

In addition to this handbook, your literature pack contains the following documents:

- **Service Portfolio**

This book includes important information about Land Rover warranty and vehicle maintenance requirements, as well as containing a unique record of your own vehicle's service history. Ensure that your Land Rover dealer completes the appropriate service record slip after every service.

- **In-Car Entertainment**

This book contains operating instructions for the audio equipment fitted to your Freelander.

- **Security Card**

Your Land Rover dealer should have filled in all the relevant serial numbers concerning your vehicle before delivery. These are important aids to vehicle security; keep the card in a safe place - NOT IN THE VEHICLE.

- **Softback & Hardback Owner's Guide - (3-door models only)**

This book contains instructions for operating and maintaining the softback and hardback, as well as for removing and refitting the roof bars (if fitted).

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As part of Land Rover's environmental policy, this publication is printed on paper made from chlorine free pulp.

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Introduction

Welcome to your new Freelander. This handbook, together with the other publications in the literature pack, provides all the information you need to gain maximum pleasure from owning and driving your new vehicle.

For your convenience, the handbook is divided into sections, each dealing with a particular aspect of driving or caring for the vehicle. Take a little time to read each one and get to know your new Land Rover as soon as you possibly can.

- **'Before you drive'** - covers seat adjustment, seat belts and heating controls and deals with everything you need to know to settle comfortably into the vehicle before you drive.
- **'Driving controls'** - here the functions and operation of the switches, instruments and driving controls are explained.
- **'Off-road driving'** - provides a guide to basic off-road driving techniques should you wish to venture off the beaten track.
- **'Maintenance'** - includes information about the checks that you should carry out on a regular basis.
- **'Emergency information'** - will help to solve some of those unavoidable little emergencies that occur from time to time, like replacing bulbs and fuses, or changing a wheel.
- **'Technical Data'** - includes the technical specification for your vehicle.

WARNING!

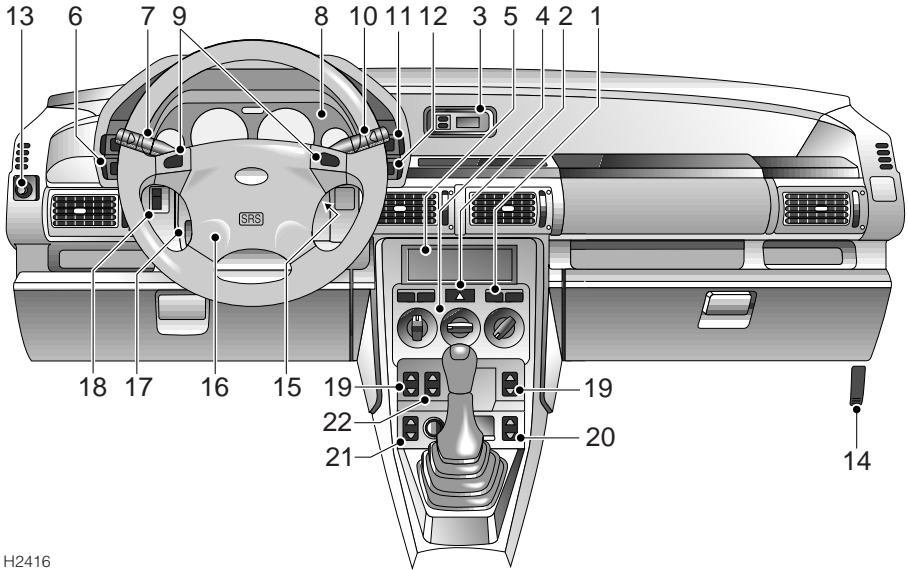
Warning boxes and safety information are included in the handbook. These indicate either a procedure which must be followed precisely, or information that should be considered with great care in order to avoid personal injury or damage to the vehicle.

IMPORTANT

The specification of each Land Rover vehicle will vary according to territorial requirements and also from model to model within the vehicle range. Some of the information published in this handbook, therefore, may not apply to your vehicle. Contact your dealer if you are in any doubt.9

Land Rover operate a policy of constant product improvement and therefore reserve the right to change specifications without notice at any time. Whilst every effort is made to ensure complete accuracy of the information in this handbook, no liabilities for inaccuracies or the consequences thereof, including loss or damage to property, or injury to persons, can be accepted by the manufacturer or the dealer who supplied the handbook, except in respect of personal injury caused by the negligence of the manufacturer or dealer.

Controls



H2416

- | | |
|--|--------------------------------------|
| 1. Rear screen demister | 12. Rear wiper switch |
| 2. Hazard warning light switch | 13. Exterior mirror control |
| 3. Clock/radio display | 14. Bonnet release |
| 4. Heater/air conditioning controls | 15. Starter switch |
| 5. Radio/cassette/CD player | 16. Driver's airbag SRS |
| 6. Rear fog guard light switch | 17. Steering column adjustment lever |
| 7. Lighting and direction indicator controls | 18. Headlight adjustment control |
| 8. Instrument panel | 19. Window switch |
| 9. Horn switches | 20. Sunroof switch |
| 10. Windscreen wiper/washer controls | 21. Taildoor glass switch |
| 11. Rear wash/wipe switch | 22. Door lock switch |

Security Card

The cards, supplied as part of the Service Portfolio book, contain important emergency information. It is ESSENTIAL that you keep the cards safe from theft and ensure that they are passed to the new owner if you sell the vehicle.

- **Key number:** This is the number of the starter/door key - essential if you ever need to obtain a replacement.
- **Emergency key access code:** You will need this code in order to start the vehicle if the handset has been lost or damaged (see 'Emergency key access' in the 'Locks & alarm' section).
- **Locking wheel nut number:** If your vehicle has locking wheel nuts, you will have been provided with a special wheel nut socket to remove them. This is the number you will need to obtain a replacement socket.
- **VIN (vehicle identification number):** This identity number is unique to your vehicle and is essential proof of its specification. The number can also be found in various locations around the vehicle (see 'Vehicle Identification').
- **Radio serial number:** This unique number is stamped into the side of the radio/cassette player supplied with your vehicle - proof of the unit's specification and your ownership (in the event of theft).
- **Radio security code number:** This unique code must be entered into the radio whenever the power supply has been disconnected. Without this code, the radio unit will not operate (see 'Security Code' in the 'In-Car Entertainment' book).

WARNING!

NEVER leave the card inside the vehicle when it is unattended.

Memorise the emergency key access code, or keep the card on your person while driving, in case of emergencies.

Locks & Alarm

ALARM SYSTEM

Your vehicle is fitted with a sophisticated electronic anti-theft alarm and engine immobilisation system. In order to ensure maximum security and minimum inconvenience, you are strongly advised to gain a full understanding of the alarm system, by thoroughly reading this section of the handbook.

ENGINE IMMOBILISATION

Engine immobilisation is an important aspect of the vehicle's security system and includes a feature known as 'passive immobilisation', designed to safeguard the vehicle from theft should the driver forget to lock the doors. The engine is automatically immobilised whenever any of the following conditions occur:

1. The alarm is armed using the handset or the key.
2. Five seconds after the starter switch has been turned off AND the driver's door opened (whether the key is removed or not).
3. Five minutes after the starter switch is turned off (whether the key is removed or not).

To re-mobilise the engine, press the plain button on the handset or insert the key into the starter switch and turn to position 'II.

IMPORTANT

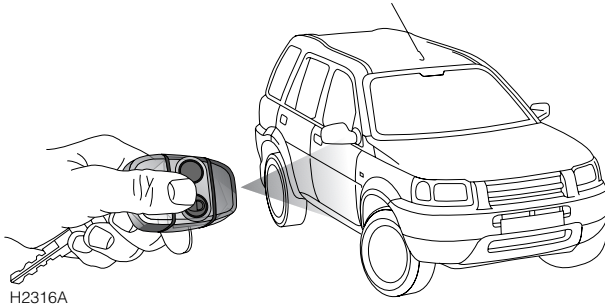
Only keep one handset and one key together on each key ring.

Some immobilisation and remobilisation features will not function if, either the handset is not on the same key ring as the key, or if two handsets are on the same keyring.

Operating Tip

If the engine fails to remobilise, the alarm indicator will illuminate constantly with the ignition on - press either handset button to remobilise the engine.

Locks & Alarm



LOCKING THE VEHICLE AND ARMING THE ALARM

Before locking the vehicle and arming the alarm, ensure that all doors (including taildoor), windows, sunroof and bonnet apertures are securely closed.

There are three methods for securing your vehicle:

1. 'Superlocking' using the handset - (recommended high security method).
2. 'Superlocking' using the key.
3. Locking using the key.

FOR MAXIMUM SECURITY, ALWAYS 'SUPERLOCK' THE VEHICLE USING THE HANDSET

(except when the vehicle is to be locked with passengers or animals inside).

Care Points

Always adopt this simple 'five-point' drill, whenever you leave your vehicle - even for just a few minutes:

- Fully close all windows, bonnet and sunroof.
- Remove any valuables (or hide them in the luggage compartment or lockable storage box).
- Remove the starter key (and handset).
- Engage the steering lock (by slightly turning the steering wheel until it locks).
- Close all the doors and arm the alarm.

Locks & Alarm

Locking with the handset

Aim the handset at the vehicle and briefly press the lock button (PADLOCK symbol). If the doors lock correctly, the hazard warning lights will flash three times and the alarm system indicator light on the instrument panel will start to flash rapidly.

Each time the vehicle is locked using the handset, a coded signal is transmitted to a receiver inside the vehicle, which activates the following security features:

- The central door locking system (all the door locks are activated).
- 'Superlocking' - the door locks cannot be operated from inside the vehicle.
- The perimeter alarm (protects the door, taildoor, and bonnet apertures).
- Interior space protection.
- Engine immobilisation

Once armed, the alarm will sound if any door is opened, or if the soft-back is raised or hard-back removed or if (after a checking period of 15 seconds) any movement is detected inside the passenger compartment (see '*Interior space protection*').

Mislock

If one of the doors, taildoor or bonnet are not properly closed when the alarm is armed, a mislock occurs (the horn will sound a warning). The alarm will still be armed and the engine immobilised, but the open aperture will not be protected and, unless it is the bonnet that has been left open, interior space protection will not have been activated. If the appropriate aperture is then closed, the alarm will fully arm without the need to press the lock button again unless it is the driver's door that is open, in which case the alarm will be fully armed by pressing the lock button again.

If the taildoor glass is left open when the alarm is armed, the horn will sound as a reminder, but the vehicle will be locked and alarmed as normal. The taildoor glass can be closed from outside the vehicle using the starter key in the taildoor (see '*Windows*').

IMPORTANT

If passengers or animals are to be left inside, DO NOT superlock the vehicle using the handset - movement inside the vehicle may activate interior space protection, causing the alarm to sound.

