

ENGINE PROBLEMS

Will not start - check the following:

- Petrol level.
- Engine and leads not wet after washing car.
- Engine not flooded with petrol (Sect. 9).
- Exhaust tail pipes not blocked.
- If no electric power - check battery (Sect.14).

OTHER PROBLEMS

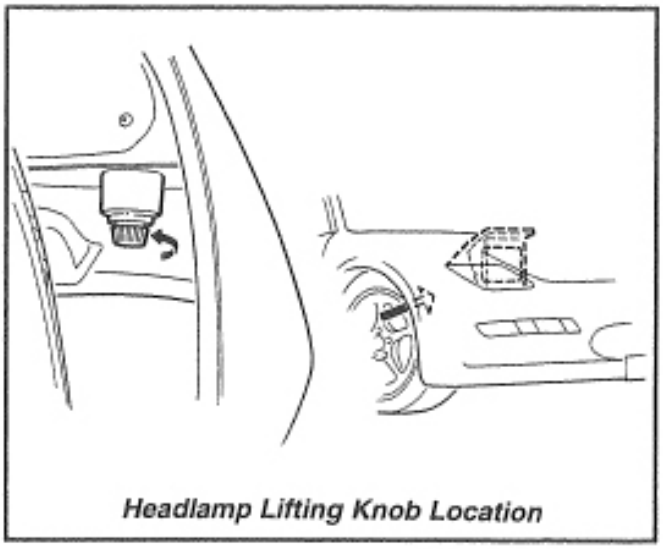
With engine running - check:

- Gauges for correct indications.
- Low oil pressure - oil level (Sect. 14).
- High temperature - coolant level.
- Brakes - incorrect operation (Sect.10 and 14).
- Clutch incorrect operation (Sect. 14).

SOME ELECTRICAL CIRCUITS NOT OPERATING

Check fuses are serviceable (Sect. 13). If headlight will not lift and fuse OK, lift it manually by rotating the knurled plastic knob, located beneath the light inside the wheel arch, to enable the journey to be completed.

Malfunction of many other fittings or controls may be checked by reference to the appropriate section in this handbook. If the fault cannot be identified as an omission of owner's checks and maintenance, or if unsure that the solution is within the owner's capability, refer the problem to the dealer. If in doubt of the safety of the car **DO NOT** drive until sure.



Headlamp Lifting Knob Location

LIGHT BULB REPLACEMENT

CAUTION.- Before starting to dismantle any lights to replace a bulb you are advised to disconnect the battery. Make sure that the ignition and all the lights at the lighting main switch on the steering column (Sect. 7) are switched off. Ensure that the power supply is not switched on again until after the bulb has been replaced and the lamp reassembly has been completed.

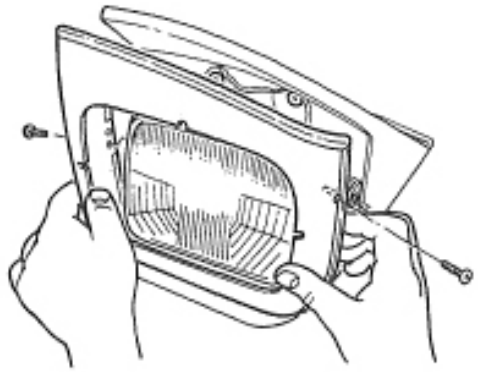
Headlights

If a headlight bulb needs replacing, switch off the lights:

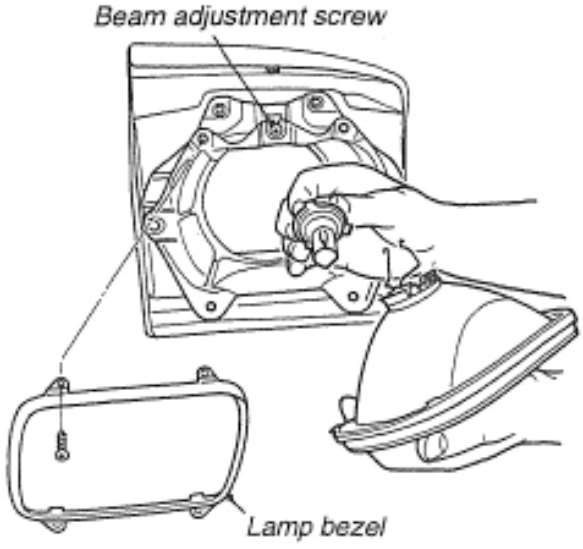
- Lift the headlight manually by rotating the knurled plastic knob located beneath the light inside the wheel arch.
- Remove the two screws, one on each side, securing the lamp front bezel cover and lift off to expose the lamp bezel.
- Remove the four screws securing the lamp bezel - **DO NOT** touch the beam adjustment screw in the centre or the light will require re-adjustment on the dealer's beam setter.
- Unplug the bulb holder at the rear of the lamp.
- Squeeze the wire clips securing the bulb in the lamp and release them to remove it.