Locks & Alarm

Unlocking with the handset

If your vehicle is fitted with the Single Point Entry security feature, and was locked with the handset, the handset unlocks the vehicle in two stages:

1. The first press (on the plain button) unlocks the driver's door.
2. The second press unlocks the passenger doors and the taildoor.

If your vehicle is not fitted with Single Point Entry, all the doors will unlock at the first press.

NOTE: *If you do not require Single Point Entry, it can be deselected by your Land Rover dealer.*

Always aim the handset at the vehicle when pressing the button. The hazard warning lights will flash once, the alarm is disarmed immediately and the engine is re-mobilised.

If the handset fails to unlock the vehicle, resynchronise the handset (see 'Handset battery'). If this fails, use the key (see 'Emergency key access').

If the alarm sounds

Once activated, the alarm will sound for approximately 30 seconds before switching itself off and can be triggered up to ten times in total before needing to be reset. To silence the alarm, press either handset button, or operate the door locks using the key in the driver's door.

Anti-theft alarm indicator light

After locking, the RED indicator light on the instrument panel flashes rapidly while the alarm is arming itself.

After approximately 10 seconds, the indicator light adjusts to a slower frequency, and continues to flash as an anti-theft deterrent until the alarm is disarmed.

Interior space protection

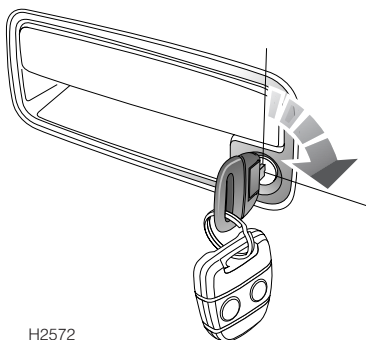
Interior space protection is only activated when the vehicle is locked with the handset. A sensor inside the vehicle monitors the interior space and activates the alarm if an intrusion into the passenger compartment is detected (entry gained through a window or sunroof, for example).

Operating Tip

After locking the vehicle and arming the alarm, there is much you can do to make your vehicle a less inviting target for the thief:

- Try to park where your vehicle can be seen by householders or passers-by.
- At night, always park in well lit areas and try to avoid dimly lit side streets.
- Never leave the vehicle documents in the vehicle - these are a real bonus for the thief.
- If you have a garage, use it - and don't risk leaving the key and handset in the starter switch.

Locks & Alarm



H2572

IMPORTANT

If passengers are to be left inside, DO NOT superlock the vehicle with the key or handset - superlocking prevents operation of the door locks from inside the vehicle.

LOCKING USING THE KEY

Turn the key in the driver's door towards the rear of the vehicle;

- ONCE to lock - the engine is immobilised and the perimetric alarm is armed.
- TWICE (within 1 second) to 'superlock' - in addition, the doors cannot be unlocked from the inside of the vehicle (recommended when leaving animals in the vehicle).

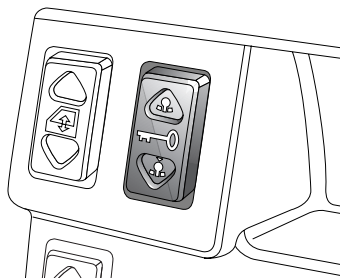
Remember; the recommended method of securing the vehicle is by 'superlocking' with the handset.

To unlock:

Turn the key towards the front of the vehicle. If the alarm is armed, the driver's door will disarm and interior space protection will be de-activated. However, to disarm the alarm completely and to remobilise the engine, the handset must be used.

NOTE: *If the handset is lost or broken, use the emergency key access code to disarm the alarm and remobilise the engine, as described later in this section.*

Locks & Alarm



H2393A

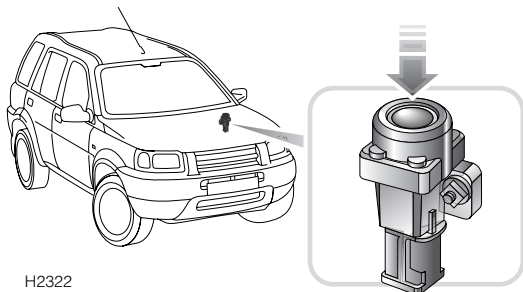
Operating Tip

Pull the interior door handle once to unlock, and twice to open the door.

CENTRAL DOOR LOCKING SWITCH

As a security feature, when locking, the door sill locking buttons drop completely into the door, making them less accessible to a would be thief. To enable the driver to operate the sill locking buttons, the vehicle is equipped with a central door locking switch on the fascia panel.

Press the lower portion of the switch to lock all the doors (the alarm is not armed). Press the upper portion of the switch to unlock.



H2322

DOOR LOCKING CUT-OFF SWITCH

An inertia switch, operational only with the starter switch in position 'II', prevents the doors centrally locking (or if the doors are locked, will unlock them) in the event of an accident or sudden impact.

When the inertia switch operates, central door locking is inhibited until the system is reset by pressing the rubber top (arrowed in illustration). On petrol models, this will also reset the fuel system (see 'Fuel cut-off switch').

Locks & Alarm

EMERGENCY KEY ACCESS

If the handset is lost or fails to operate, the alarm can be disarmed and the engine re-mobilised by using the key to enter a unique four number emergency key access code. The code is recorded on the Security card and is entered as follows:



1. With the vehicle locked and the alarm armed, turn the key (towards the front of the vehicle) to the UNLOCK position once, to unlock the vehicle. Now **wait for 6 minutes** before entering the code. During the waiting period, the key can be removed and the doors opened, if desired.



2. After six minutes, enter the first number of the code. If the first number is 4, turn the key to the UNLOCK position 4 times. Ensure the key is fully returned to the centre position after each turn.



3. Enter the second number of the code. If the second number is 3, turn the key (towards the rear of the vehicle) to the LOCK position 3 times. Remember; the key must be fully returned to the centre position after each turn.



4. Enter the third number of the code. If the third number is a 12, turn the key to the UNLOCK position twelve times, ensuring that the key is fully returned to the centre position after each turn.



5. Enter the fourth number of the code. If the fourth number is 1, turn the key to the LOCK position once. Ensure the key is fully returned to the centre position afterwards.



6. Finally, turn the key to the UNLOCK position once more to disarm the alarm and re-mobilise the engine. If the code has been entered successfully, the anti-theft alarm indicator light will extinguish, the doors will unlock to Single Point Entry (if selected) and the engine can be started.

NOTE: During the above procedure, the anti-theft indicator light will continue to flash (indicating that the alarm is still partially armed).

IMPORTANT

When entering a code:

- **ENSURE** each key movement is carried out with care and precision and turned through the full extent of its travel.
- After turning the key to either the lock or unlock positions, make sure it is **FULLY** returned to the centre (vertical) position.
- If you forget your place in the sequence of key operations and therefore do not complete a code, open and then shut the door and start entering the code again (this will not count as a failed attempt).

Operating Tip

If the engine is not started within five minutes of the emergency key access code entry, the engine will immobilise again and the code will have to be re-entered from item 1.

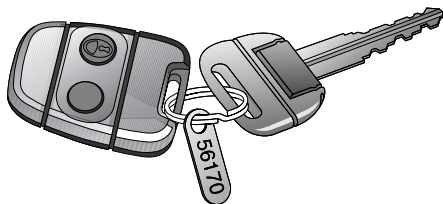
NOTE: If the handset is inoperable, the emergency key access code must be entered **EVERY** time you need to start the engine.

Locks & Alarm

If an incorrect code has been entered

If the code has been entered incorrectly, the anti-theft alarm indicator light will continue to flash and the horn will sound once. In this case, open and close the driver's door, repeat the access code procedure FROM ITEM 2 on the previous page.

After three failed attempts, the security system invokes a delay period of thirty minutes during which the system will not accept any further attempts to enter a code.



H2314B

KEY AND HANDSET REPLACEMENTS

You have been supplied with two remote control handsets and a pair of identical keys.

The key number is stamped on a tag attached to the key ring. Check that the key number has been entered in the space provided on your Security card.

If the key or handset is lost, contact a Land Rover dealer, who can supply replacement or additional keys and handsets.

NOTE: When obtaining a replacement handset your dealer will need to programme both handsets (old and new) together.

WARNING!

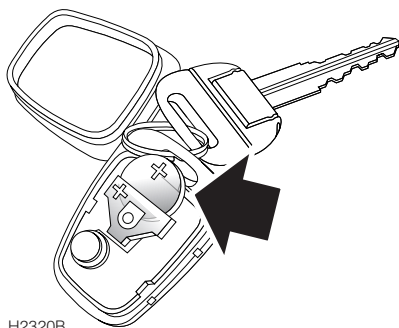
NEVER leave the Security card in the vehicle.

Memorise the emergency key access code or keep the Security card on your person in case of emergencies (a damaged handset for example).

WARNING!

Keep the key tag spare key and handset in a safe place - NOT IN THE VEHICLE!

Locks & Alarm



H2320B

HANDSET BATTERY

The handset battery should last for approximately three years, dependent upon use. When the battery needs replacing it will be apparent from the following symptoms:

- The alarm buzzer and the anti-theft alarm indicator light will double bleep/flash every second, for ten seconds, after the alarm is disarmed and driver's door opened.

Only fit a Land Rover STC4080 or a Panasonic CR2032 replacement battery (available from a Land Rover dealer) and adopt the following replacement procedure:

1. Carefully prise the handset apart, start from the keyring end using a coin or small screwdriver. Avoid damaging the seal between the two halves of the case and DO NOT allow dirt or moisture to get inside the handset.
2. Slide the battery out of its clip, taking care to avoid touching the circuit board or the contact surfaces of the clip.
3. Press and hold each button in turn for at least five seconds (this will drain any residual power from the handset).
4. Fit the new battery, ensuring that correct polarity is maintained ('+' side facing up). Finger marks will adversely affect battery life; if possible, avoid touching the flat surfaces of the battery and wipe them clean before fitting.
5. Reassemble the two halves of the handset.
6. To resynchronise the handset, operate either button of the handset at least five times in quick succession (in close proximity to the vehicle) or insert the key (with handset attached) into the starter switch and turn to position 'II'.

The handset is now ready for use.

WARNING!

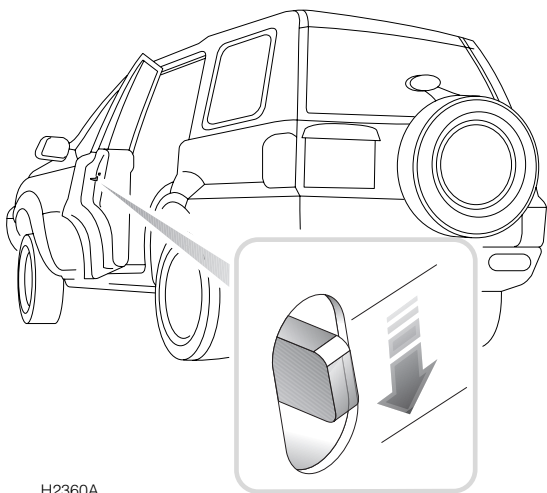
The handset contains delicate electronic circuits and must be protected from impact and water damage, high temperatures and humidity, direct sunlight and the effects of solvents, waxes and abrasive cleaners.

IMPORTANT

Battery disconnection

If the vehicle battery is disconnected for any reason the status of the security system prior to disconnection will be memorised and automatically reset when the battery is reconnected. However, the handset will need to be resynchronised (see item 6 alongside).

Locks & Alarm



H2360A

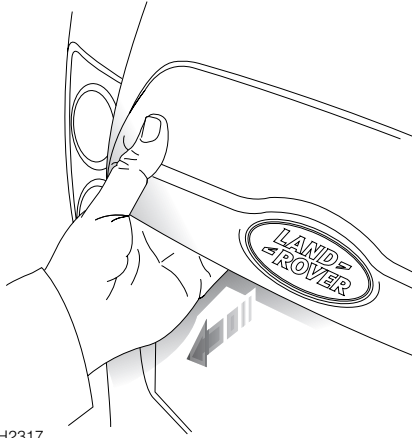
CHILD DOOR LOCKS

(5-door models only)

Move the lever on the rear doors down (arrowed in illustration) to engage.

With the child-proof locks engaged, the rear doors cannot be opened from inside the vehicle, thereby avoiding the risk of a door being opened accidentally while the vehicle is moving.

Taildoor



H2317

Opening the taildoor

When the release catch is pulled (as shown in illustration), the taildoor lock is released in two phases:

Firstly, the taildoor glass drops clear of its retaining channel, then the electronic door latch is released and the door can be opened.

Initially, the door opens approximately half way until resistance is felt; this prevents the door swinging fully open and possibly hitting an obstruction, yet still enables access in a situation where there is not enough room to open the door fully. Push, against resistance, to open the door fully.

Care Points

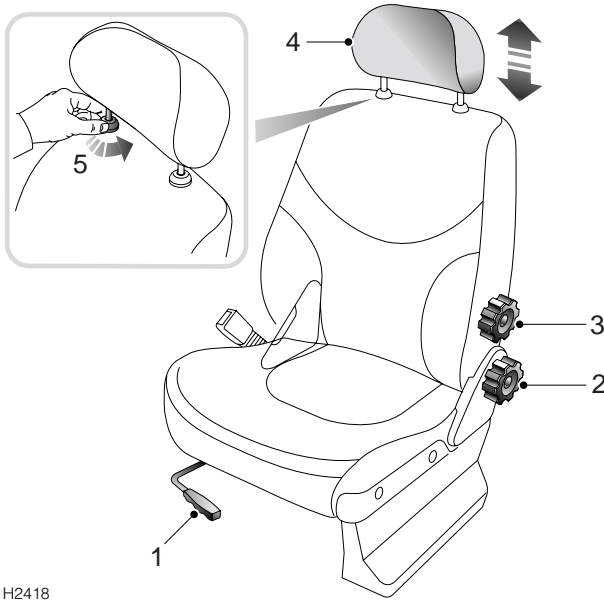
Long loads should be carried on the roof rack. If it is necessary to carry a load that protrudes through the taildoor window aperture, the weight of the load must NOT rest on the glass. Damage to the glass or mechanism may occur (see also 'Accommodating long loads' in 'Load carrying').

When closing the taildoor, push on the handle - NOT on the taildoor glass.

Operating Tip

The taildoor latch will not operate if the glass is frozen to the door seals, as the glass needs to drop slightly before the door can be opened. Defrost the glass with lukewarm water first.

Seats



H2418

WARNING!

DO NOT adjust the seats while the vehicle is moving.

DO NOT allow front seat occupants to travel with the seat backs reclined steeply rearwards. Optimum benefit is obtained from the seat belt, with the backrest angle set to 25 degrees from the upright (vertical).

Forward/backward adjustment

Lift the lever (1) and slide the seat into position. Make sure the seat is locked in position before driving.

Backrest adjustment

Rotate the handwheel (2) to adjust.

Lumbar support adjustment - if fitted

(Driver's seat only)

Rotate the handwheel (3) to increase or decrease support to the lumbar region of the back.

Head restraint adjustment

Raise or lower the restraint (4), until level with the back of the head.

Head restraint removal

Turn the right hand mounting (5) a quarter turn anti-clockwise and pull the restraint upwards.

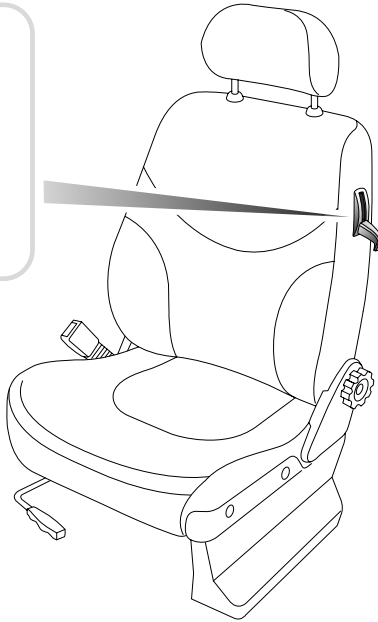
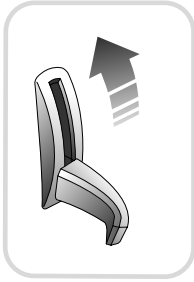
After replacing a head restraint, turn the right hand mounting clockwise.

For Your Safety

Where possible, adjust the head restraint so that the cushion is level with the back of the head - NOT THE NECK!

DO NOT drive with the head restraints removed from occupied seats.

Seats



For Your Safety
Make sure the backrest is
secure before driving.

H2435

Rear seat access lever

(3-door models only)

Lift the lever upwards to fold the backrest forwards.

The rear seat access lever also acts as a seat belt presenter, improving access to the seat belt (see '*Seat belts*').

Rear seats

For information on folding the rear seats, refer to '*Load carrying*'.

Seat Belts

SEAT BELT SAFETY

The seat belts fitted to your vehicle are intended for use by adult sized occupants and must be used by one occupant only.

Ensure that all passengers are securely strapped in at all times and be sure to observe the following precautions:

- Adjust seat belts to eliminate any slack. Do not pull the belt away from the body while travelling - to be fully effective, the seat belt must remain in full contact with the body at all times.
- Fit the lap strap across the PELVIS (never across the abdomen), ensuring that the diagonal strap passes across the CHEST and SHOULDER.
- DO NOT wear seat belts over hard, sharp or fragile items in clothing, such as pens, keys, spectacles etc.
- Always replace a seat belt assembly that has withstood the strain of a severe vehicle impact, or if the webbing shows signs of fraying.
- Where possible, use the seat belts to secure luggage carried on the seats - in an accident, loose items can be thrown around inside the vehicle, causing serious injury.
- In most countries, all occupants are required by law to wear a seat belt, unless they have been issued with a medical exemption certificate.
- During pregnancy, women should wear the lap belt across the hips below the baby, with the diagonal belt passing across the shoulder, between the breasts and to one side of the baby - if in doubt, consult a doctor.

For Your Safety

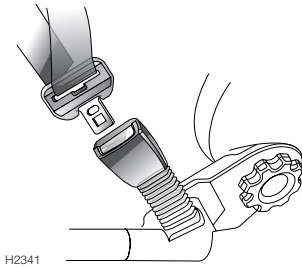
Do not use a seat belt that is twisted or obstructed in any way.

Do not allow occupants to travel with the seat backs reclined steeply rearwards. Optimum benefit is obtained from the seat belt with the backrest angle set to 25 degrees from the upright (vertical).

Do not allow foreign matter (particularly sugary food and drink particles) to enter the seat belt buckles - such substances can render the buckles inoperative.

On 3-door models fitted with only four seats, do not carry a passenger in the centre rear position.

Seat Belts



H2341

To minimise injury in the event of an accident, it is important that seat belts are worn correctly. Read the instructions below and the advice contained under the heading 'Seat belt safety' on a previous page.

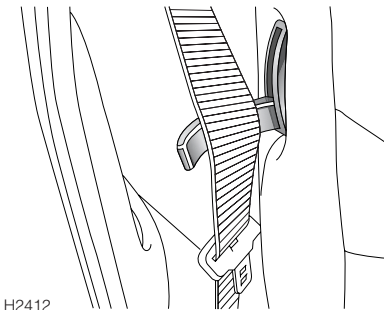
Fastening the belt

Pull the seat belt steadily across the body and, ensuring the webbing is not twisted, insert the metal tongue plate into the appropriate buckle - a 'click' indicates that the belt is securely locked.

Seat belts are designed to bear upon the bony structure of the body (pelvis, chest and shoulders) - see previous page.

Releasing the belt

Press the red button on the seat belt buckle.



H2412

Operating Tip

The tongue for the centre rear seat belt (if fitted) will only fit into the centre rear seat belt buckle.

For Your Safety

Where possible, rear seat passengers should adjust their position to enable the seat belt webbing to cross the shoulder without pressing on the neck.

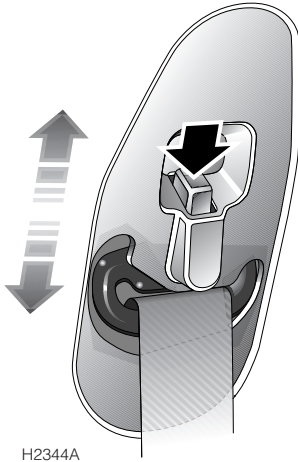
WARNING!

Ensure that all seat belts are worn correctly - an improperly worn seat belt increases the risk of death or serious injury in the event of a collision.

Operating Tip

On 3-door models, the rear seat access lever can be used as a seat belt presenter (see illustration) to improve accessibility of the front seat belts.

Seat Belts



For Your Safety

Accident statistics show that children are safer when properly restrained in the rear seating positions than in the front.

Do not attempt to fit a child seat in the central rear position on 3-door vehicles fitted with only four seats.

WARNING!

DO NOT install a rearward facing child seat in a passenger seat equipped with an airbag system. Failure to follow this advice could result in serious injury, or even death for the child.

Adjusting the upper anchorage

(front seat belts only - 5-door)

To reduce the likelihood of injury in an accident, the seat belt upper anchorage point should be adjusted so that the belt webbing crosses the shoulder, **MIDWAY BETWEEN THE NECK AND THE EDGE OF THE SHOULDER.**

Adjust the height of the seat belt anchorage point, by pressing the button (arrowed in illustration) and sliding the anchor up or down.