EMERGENCY INFORMATION

- Select a new bulb of the correct type (check Technical Data) but **DO NOT** touch the glass of the lamp - the data supplied with the lamp should warn of this - hold in a clean cloth.
- Insert the bulb into the lamp holder and rotate until the lugs are correctly aligned with the slots.
- Squeeze the wire clips together onto the back of the bulb then release them to lock it in position.
- Insert the plug onto the lamp terminals.
- Reassemble the lamp and bezels in the reverse order to disassembly.
- Lower the headlight by rotating the knurled knob until fully closed.
- Switch on to test the headlights.



Front Bezel Removal

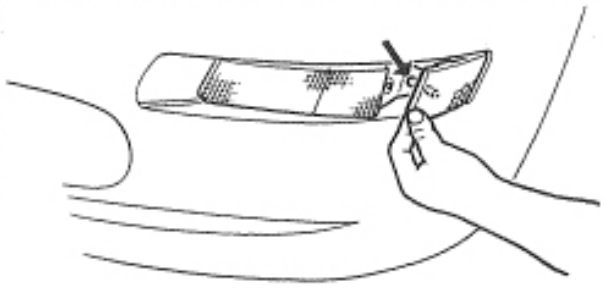


Headlight Bulb Replacement

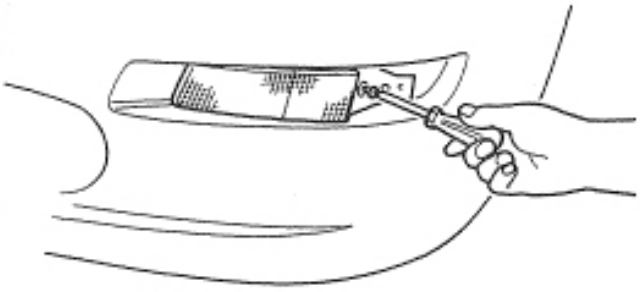
Front Parking / Sidelight / Indicator Lights

If a parking or indicator bulb needs replacing, switch off the lights and the direction indicator:

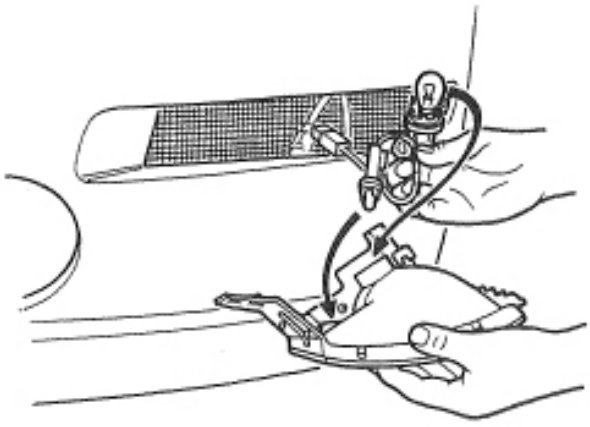
- Prise off the outer orange reflector.
- Remove the single screw securing the parking and indicator light plate.
- Remove the faulty bulb from the holder.
- Select a new bulb of the correct type (check Technical Data) and insert into the holder.
- Reassemble in reverse order`.
- Test for correct operation



Prise off orange reflector



Remove screw



Remove / replace faulty bulb

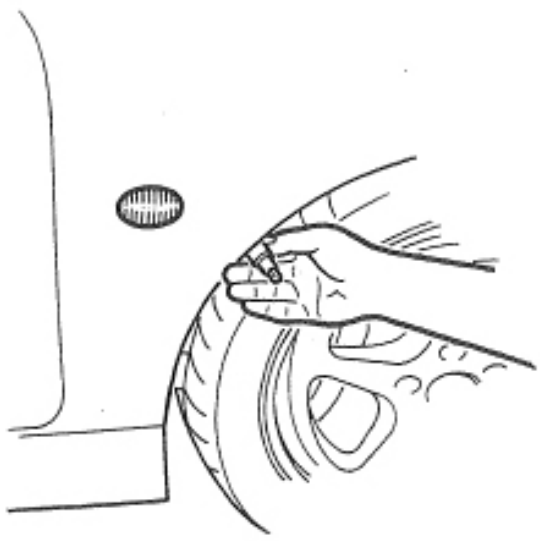
Front Parking / Sidelight / Indicator Light Bulb Replacement

EMERGENCY INFORMATION

Side Repeater Indicator Lights

If a bulb needs replacing, switch off the direction indicators:

- Locate the lampholder inside the front wheel arch and pull to remove it. It comes away connected to the electrical supply wires.
- Remove the faulty bulb from the holder.
- Select a new bulb of the correct type (check Technical Data) and insert into holder.
- Insert the lampholder into the lamp and press firmly into position.
- Test for correct operation.