CHILD SEATS

For their safety, it is very important that all infants and young children are restrained in a child safety seat appropriate to their age and size. A range of safety seats approved for use in your vehicle is available from your dealer.

For optimum safety, children should travel in the rear of the vehicle at all times. However, if a passenger airbag is fitted and it is essential that a child travel in the front, set the seat fully rearward and seat the child in an approved, **FORWARD FACING** child seat. **DO NOT** use a rear facing child seat - an inflating airbag could impact with the seat and cause serious injury to the child!

This label (shown alongside) fixed to the passenger side fascia panel of your vehicle, warns against the use of a **REAR FACING** child seat when a front passenger airbag is fitted. Fitting this type of child seat could cause serious injury to a child in the event of an airbag deployment.



Seat Belts

Caring for seat belts

Regularly inspect the webbing for signs of fraying, cuts and wear, also pay particular attention to the condition of the fixing points and adjusters.

Avoid contaminating the webbing with polish, oil and chemicals (see 'Cleaning & vehicle care').

Three tests for checking seat belts

1. With the seat belt fastened, give the webbing near the buckle a quick upward pull - the buckle should remain securely locked.
2. With the seat belt unfastened, unreel the webbing to the limit of its travel. Check that unreeling is free from snatches and snags.
3. With the webbing half unreeled, hold the tongue plate and give it a quick forward pull - the mechanism must lock automatically and prevent any further unreeling.

If a seat belt should fail any of these tests, contact your dealer immediately.

SEAT BELT PRE-TENSIONERS

The seat belt pre-tensioners activate in conjunction with the airbag SRS and provide additional protection in the event of a severe frontal impact on the vehicle (see 'Airbag SRS'). The pre-tensioners automatically retract the seat belts fitted to the front seats. This reduces any slack in both the lap and diagonal portions of the belts, thereby reducing forward movement of the belt wearer in the event of a severe frontal collision.

The airbag SRS warning light on the instrument panel, described on the following page, will alert you to any malfunction of the seat belt pre-tensioners.

If the pre-tensioners have been activated, the seat belts will still function as restraints, and must be worn in the event that the vehicle remains in a driveable condition.

NOTE: *The seat belt pre-tensioners will NOT be activated by rear, side or minor frontal impacts.*

WARNING!

Always replace a seat belt assembly that has withstood the strain of a severe vehicle impact, or one where the webbing shows signs of fraying.

IMPORTANT

The seat belt pre-tensioners will only be activated once and then MUST BE REPLACED by a Land Rover dealer. Failure to replace the pre-tensioners will reduce the efficiency of the vehicle's front restraint systems.

For Your Safety

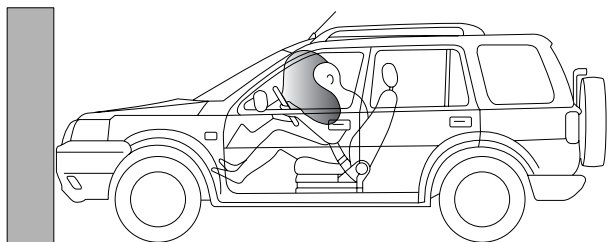
After any frontal impact, always have the seat belts and pre-tensioners checked and, if necessary, replaced by a Land Rover dealer.

In the interests of safety, it is recommended that removal or replacement of the front seats and seat belts should only be carried out by a Land Rover dealer.

Airbag SRS



The airbag supplementary restraint system (SRS) provides additional protection for the driver and front passenger in the event of a severe frontal impact on the vehicle.



H2376

For Your Safety

Always remember; the airbag SRS provides ADDITIONAL protection in a frontal impact only. It does not replace the need to wear a seat belt.

Inflation and deflation of the airbags takes place very quickly and they will not protect against the effects of secondary impacts that may occur.

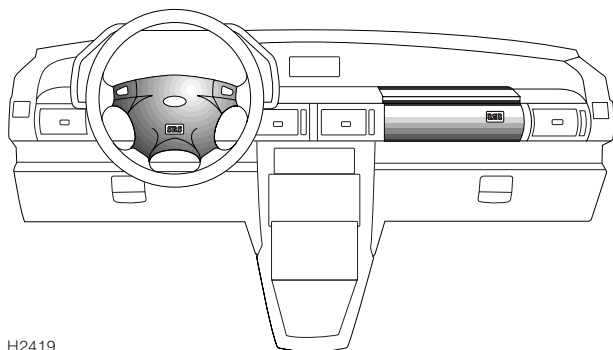
Do not allow a front seat passenger to obstruct the operation of the airbag by placing feet, knees or any other part of the person in contact with, or in close proximity to the airbag module.

Airbag SRS warning light

The warning light, mounted on the instrument panel, will alert you to any malfunction of the airbag SRS. The light illuminates as a bulb and system check when the starter switch is turned to position 'II' and will extinguish after approximately five seconds. The system however, should be checked by your Land Rover dealer if any of the following occurs:

- The warning light fails to illuminate when the starter switch is turned to position 'II'.
- The warning light fails to extinguish after approximately five seconds.
- The warning light illuminates after the engine is started.

Airbag SRS



H2419

How the airbag SRS works

In a frontal collision, a sensor monitors the force of the impact to determine whether the airbags should be inflated. The airbags (where shown in illustration) will inflate in SEVERE frontal collisions only, they will NOT inflate in the event of side or rear impacts, roll over accidents or minor frontal impacts.

Inflation is instantaneous and accompanied by a loud noise and traces of smoke and powder, none of which are indicative of an airbag malfunction.

After inflation, an airbag module will deflate immediately so that visibility is not impaired.

For Your Safety

After inflation, some airbag components are hot - DO NOT touch until they have cooled.

WARNING!

An inflating airbag can cause facial abrasions and other injuries. Minimise the risk of injury by ensuring that front seat occupants are wearing their seat belts and are seated correctly, with the seat as far back as is practical.

DO NOT attach accessory items to an airbag cover (steering wheel centre pad or fascia panel), which could interfere with the inflation of the airbag or, if the airbag inflates, be propelled inside the vehicle causing injury to the occupants.

Airbag SRS

Service information

After 10 years from the initial date of registration (or installation date of a replacement airbag SRS), some components will need to be replaced by a Land Rover dealer (see airbag module replacement date shown on page 2 of the Service Portfolio book), who should stamp and sign the appropriate page once the work is completed.

In addition, ALWAYS contact your Land Rover dealer if:

- the airbag inflates.
- the front of the vehicle is damaged (even if the airbag has not inflated).
- any part of the airbag module covers show signs of cracking or damage.

Disposing of the vehicle

If you sell your vehicle, be sure to inform the new owner that the vehicle has an airbag SRS and of the airbag module replacement date, shown in the Service Portfolio book.

If the vehicle is to be scrapped; uninflated airbags are potentially very dangerous and must be safely deployed in a controlled environment by qualified personnel, before a vehicle is scrapped.

WARNING!

DO NOT service, repair, replace, modify or tamper with any part of the airbag SRS, or wiring in the vicinity of an airbag SRS component; this could cause the system to activate, resulting in personal injury.

For Your Safety

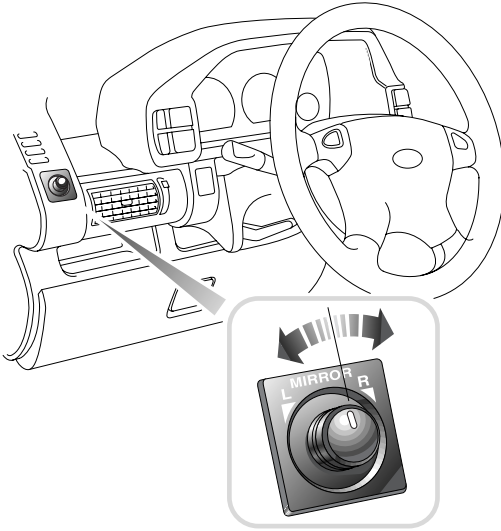
The components of the airbag SRS are sensitive to electrical and physical interference; it is recommended that you ALWAYS seek the assistance of a Land Rover dealer to carry out any of the following:

Removal or repair of any wiring or component in the vicinity of the airbag SRS components (yellow wiring harness), including the steering wheel, steering column and instrument panel.

Installation of electronic equipment such as a mobile phone, two-way radio or in-car entertainment system.

Attachment of accessories to, or modification of, the front of the vehicle.

Mirrors



H2420

For Your Safety

Objects viewed in exterior mirrors may appear smaller (and further away) than they actually are.

EXTERIOR MIRRORS

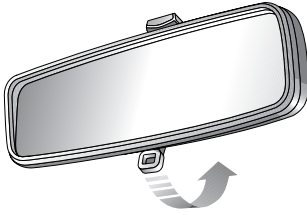
Adjustment:

1. Turn the mirror selector switch to the 'L' or 'R' position (to adjust either the left or right mirror).
2. With the starter switch turned to position 'II', press the appropriate side of the selector switch to tilt the mirror glass up/down/left or right.
3. When adjustment is complete, return the selector switch to the OFF position (midway between 'L' and 'R').

Heating elements

The exterior mirrors have automatic, integral heating elements for dispersing ice and mist.

Mirrors



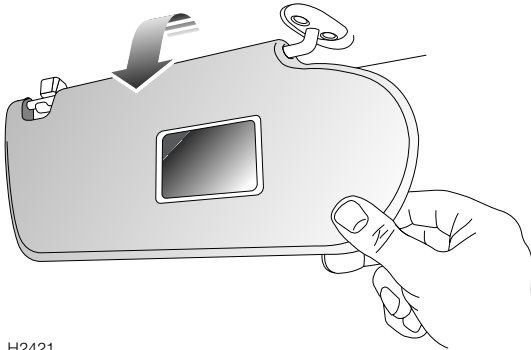
H2319

For Your Safety

In some circumstances, the view reflected in a 'dipped' mirror can confuse the driver as to the precise position of following vehicles. Remember to take additional care!

INTERIOR MIRROR

The interior mirror can be dipped to reduce glare from following vehicles. In the event of excessive glare, move the lever at the base of the mirror forward to 'dip' the mirror. Normal visibility is restored by pulling the lever back to its original position.



H2421

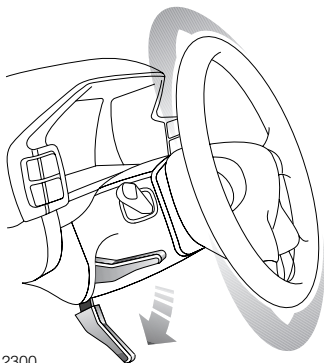
Operating Tip

To avoid possible scorching of the seats by the sun reflected in the vanity mirror, always return the visor to its stowed position when not in use.

VANITY MIRROR

To use the vanity mirror, pull down the passenger's sun visor.