Side Repeater Indicator Bulb Replacement

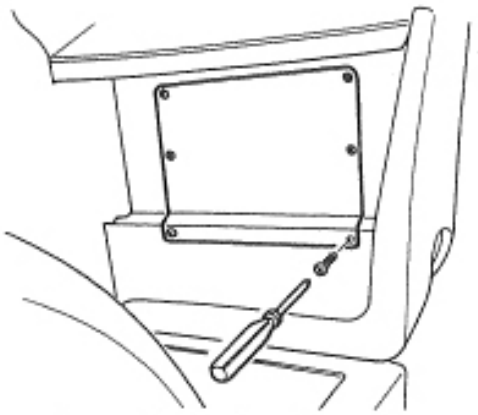
Rear Light Clusters

If any of the bulbs need replacing, switch off the lights, the direction indicators, the reversing lights and the brake lights:

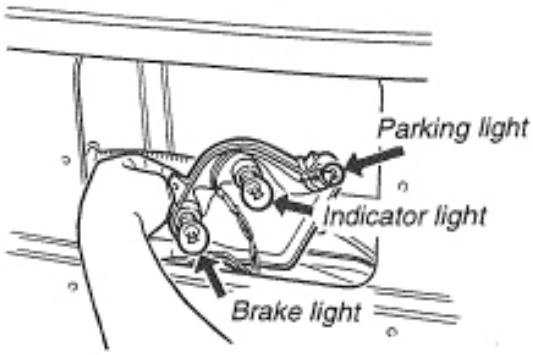
- Open the engine compartment cover and ensure the stays lock into place to hold it open:
- Locate the lamp cover panel and remove by unscrewing the six securing screws.
- If the rear or stop or indicator bulbs need replacing, unscrew and remove the outboard carrier and remove the faulty bulb from the holder.
- Select a new bulb of the correct type (check Technical Data) and insert into the holder.
- Reassemble in reverse order.
- Test for correct operation.

If the fog or reverse bulbs are to be removed they are on the inboard bulb carrier and it should be:

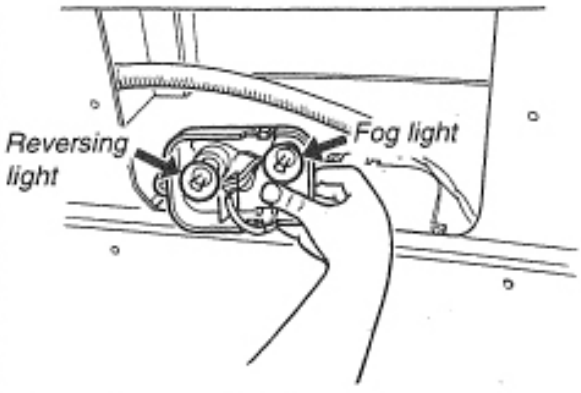
- Unscrewed and removed after removing the outer lamp carrier as described above.
- Remove the faulty bulb from the holder.
- Select a new bulb of the correct type (check Technical Data) and insert into the holder.
- Reassemble in reverse order.
- Test for correct operation.
- Close the engine compartment cover.
- Test for correct operation.



Lamp Cover Panel Removal

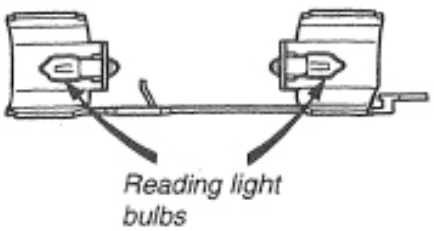


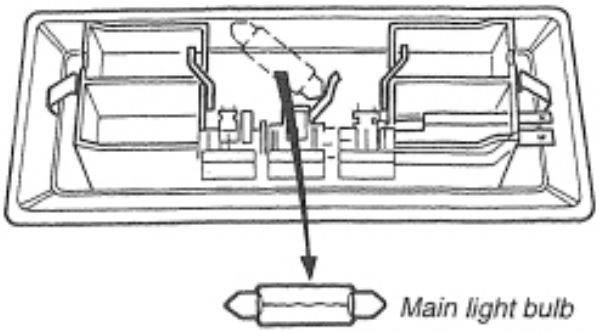
Outboard Bulb Carrier Removal



Inboard Bulb Carrier Removal

EMERGENCY INFORMATION





Passenger Compartment Light Bulb Replacement

Passenger Compartment Lights

These lights cannot be switched off conveniently at any other point and can only be isolated by removing the fuse C1 (Sect. 13).

- This light fitting is held in place by hidden spring clips and is removed by carefully pulling down the fitting from one end. It all comes away in one piece. Take care not to damage the head lining.

Main light:

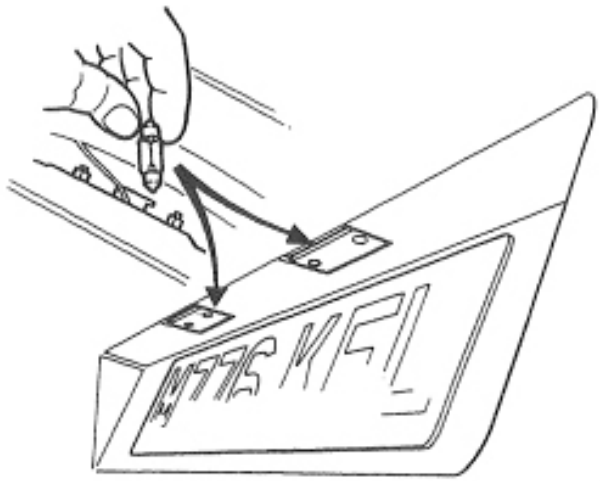
- Locate the main light bulb, which is the festoon type (long) bulb mounted centrally; it can be removed and a new bulb fitted without further dismantling.
- Select a new bulb of the correct type (check Technical Data) and insert into the terminals.

Reading lights:

- The reading light bulbs are fitted on a metal carrier that is removed from the fitting by pulling it away from the main light fitting.
- Select a new bulb of the correct type (check Technical Data) and insert into the holder.
- Press the carrier back into place on the light fitting.
- Check that all the terminals are making contact with the bulbs.

Reassembly:

- Press the complete light fitting back into place.
- Reconnect the electrical supply by replacing the fuse and test each light for correct operation.



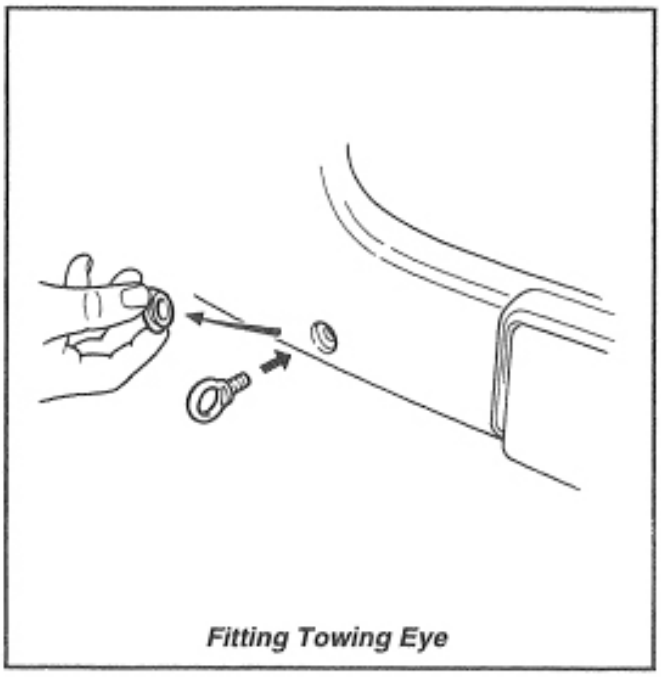
Number Plate Lights

Number Plate Lights

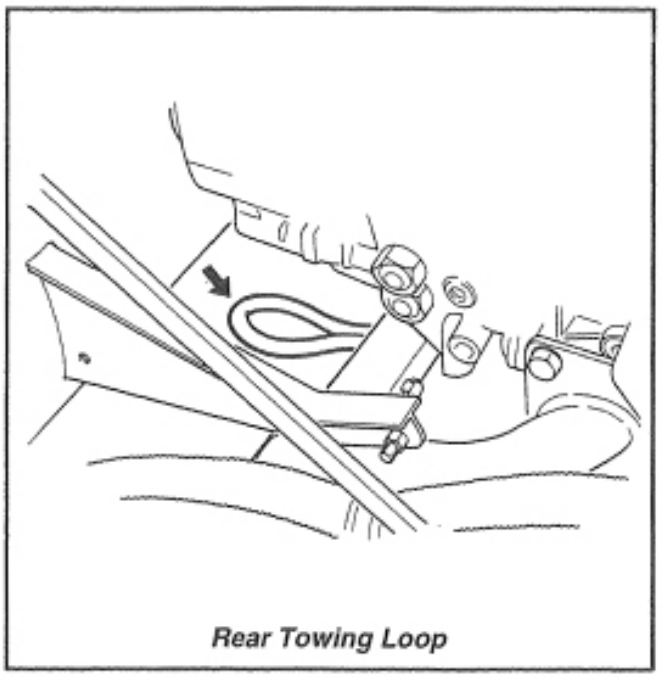
If a bulb needs replacing switch off the lights:

- Open the engine compartment cover and ensure the stays lock into place to hold it open.
- Locate the two number plate lights and reach over to feel the long 'festoon' bulbs.
- Grip the faulty bulb between finger and thumb and pull it out of the terminals.
- Select a new bulb of the correct type (check Technical Data) and insert it into the terminals.