Steering Column



H2300

STEERING COLUMN ADJUSTMENT

The angle of the steering column can be adjusted to suit your driving position:

1. With the vehicle stationary, push the locking lever fully down to free the steering column.
2. Move the steering wheel (up or down) into a position which is comfortable.
3. When the adjustment is complete, pull the locking lever fully up to lock the steering column in position.

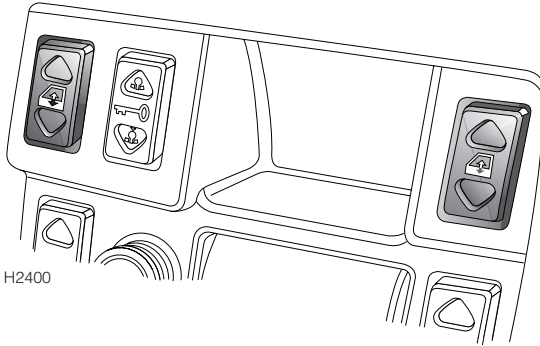
WARNING!

DO NOT adjust the steering column while the vehicle is in motion. This is extremely dangerous!

For Your Safety

Make sure the steering wheel does not obstruct your view of the instrument panel.

Windows



H2400

ELECTRIC WINDOW CONTROLS

Operating the windows

The electric windows can only be operated when the starter switch is in position 'II'.

Press the bottom half of the switch to open and the upper half to close. The window will stop moving as soon as the switch is released.

WARNING!

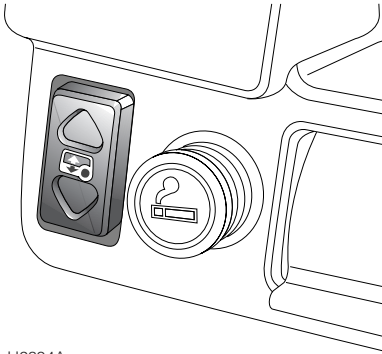
Accidental closing of an electrically operated window on fingers, hands or on any other vulnerable parts of the body can result in serious injury!

For Your Safety

ENSURE children are kept clear when raising or lowering windows.

ENSURE that all adult passengers are familiar with the controls and the potential dangers of electrically operated windows.

Windows



H2394A

ELECTRIC TAILDOOR GLASS

From inside the vehicle:

With the starter switch in position 'II', press the bottom half of the switch to lower the glass, movement will stop when the switch is released.

Press the upper half of the switch to raise the glass. If the switch is released before the glass is fully raised it will automatically lower again.

NOTE: *On 3-door models, the taildoor glass cannot be raised if the soft-back is raised or if the hard-back is removed.*

Operating Tip

The taildoor glass can be fully lowered in one operation, by briefly pressing the bottom half of the switch.

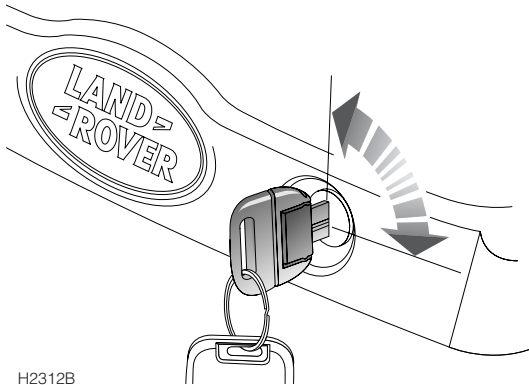
For Your Safety

Always observe the safety warnings listed under 'Electric window controls' on the previous page.

Care Points

Long loads should be carried on the roof rack. If it is necessary to carry a load that protrudes through the taildoor window, the weight of the load must NOT rest on the glass of a partially open window. Damage to the glass or window mechanism may occur (see also 'Accommodating long loads' in 'Load Carrying').

Windows



Operating Tip

The taildoor glass can be lowered from outside the vehicle, to enable easy access to the loadspace area when it is impossible or inconvenient to open the taildoor.

From outside the vehicle:

Press and hold the UNLOCK button on the remote handset (hold for 2 seconds) - the taildoor glass will fully lower.

To raise the glass, insert the starter key into the switch mounted in the taildoor handle and turn clockwise. If the switch is released before the glass is fully raised it will automatically lower again.

NOTE: *If the vehicle is locked when the glass is lowered using the handset, the driver's door will unlock and the security features will be disarmed.*

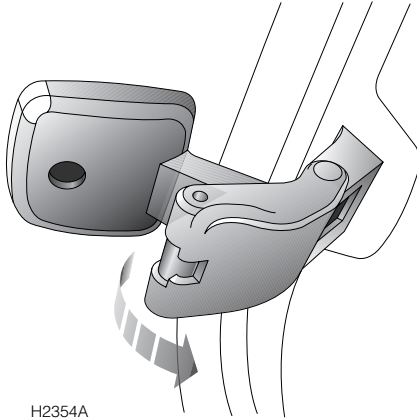
Remember to relock the vehicle (if required).

Battery disconnection

If the battery has been disconnected, the taildoor glass will need to be recalibrated. If the alarm was armed when the battery was disconnected (or discharged), disarm the alarm after reconnection - the glass will fully lower. This will happen automatically if the alarm was in a disarmed state when the battery was disconnected.

After battery reconnection, fully raise the glass (if the glass is not fully raised, an error 'beep' will sound) - the taildoor glass is now recalibrated.

Windows



H2354A

For Your Safety
Ensure that children are kept clear while operating the windows.

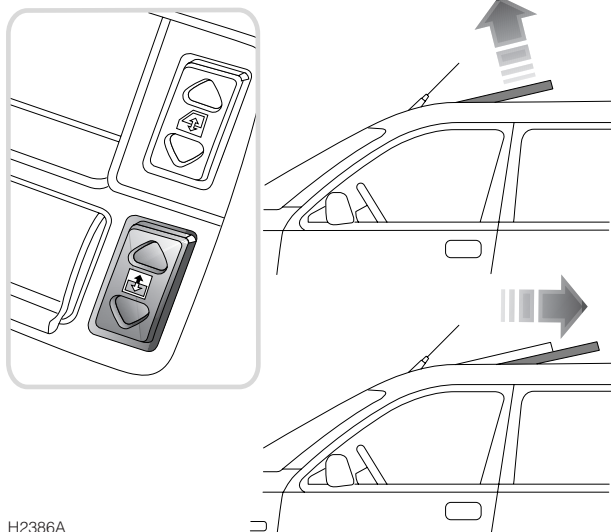
REAR VENTILATOR WINDOWS

(3-door models only)

To open, pull the catch forwards and push outwards until the window 'clicks' into position.

To close, pull the centre of the catch inwards, then push rearwards until the catch is felt to 'clip' into the locked position.

Sunroof



H2386A

SUNROOF (if fitted)

The sunroof can be operated when the starter switch is turned to position 'II'.

Tilting the rear edge

To raise the rear edge of the roof, push the lower portion of the switch. To return the tilted roof to the closed position, press the upper portion of the switch.

Opening and closing

To open the roof: with the sunroof fully tilted, press the lower portion of the switch.

To close the roof: press the upper portion of the switch - the sunroof will first close to the tilted position, then it will return the tilted roof to the closed position. The sunroof can be stopped (at any position) by releasing the switch.

NOTE: The sunroof visor needs to be opened and closed manually.

Care Points

Do not operate the sunroof when it is obstructed, or covered in ice or snow - damage could be caused.

Always close the roof when the vehicle is left unattended.

WARNING!

Keep passengers clear while operating the sunroof - closing the roof on any part of the body, could result in serious injury.

Do not open the sunroof if the load on the roof rack will impede its operation.

For Your Safety

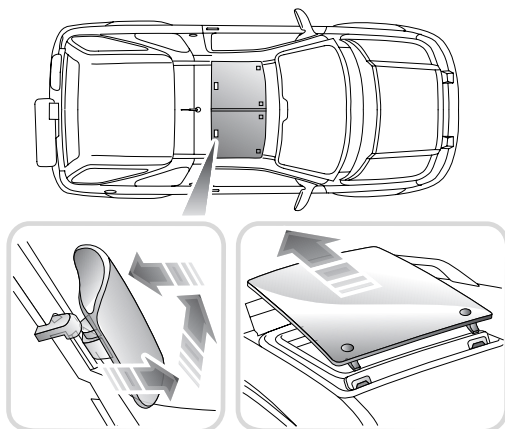
DO NOT allow passengers to extend any part of their bodies through the sunroof aperture when the vehicle is moving - injury from flying debris, branches of trees or other obstructions could occur.

ENSURE that all adult passengers are familiar with the controls and the potential dangers of operating the sunroof.

Operating Tip

Rear edge tilt ventilation will be increased by opening the visor.

Targa Roof



H2401A

TARGA ROOF (3-door models)

The targa roof is made up of twin glass or composite panels set into the roof. Either or both can be tilted open, or removed, as follows:

Tilting a panel (see left inset)

1. Pull the handle forward to unlock.
2. Push the handle up.
3. Push the handle to the rear until it 'clicks' into the lock position.

To close the panel, reverse the above procedure.

Removing a panel

Half tilt the panel (as in 1 and 2 above), then press the red catch to detach the handle linkage. From outside the vehicle, raise the rear of the panel until the two front hinges disengage and lift the panel off.

WARNING!

DO NOT attempt to remove the targa roof panels when the vehicle is moving!

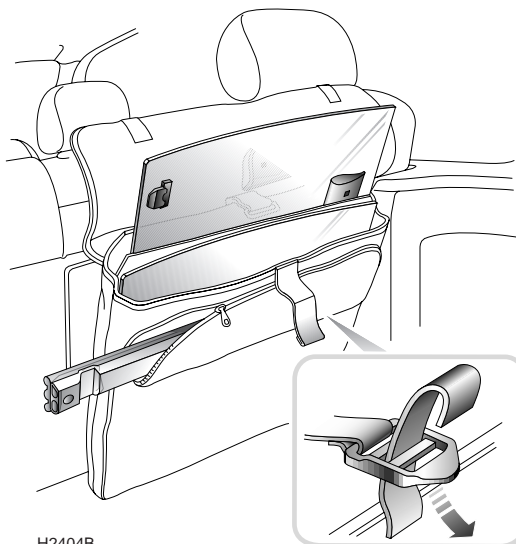
For Your Safety

DO NOT allow passengers to extend any part of their bodies through roof apertures when the vehicle is moving - they could be injured by flying debris, tree branches or other obstructions.

Care Points

Handle glass with care, avoid damage to the surfaces, especially along the edges.

Targa Roof



H2404B

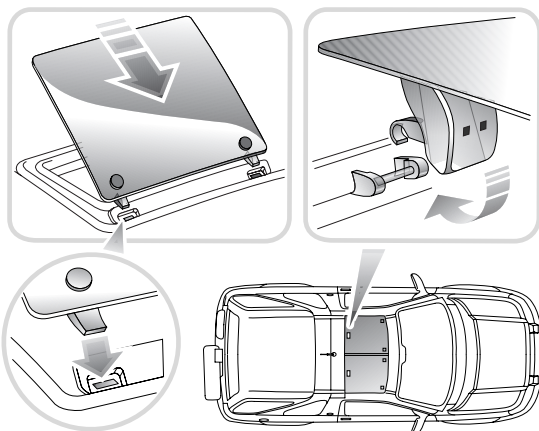
For Your Safety

DO NOT drive with the roof panels loose in the vehicle, they could become dangerous projectiles in the event of an accident or emergency manoeuvre.

Storing the panels

After removal, always protect the panels by placing them sideways in the storage case attached to the rear seats in the luggage compartment as shown.

Targa Roof



H2406

Operating Tip

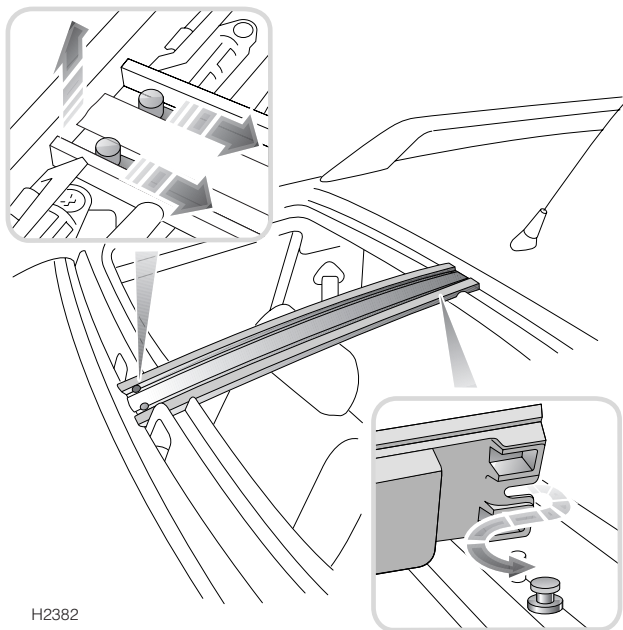
ALWAYS close and secure the roof when the vehicle is to be left unattended.

Refitting a panel

Before refitting, note that the panels are not interchangeable because the curvature at each side of the roof is more pronounced than in the centre. To ensure accurate refitting, the one rounded corner of the panel should be positioned at the front OUTSIDE corner.

1. Locate the hinges over the top of and through the slots in the wind deflector into their appropriate slots at the front of the roof.
2. Lower the roof and, ensuring that the handle linkage is the correct way up, push the handle rearwards as if to lock.
3. The handle should now be engaged - ensure the red button is fully retracted, then attempt to open (tilt) the roof to check.

Targa Roof



H2382

Operating Tip

The 'T-bar' can be stowed in the pocket provided in the stowage bag in the luggage compartment (see '*Storing the panels*').

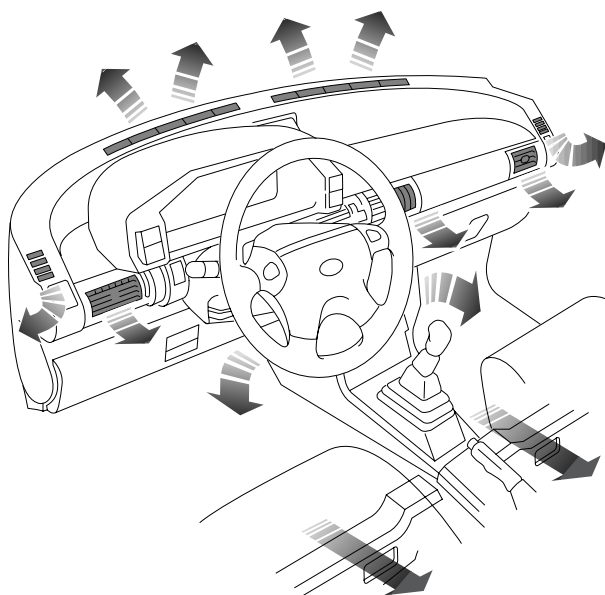
Removing the 'T-bar'

If both panels are to be removed, the 'T-bar' can also be removed:

Press the RED catches rearwards (as arrowed), then pull the bar upwards and then forwards to remove.

When replacing, ensure that the 'T-bar' is secured at the rear, before pushing downwards to engage the front (RED) locking catches.

Heating & Ventilation



H2422

The heating and ventilation system provides fresh or heated air to the interior of the vehicle from the air intake grille in front of the windscreen.

Air outlets are provided to the windscreen, face and feet - the location of the vents is shown in the illustration above. Information concerning the operation of the heating and ventilation system, as well as the air conditioning, appears on the pages that follow.

Operating Tip

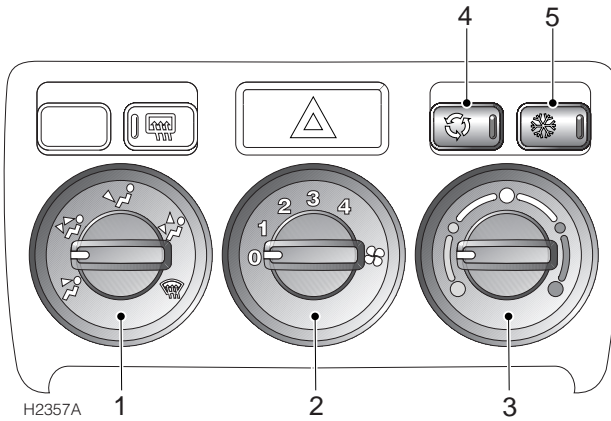
As the heater system uses heat from the engine to warm the air, full heating is not available until the engine reaches its normal operating temperature.

With the blower switched off, the volume of air entering the vehicle is dependent on driving speed alone.

Care Points

Always keep the air intake grille clear of obstructions such as leaves, snow or ice.

Heating & Ventilation








Operating Tip

When distributing air to the face level vents, they must be FULLY open to ensure best performance.

Leaving the system in recirculation mode can cause the windscreen to mist. If this happens, switch off recirculation immediately.

The air conditioning will not operate without the engine running or when the blower switch is turned to position '0'.

1. Air distribution control

-  Face level vents only.
-  Foot and face level vents.
-  Foot level vents.
-  Foot level, windscreen and side window vents.
-  Windscreen and side window vents.

2. Blower switch

Turn the switch clockwise to increase the blower speed.

3. Air temperature control

BLUE: Unheated air

RED: Heated air

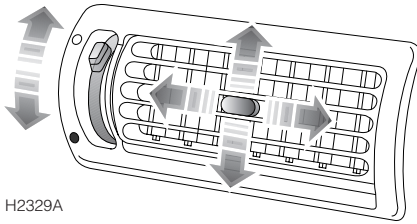
4. Recirculated air supply button - if fitted

Press to operate. The indicator light in the switch illuminates when recirculation is operating. With this button pressed, the heater recirculates the air already inside the vehicle, preventing the entry of traffic fumes.

5. Air conditioning switch - if fitted

With the engine running, press to operate. The indicator light in the switch illuminates when the air conditioning is switched on.

Heating & Ventilation



H2329A

Face level vents

Rotate the thumbwheel down to open or up to close the vents. Direct the air flow by moving the control in the centre of the louvres up or down, or from side to side.

To increase output from the centre face vents, shut the outer vents.

When carrying rear seat passengers, use the outer vents for the front seat occupants and use the centre vents for the rear seat passengers.

On 3-door models, when driving with either the hard or softback removed (or folded in the case of the softback), open all the vents and turn the blower switch on - this will help prevent the ingress of poisonous exhaust fumes.

On both 3 and 5-door models, driving with the taildoor or taildoor window open is not recommended because poisonous exhaust fumes will be drawn into the vehicle (see 'Load carrying' for advice).

Particle/pollen filter

On vehicles not fitted with air conditioning, a particle filter will help to keep the vehicle interior free from pollen and dust. To remain fully effective, the filter should be replaced at least every 12 months or 20,000 km, at the time of a main service.

Operating Tip

Maximum defrosting

- Select 'windscreen' on the air distribution control.
- Turn the air temperature control to the RED segment.
- Turn the blower switch to 4.
- To obtain maximum heated air flow from the windscreen and side window vents, keep the face level vents closed.

Maximum heating

- Turn the air distribution control to foot level vents.
- Turn the air temperature control to the RED segment.
- Select 1 on the blower switch (increase as required).

Maximum ventilation

- Turn the air distribution control to foot and face level vents.
- Turn the air temperature control to the BLUE segment.
- Select 4 on the blower switch (adjust as required).

Heating & Ventilation

AIR CONDITIONING

The air conditioner provides additional cooling and also reduces humidity. This can be used to demist windows quickly in damp weather and, when used in conjunction with the heater, makes the interior of the vehicle warm and dry.

NOTE: *In high humidity conditions, slight screen misting may be experienced when the air conditioning is turned on. This is a natural occurrence for most automotive air conditioning systems; it is not a fault with the system and will clear after a few seconds, once the air conditioning is operating.*

Using the air conditioning

The air conditioning can only be used when the engine is running. It is also important to keep the windows and sunroof/Targa roof closed and not to operate the air conditioning with the softback opened, or the hardback removed.

With the engine running, press the 'A/C' button, turn the air distribution switch to foot and windscreen vents and adjust the blower and air temperature switches as required.

NOTE: *The air conditioner will only operate when the blower is switched on.*

Operation of the air conditioning system places an extra load on the engine. In very hot conditions or when the engine is required to work unusually hard (climbing long hills or driving in congested traffic, for example), this could result in high engine temperatures. If the pointer nears the RED zone of the temperature gauge, temporarily turn the air conditioning off until engine temperatures return to normal.

Maintaining the air conditioning

The air conditioning system is sealed and major maintenance should only be carried out by a qualified technician. To maintain the system in peak condition, owners should ensure that the system is operated for a short period every week (even during the cold winter months); with the engine at its normal operating temperature, run the air conditioning for at least ten minutes whilst driving at a steady speed.

Surplus water produced by the dehumidifying process is expelled from the system via drain tubes beneath the vehicle. This may result in a small pool of water forming on the road when the vehicle is stationary and is not a cause for concern.

Operating Tip

Cooling

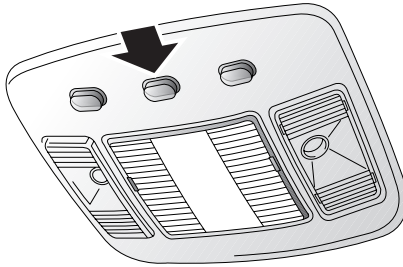
With the engine running, press the 'A/C' button to activate the air conditioning, turn the air temperature control to the BLUE segment and set the blower speed and air distribution controls to suit your requirements.