EMERGENCY INFORMATION



Fitting Towing Eye



Rear Towing Loop

TOWING

WARNING
DO NOT allow anyone to jack up the car until after reading Sect. 13 information on jacking.

Towing Eye
The towing eye has to be screwed into the threaded hole provided in the right-hand side of the front 'bumper' area. To screw-in the eye, first remove the rubber bung that normally protects the hole and thread and retain it for reinserting after the eye is removed. Ensure that the eye is screwed fully in and is tight before attaching the tow rope.

Rear Towing Loop
This loop is welded to a chassis cross-member to the right of the gearbox and is visible when looking down into the engine compartment

TYRES AND WHEELS

Refer to Sect 13 for information relating to tyres and punctures. Refer to Technical Data for specification of tyres.

EMERGENCY INFORMATION

EMERGENCY BOOST 'JUMP' STARTING

Jump starting is the term used to describe starting a vehicle with a 'flat' or discharged battery from another vehicle. The engine of the assisting vehicle must be started after connecting and before the starter of the other vehicle is operated.

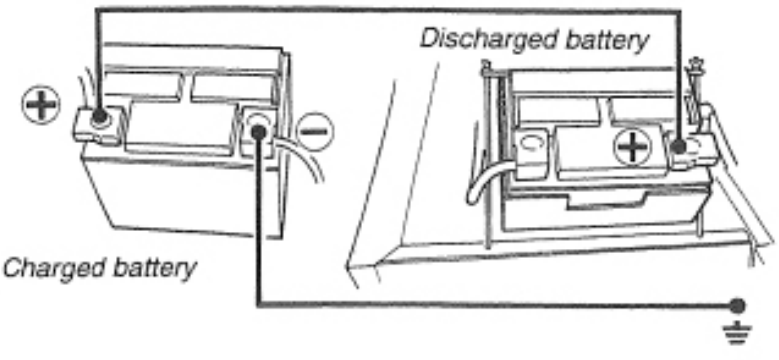
WARNING

Apply the handbrakes and ensure that both vehicles are in neutral gear. It is very easy to forget this and if someone is standing between the vehicles they may be trapped if a vehicle jumps forward in gear.

Normal battery precautions are to be observed when carrying out this operation (Sect. 14) and **DO NOT** lean over the batteries. Proceed as follows:

- Ensure the other vehicle has the same voltage battery.
- Take great care to ensure that leads are not shorted out to each other or to the vehicles.
- Switch off all electrical circuits not required.
- Ensure that the vehicles are not touching in case they are of opposite polarity earth.
- Connect the red (+) positive lead from the positive battery terminal of the vehicle supplying the power (1) to the red (+) positive terminal of the battery requiring power (2).
- Connect the black (-) negative lead from the negative battery terminal of the vehicle supplying the power to the engine mounting or chassis of the car requiring power.
- NOTE: It is preferable that the black (negative) lead is connected not to the negative terminal of the battery requiring a boost but to a suitable point on the chassis or engine some distance from the battery. This ensures that sparks occur as far away from the battery as possible.
- If previously stopped, start the engine of the vehicle supplying power.
- Attempt to start the engine of the vehicle being aided. If it does not start readily check out the starting procedure or look for other causes. Do not persist in attempting to start, it will only run down the battery of the vehicle supplying power.

When the engine is running, disconnect the jump leads in the reverse order to which they were connected taking great care again not to short them out.



Emergency Boost Connections

ENGINEER MAINTENANCE

Servicing Schedule
Owner's Service Record

Section 16
SERVICING SCHEDULE

SERVICING INTERVALS

The car should be serviced at regular intervals in accordance with the schedules recommended. Normally servicing is carried out at certain distances travelled but for low usage cars servicing should be carried out at 6 monthly intervals. The service records provided are designed for distances travelled but dealers should stamp them in sequence at 6 monthly intervals. Owners should ensure that their car is presented for servicing at the recommended intervals.

If the car is used constantly in cities and other locations where journeys are short, with frequent stops and starts and at low speeds, it puts a lot of strain on a powerful car and servicing should be carried out more frequently. It is recommended that the engine oil is changed every 3000 miles / 5000 km or every 3 months for low users; basic servicing checks should also be carried out at these intervals.

Maintenance Work

Maintenance work should always be carried out by a dealer appointed by ***Spectre Supersports***. These dealers have all the necessary Training, Documentation, Tools, Parts and experience to carry out the work. They will also be in constant touch with the manufacturer to keep their records and experience up to date. Other dealers and maintainers may have the skills but not the specialised training and other essentials to carry out the work satisfactorily.