Rapid cooling

With the engine running press the 'A/C' button, turn the air temperature control to the BLUE segment, select recirculation and turn the blower switch to 4. Turn off recirculation and adjust the blower when the vehicle interior is cool.

In very hot conditions, it may be advisable to fully ventilate the vehicle by opening the windows and sunroof for a while before closing them again and operating the air conditioning.

Interior Equipment



H2352A

COURTESY & MAP READING LIGHTS (5-door models)

Manual operation

Press the appropriate switch to turn the lights on - press a second time to turn off.

Automatic operation

The front and rear courtesy lights illuminate automatically whenever the vehicle is unlocked, or when a door or taildoor is opened and remain illuminated for approximately 15 seconds after the doors and taildoor are closed or until the starter switch is turned on.

Rear courtesy light

The rear courtesy light operates automatically in the same manner as the front courtesy light. Press the switch to illuminate or extinguish the light manually.

IMPORTANT

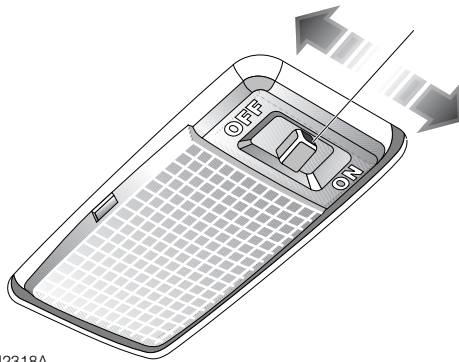
If the map reading lights or rear courtesy light are left on after being manually selected, they will NOT extinguish automatically.

Operating Tip

If a door or the taildoor remains open for ten minutes or more, a 'time out' function will extinguish the courtesy lights in order to prevent the battery from discharging.

The courtesy lights will extinguish when the vehicle is locked.

Interior Equipment



H2318A

COURTESY LIGHT (3-door models)

Switch positions:

'OFF' - Light permanently off.

'ON' - Light illuminates continuously.

With the switch in the centre position, the interior light illuminates automatically whenever the vehicle is unlocked, or when a door or taildoor is opened. The light remains illuminated for 15 seconds after all the doors and taildoor are closed, or until the starter switch is turned on.

LUGGAGE COMPARTMENT LIGHT

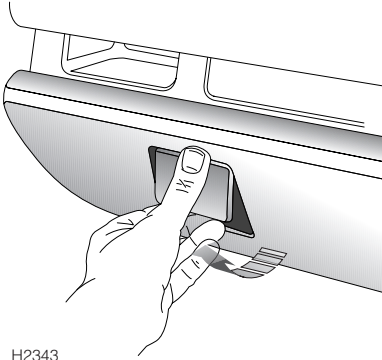
Illuminates automatically when the taildoor is opened.

Operating Tip

If a door or the taildoor remains open for ten minutes or more, a 'time out' function will extinguish the courtesy light in order to prevent the battery from discharging.

The courtesy light will extinguish when the vehicle is locked.

Interior Equipment



H2343

GLOVEBOX

Lift the handle to open the glovebox - the two recesses in the glovebox lid can be used, when the vehicle is stationary, as cup stands.

The left hand compartment in the glovebox can be used to store CD cases.

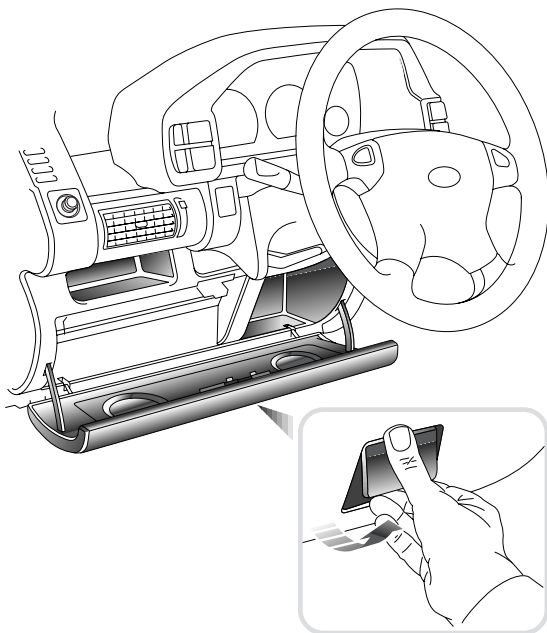
GLOVEBOX LIGHT

Operates automatically when the exterior lights are switched on and the passenger glovebox is opened.

WARNING!

DO NOT drive with either glovebox open. An open glovebox could cause injury to the driver or front seat passenger in the event of a collision.

Interior Equipment



H2423

WARNING!

DO NOT drive with either glovebox open. An open glovebox could cause injury to the driver or front seat passenger in the event of a collision.

Drivers personal storage

Lift the handle to open the driver's glovebox - the two recesses in the glovebox lid can be used, when the vehicle is stationary, as cup stands.

The left hand compartment in the glovebox can be used to store CD cases.

Drinks container strap

(5-door models only)

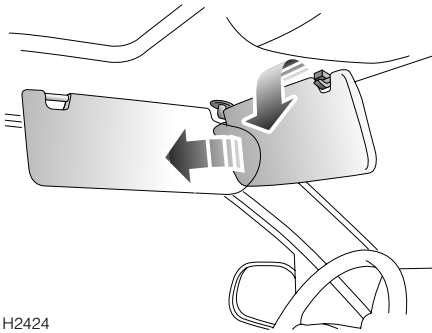
The expanding strap fitted to the front door stowage compartment can be used to store drinks containers securely when driving.

Care Points

Do not use the strap to store hot drinks.

Drinks containers over 0.5 litre capacity will not be properly secured by the strap.

Interior Equipment

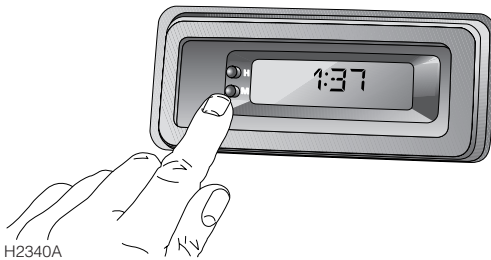


H2424

SUN VISOR

To shield your eyes from the sun, pull the visor down from the roof; the visor can be used to shield the upper part of the windscreen or the side window as required.

On 3-door models, there is a pocket in the headlining between the two visors, designed to be a convenient place to stow sunglasses.



H2340A

CLOCK

The digital clock display illuminates when the starter switch is turned on and dims for night viewing when the sidelights are switched on.

Press the hour ('H') and minute ('M') buttons to set the time. If both buttons are pressed together, the display will change between 24 hour and 12 hour displays.

On some models, the clock also displays information about the operation of the audio unit fitted to your vehicle (see the separate 'In-car entertainment' book).

Operating Tip

The passenger's sun visor is fitted with a vanity mirror on the underside.

Care Points

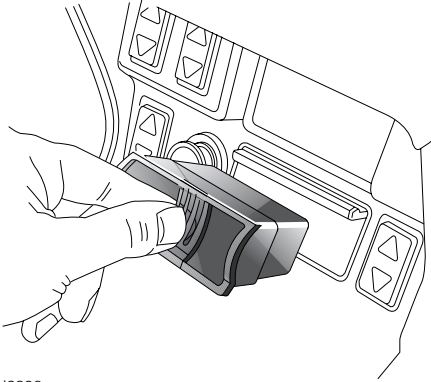
Do not store loose items (tapes, coins etc.) in the sunglasses pocket.

Keep sunglasses in a soft case, to prevent scratching.

Care Points

If the battery is disconnected, the clock will need to be reset.

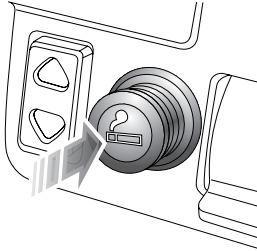
Interior Equipment



H2398

ASHTRAYS

Lift the lid to access the front or rear ashtray. To remove for emptying, carefully pull out the inner tray from the surround.



H2306

CIGAR LIGHTER

With the starter switch turned to position 'I' or 'II', push the lighter in to heat up. When ready, the lighter will partially eject and can then be withdrawn for use. **DO NOT** hold the lighter in while it is heating - this could cause it to overheat.

WARNING!

Ashtrays are fire hazards - DO NOT use for waste paper or other combustible materials.

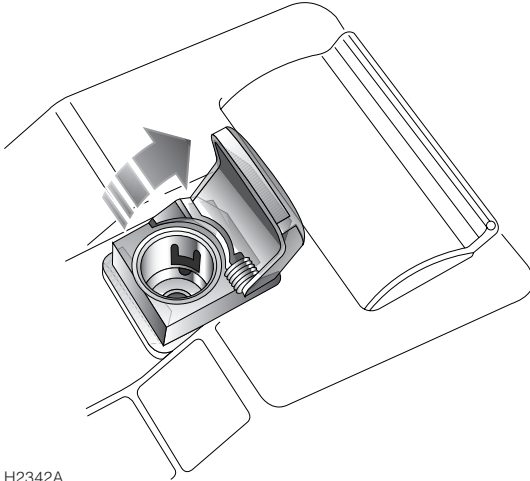
For Your Safety

Hold the cigar lighter by the handle **ONLY!**

WARNING!

DO NOT plug accessories into the cigar lighter socket.

Interior Equipment



H2342A

WARNING!

NEVER plug unapproved accessories into the auxiliary power socket. Damage to the vehicle's electrical systems could occur.

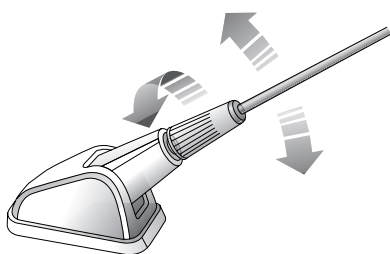
Care Points

Always run the engine if prolonged use of electrical accessories is required - otherwise the battery will become discharged.

AUXILIARY POWER SOCKET

An electrical accessories socket is mounted in the floor console, to the rear of the handbrake. This can be used to power Land Rover approved electrical accessories that use a maximum of 180 Watts.

In-Car Entertainment



H2330

***Care Points***

ALWAYS unscrew and remove the aerial before entering an automatic car wash.

RADIO AERIAL

Your vehicle is equipped with a detachable mast aerial, mounted on the roof.

Aerial height

Always check the available headroom and, if necessary, adjust the angle of the aerial (see illustration) before entering or leaving a garage or car park with insufficient headroom.

RADIO/CASSETTE PLAYER

Full operating instructions for any audio equipment fitted as standard to your vehicle, are contained in the 'In-Car Entertainment' book in the vehicle literature pack.