Technical Manuals will be made available for purchase direct from ***Spectre Supersports*** for those owners interested in the engineering of their car.

This servicing schedule and recommended servicing intervals do not apply if the car is used for racing and other competitions. Any servicing advice required by owners participating in competitions may be obtained from Spectre Supersports.

Registration

Owners, and subsequent owners, are recommended to register with ***Spectre Supersports*** and registration forms are provided at the back of this handbook. The owner should complete this as soon as the car is purchased so that their name may be recorded in the Owners Register for future mailings of information.

WARRANTY

The Warranty Document is provided separate from this manual and it is advised that the owner and dealer completes the following Owner's Record immediately on taking delivery of the car. The dealer should complete it as part of the sales procedure since he will have to locate the chassis and engine numbers and ensure that the owner sees them. New owners, and subsequent owners, should always check the chassis and engine numbers and compare them with those on the Registration Document (Log Book).

OWNER'S RECORD

Pre Delivery Inspection and Registration of Purchase:

Purchase date:.....

V.I.N. number:.....

Engine number:.....

Body colour:.....

Vehicle registration / Licence number:

.....

Owner's name:.....

Address:.....

.....

.....

Dealer's Statement:

I have carried out the pre delivery inspection in the presence of the above owner and I am satisfied that the car is in accordance with the stated specification and operating satisfactorily:

Dealer's signature:

Dealer's address stamp:

Section 16
SERVICING SCHEDULE

NOTE: It is assumed in all cases that electronic test and diagnosis equipment is used for operational servicing. The relevant operations are specified as - 'test' and 'adjust' - and it is intended that these will be carried out using the appropriate equipment.

1000miles/1500km

Engine
Check for oil and coolant leaks.
Check hoses and joint clips.
Drain engine oil and refill.
Fit new oil filter.
Check alternator / ancillaries drive belt and adjust.
Check gasket joints for leaks.
Top up coolant to level.
Test exhaust and adjust engine as required.

Ignition
Test and adjust if necessary.

Gearbox and Transmission
Check for oil leaks.
Check oil level and top up if necessary.
Check clutch components for leaks, damage and security of pipes.
Check clutch fluid reservoir and top up if necessary.
Check engine gearbox coupling for security.

Steering and Suspension
Check for security of joints, mountings and gaiters.
Check all wheels and bearings and adjust if necessary.
Check shock absorbers for operation.
Check power steering fluid level and top up if necessary.

Brakes
Check all pipes, unions and components for leaks and damage.
Check brake fluid level and top up if necessary.
Check pipes to servo unit for security and damage.
Check wheel alignment.

Electrical System
Check all equipment for correct operation.
Test and adjust headlight settings.
Check air conditioning system for correct operation.

Fuel System
Check for leaks at unions and security of pipes, clips and damage.

Exhaust System
Check for leaks and security.

Wheels and Tyres
Ensure road wheel nuts are tight.
Check tyre pressures and adjust if necessary.
Check pressurized tyre repair bottle is within date range (if carried - not supplied).
Check for adverse wear on tyres.
Check that condition of tyres is within maker's specification and check for damage.

Bodywork and Chassis
Inspect paintwork for chips and general condition.
Check underside of chassis and body for condition and make good sealing if necessary.
Lubricate and check for correct operation all hinges and stays.
Check seat belts and seats for condition and correct operation.

Road Test
Check for performance of engine, clutch, brakes and correct operation of all indicators and gauges.

Service Record
Complete the Service Record for the appropriate service carried out.

Section 16
SERVICING SCHEDULE

NOTE: It is assumed in all cases that electronic test and diagnosis equipment is used for operational servicing. The relevant operations are specified as - 'test' and 'adjust' - and it is intended that these will be carried out using the appropriate equipment.

6000miles/10000km
(or 6 months)

Engine
Check for oil and coolant leaks.
Check hoses and joint clips.
Drain engine oil and refill.
Fit new oil filter.
Check alternator / ancillaries drive belt and adjust.
Check gasket joints for leaks.
Top up coolant to level.
Test exhaust and adjust engine as required.

Ignition
Check/clean spark plugs and renew if necessary.
Test and adjust if necessary.

Gearbox and Transmission
Check for oil leaks.
Check oil level and top up if necessary.
Check clutch components for leaks, damage and security of pipes.
Check clutch fluid reservoir and top up if necessary.
Check engine gearbox coupling for security.

Steering and Suspension
Check for security of joints, mountings and gaiters.
Check all wheels and bearings and adjust if necessary.
Check shock absorbers for operation.
Check wheel alignment.
Check power steering fluid level and top up if necessary.

Brakes
Check calliper brake pads and discs for wear and condition - adjust if necessary.
Check handbrake shoes for wear and adjust if necessary.
Check all pipes, unions and components for leaks and damage.
Check brake fluid level and top up if necessary.
Check pipes to servo unit for security and damage.

Electrical System
Check all equipment for correct operation.
Test and adjust headlight settings.
Check air conditioning system for correct operation.
Check wiper blades and renew when necessary.

Fuel System
Check for leaks at unions and security of pipes, clips and damage.

Exhaust System
Check for leaks and security.

Wheels and Tyres
Ensure road wheel nuts are tight.
Check tyre pressures and adjust if necessary.
Check pressurized tyre repair bottle is within date range (if carried - not supplied).
Check for adverse wear on tyres.
Check that condition of tyres is within maker's specification and check for damage.

Bodywork and Chassis
Inspect paintwork for chips and general condition.
Check underside of chassis and body for condition and make good sealing if necessary.
Lubricate and check for correct operation all hinges and stays.
Check seat belts and seats for condition and correct operation.

Road Test
Check for performance of engine, clutch, brakes and correct operation of all indicators and gauges.

Service Record
Complete the Service Record for the appropriate service carried out.

Section 16
SERVICING SCHEDULE

NOTE: It is assumed in all cases that electronic test and diagnosis equipment is used for operational servicing. The relevant operations are specified as - 'test' and 'adjust' - and it is intended that these will be carried out using the appropriate equipment.

12000miles/20000km
(or 12 months)

Engine
Check for oil and coolant leaks.
Check hoses and joint clips.
Drain engine oil and refill.
Fit new oil filter.
Clean air filter element and refit if serviceable.
Check alternator / ancillaries drive belt and adjust.
Check gasket joints for leaks.
Top up coolant to level.
Check hoses for serviceability and security.
Lubricate control linkages throughout.
Test exhaust and adjust engine as required.

Ignition
Check distributor and its operating components.
Fit new spark plugs.
Check wiring and leads and renew if necessary.
Test and adjust if necessary.

Gearbox and Transmission
Check for oil leaks.
Check oil level and top up if necessary.
Check clutch components for leaks, damage and security of pipes.
Check clutch fluid reservoir and top up if necessary.
Check engine gearbox coupling for security.

Steering and Suspension
Check for security of joints, mountings and gaiters.
Check all wheels and bearings and adjust if necessary.
Check shock absorbers for operation.
Check wheel alignment.
Check power steering fluid level and top up if necessary.

Brakes
Check calliper brake pads and discs for wear and condition - adjust if necessary.
Check handbrake shoes for wear and adjust if necessary.
Check all pipes, unions and components for leaks and damage.
Check brake fluid level and top up if necessary.
Check pipes to servo unit for security and damage.

Electrical System
Check all equipment for correct operation.
Test and adjust headlight settings.
Check air conditioning system for correct operation.
Check wiper blades and renew when necessary.

Fuel System
Check for leaks at unions and security of pipes, clips and damage.
Check pump and other wiring for serviceability and security.

Exhaust System
Check for leaks and security.

Wheels and Tyres
Ensure road wheel nuts are tight.
Check tyre pressures and adjust if necessary.
Check pressurized tyre repair bottle is within date range (if carried - not supplied).
Check for adverse wear on tyres.
Check that condition of tyres is within maker's specification and check for damage.

Bodywork and Chassis
Inspect paintwork for chips and general condition.
Check underside of chassis and body for condition and make good sealing if necessary.
Lubricate and check for correct operation all hinges and stays.
Check seat belts and seats for condition and correct operation.

Road Test
Check for performance of engine, clutch, brakes and correct operation of all indicators and gauges.

Service Record
Complete the Service Record for the appropriate service carried out.

LATER SERVICING INTERVALS

Servicing intervals after 12000miles/20000km are repeats of the 6000mile and 12000miles with additional parts and components at certain intervals as noted below.

18000m/30000km - as 6000m.

24000m/40000km - as 12000m with the following additions:

Drain and renew gearbox oil.
Fit new air filter.
Fit new fuel filter.
Fit new alternator / ancillaries drive belt.

30000m/50000km - as 6000m.

36000m/60000km - as 12000m.

42000m/70000km - as 6000m.

48000m/80000km - as 24000m.

Continue to repeat each servicing interval as follows:

6000m/10000km services at:
54000m/90000km
66000m/100000km
78000m/130000km
90000m/150000km

12000m/20000km services at:
60000m/100000km
84000m/140000km

24000m/40000km services at:
72000m/120000km

48000m/80000km service at:
96000m/160000km

and so on.....

Annual and biannual-annual additional service tasks:

Annually:
Drain and replenish brake fluid.
Drain and replenish clutch fluid.
Drain and replenish power assisted steering fluid.
Air conditioning system; service.

Biannually: Drain and replenish engine coolant.

OWNER'S SERVICE RECORD

The owner should ensure that the appropriate service record is signed and stamped by the dealer after the work has been completed.

Service interval: 1000m/1500km	Dealer's stamp:
Recorded distance: ..... Date:..... Owner's signature:	 Dealer's signature:

Service interval: 6000m/10000km	Dealer's stamp:
Recorded distance: ..... Date:..... Owner's signature:	 Dealer's signature:

Service interval: 12000m/20000km	Dealer's stamp:
Recorded distance: ..... Date:..... Owner's signature:	 Dealer's signature:

Service interval: 18000m/30000km	Dealer's stamp:
Recorded distance: ..... Date:..... Owner's signature:	 Dealer's signature:

TECHNICAL DATA

TECHNICAL DATA

Spectre Supersports Limited reserve the right to modify and change specifications without prior notice.

Engine

Maker.....Ford
Type.....V8, 32 valve, quad cam
Cubic capacity.....4.6 litre
Power.....350 bhp at 5900 rev / min and 335 lbf ft torque at 4850 rev / min

Ignition system

Type .....Electronic management
Spark plugs .....Motorcraft AWSF 32c
Gap.....1.1 mm

Electrical system

Voltage.....12 Vdc
Battery .....12 V, 65 Amp hour, sealed for life
Alternator.....12 Vac

Wheels and tyres

Front .....235 / 45 mm / 8.5 x 17 in
Type .....ZR
Pressure (cold) .....24 lb / sq in
Rear .....335 /35 mm / 11 x 17 in
Type .....ZR
Pressure (cold) .....24 lb / sq in

Dimensions

Overall height .....1092 mm / 43 in
Overall width.....1900 mm / 75 in
Overall length .....4218 mm / 166 in
Ground clearance .....127 mm / 5 in
Wheelbase .....2480 mm / 98 in
Turning circle .....11 m / 36 ft
Front overhang .....864 mm / 34 in
Rear overhang .....737 mm / 29 in
Front track .....1600 mm / 63 in
Rear track .....1589 mm / 61 in

CD 0.28

Weight

Dry.....Approx. 1250 kg / 2750 lb

Suspension

Front .....Double wishbone, race specification swivel joints
Rear .....Inverted A arms
Shock absorbers .....Adjustable gas, with rising rate springs

TECHNICAL DATA

Spectre Supersports Limited reserve the right to modify and change specifications without prior notice.

Lights / bulbs

Head .....12 V, 55 / 60 W
Parking
Front .....12 V, 5 W
Rear .....12 V, 5 W
Indicators
Front .....12 V, 21 W
Rear .....12 V, 21 W
Side.....12 V, 5 W
Reverse .....12 V, 21 W
Rear fog .....12 V, 21 W
Number plate.....12 V, 5 W, festoon
Interior .....12 V, 5 W, festoon
and .....12 V, 12 W, festoon
Facia .....12 V, 3 W

Oil pressure.....Between 1.3 and 3 bar
Oil temperature.....Not to exceed 120deg. C

Oils

Engine
Grade .....10w / 30
Capacity .....5.7 litre / 6 quarts U.S.
Gearbox
Grade .....SAE 75w 90
Capacity .....2.4 litre
Brake fluid
Type / grade.....DOT 4
Clutch fluid
Type / grade.....DOT 4
Power steering
Type / grade.....Automatic Transmission Fluid (ATF)
Air conditioning
compressor oil .....PAG V9222; 224 ml, 8 fluid ounces

Petrol

Type.....97 RON unleaded (in U.K. Super unleaded)

Coolant

Mixture.....Distilled water / glycol ethylene (30%)
Temperature.....Normally approx. 90 deg. C. Not to exceed 110 deg. C.

Air Conditioning

Refrigerant .....R134a; 1360grams +/- 100grams / 3lb

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OWNER'S REGISTRATION

The new owner should register with *SPECTRE SUPERSPORTS* so that handbook amendments and information on developments to the cars and their equipment, can be notified promptly to owners.

Second and subsequent owners should also register as soon as possible after purchasing the car.

To register, simply complete one of the following forms and post it to;

Spectre Supersports Ltd.
Spectre House
Holton Heath Trading Park
Poole
Dorset BH16 6LG
United Kingdom

OWNER'S REGISTRATION

I have purchased a Spectre car and wish you to record my name and details in the Owner's Register.

Name.....

Address.....

.....

.....

Date of purchase:.....

Car details:.....

Chassis number on VIN Plate:.....

Number on chassis strut
in engine compartment:.....

Engine number:.....

Gearbox number.....

Transaxle number.....

Colour of car:.....

Recorded mileage:.....

Service record up to date:.....

Previous owner:.....

Please detach this page

Spectre Supersports Ltd
Spectre House, 16 Balena Close, Creekmoor, Poole, BH17 7DB, UK