Radio display

On R770 audio units, the digital display is housed in a separate unit, remote from the audio unit, sharing dual functionality with the digital clock.

CD autochanger

(if fitted)

The CD autochanger is located under the front passenger seat. Full operating instructions are contained in the 'In-Car Entertainment' book in the vehicle literature pack.

In-Car Telephones

Your vehicle utilises a number of electronic systems designed to provide you with maximum comfort, safety and economy. These systems may be affected by the use of mobile communication equipment inside the vehicle. However, the use of an external aerial will greatly reduce the likelihood of this occurrence.

For your safety, always note the following precautions before fitting or using an in-car telephone, or any electrical equipment:

- Only use an installation kit incorporating an aerial external to the vehicle.
- Ensure that the installation is carried out by a competent installer.
- Refrain from operating a mobile phone fitted with its own aerial inside the vehicle - the electromagnetic field radiated by the phone may interfere with the vehicle's electrical systems.

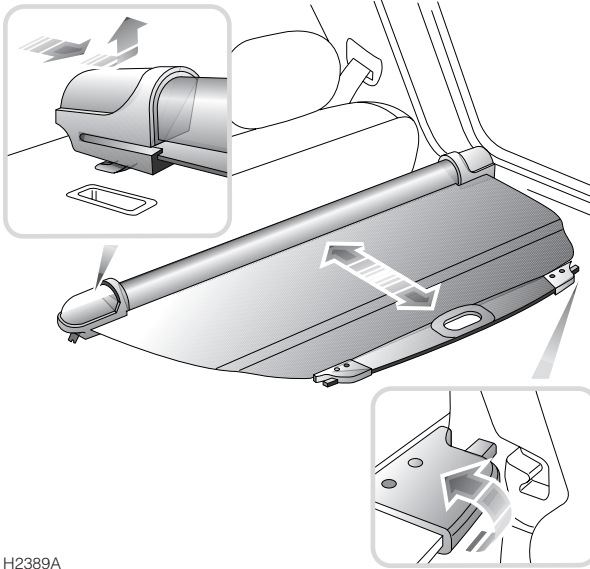
WARNING!

Refrain from operating a telephone fitted with its own aerial inside the vehicle (see main text).

For Your Safety

Using any hand-held appliance while driving can be dangerous. Always stop the vehicle before making a call and ensure the telephone is switched off while you are driving.

Load Carrying



H2389A

LOADSPACE COVER (5-door models)

The rear loadspace cover is a spring loaded roller blind, which can be retracted when not in use by detaching the cover from the hooks at the rear of the vehicle.

To remove the loadspace cover:

1. Slide the retracted cover firmly to the right.
2. Lift the left hand end of the cover and carefully manoeuvre it from the rear of the vehicle.

Refitting the loadspace cover is the reverse of the removal procedure.

WARNING!

DO NOT carry items of luggage on top of the loadspace cover - these may become dangerous projectiles in the event of a sudden stop or collision.

For Your Safety

Do not store the loadspace cover loose in the vehicle.

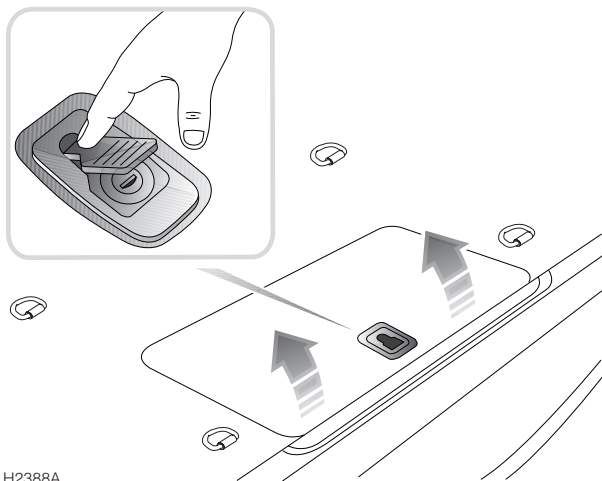
Operating Tip

To ease removal of the loadspace cover, fold the rear seat backrest forward.

Load Carrying

LUGGAGE ANCHOR POINTS

Four fixing points are provided in the rear loadspace floor, to assist in safely securing large items of luggage. Use only Land Rover approved luggage retention accessories.



H2388A

LOCKABLE STORAGE BOX

The lockable storage box, set into the loadspace floor can be used to secure small or valuable items.

To unlock:

Press the flap (see inset) to access the lock. Insert the starter key and turn 90° clockwise. Lift the lid to open.

To lock:

Turn the key anti-clockwise and remove the key.

Loadspace storage

The moulded pocket in the taildoor is suitable for stowing light items.

3-door models only:

The side pocket panels in the loadspace can be removed to accommodate wider loads, by pulling the release catch towards the rear of the vehicle.

For Your Safety

DO NOT carry unsecured equipment, tools or luggage, which could move and cause personal injury in the event of an accident or emergency manoeuvre either on or off road.

Care Points

The storage box may become hot when driving - do not store items in the storage box that could be damaged by heat.

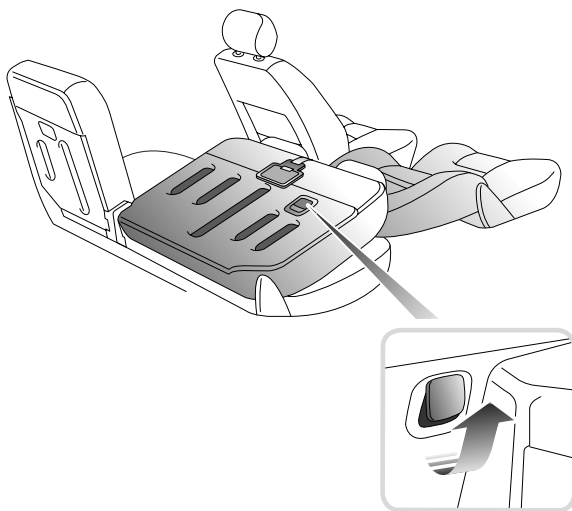
Do not store damp items in the storage box for prolonged periods - condensation may cause mould to form.

Load Carrying

FOLDING THE REAR SEATS

On vehicles not fitted with 60/40 split rear seats the whole seat can be folded forwards to increase luggage space. On vehicles fitted with 60/40 split rear seats, either or both parts of the seat can be folded.

Lift the release levers (see inset) to release the backrest (lift both levers simultaneously on vehicles without 60/40 split seats).



H2425

Accommodating long loads

Remove the head restraints from the front passenger and rear seats (see 'Seats'), move the front passenger seat forwards as far as possible and fully recline the seat backrest. Finally, fold the backrest (or the appropriate part of the backrest in the case of 60/40 split seats) fully forward as shown.

Loads that are too long to be carried inside the vehicle should be carried on the roof rack (see 'Roof rack').

Care Points

When returning the seats to the upright position, ensure that the seat belts are not trapped!

If it is necessary to carry a load that protrudes through the taildoor window, the load must NOT rest on the glass of a partially open window. Damage to the glass or the window mechanism may occur.

WARNING!

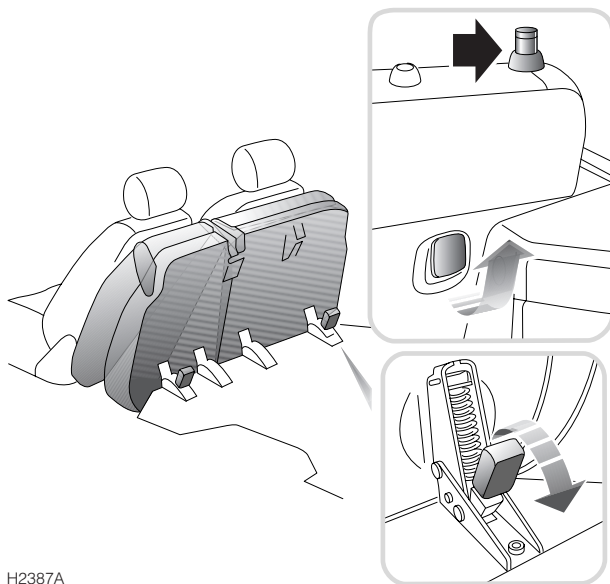
Ensure that the rear seat backrests are securely latched in the upright position when the seat is in use and when loads are carried in the luggage area behind.

For Your Safety

DO NOT carry unsecured equipment, tools or luggage that could move, causing personal injury in the event of an accident, or emergency manoeuvre - where possible, use the seat belts to secure luggage carried on the seats.

You are advised NOT to carry loads which require driving with the taildoor or taildoor window open - poisonous fumes will be drawn into the vehicle! If driving the vehicle in this condition is unavoidable, switch the heater to face level vents with all vents open, close the sunroof and windows and turn the air blower to position 4.

Load Carrying



H2387A

Maximum luggage space

To create an extra large luggage area:

1. Lift the seat release levers to release the backrest and fold the seat backrest forward.
2. Tip the whole seat assembly forward as shown in illustration and readjust the front seats as required.

To return the seats to their normal upright position; push the seat base release levers (shown in lower inset) rearwards to unlock the seat base and unfold the seats. Ensure the seat backrests are properly secured by attempting to push them forwards - there should be no movement.

'Latch secure' indicator

A 'latch secure' indicator, mounted on the top of the right hand side of the rear seat backrest, will pop up when the catch is released, showing a red band.

When returning the seat to the upright position, ensure the indicator drops back into the backrest and that the red band is no longer visible - this confirms that the larger portion of the backrest is secure.

NOTE: The 'latch secure' indicator does NOT relate to the smaller portion of the backrest - this must be checked individually.

Care Points

When returning the seats to the upright position, ensure that the seat belts are not trapped!

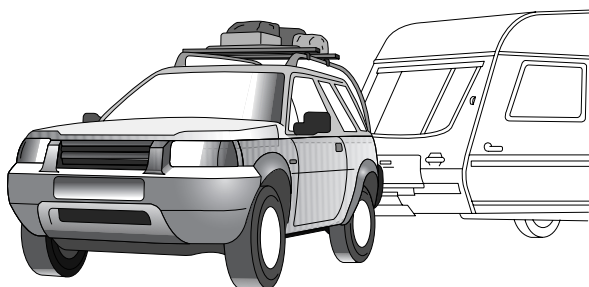
WARNING!

Ensure that the rear seat backrests are securely latched in the upright position when the seat is in use and when loads are carried in the luggage area behind.

For Your Safety

DO NOT carry unsecured equipment, tools or luggage that could move, causing personal injury in the event of an accident, or emergency manoeuvre on or off road.

Load Carrying



H2375

Vehicle weights

When loading a vehicle to its maximum (gross vehicle weight), consideration must be given to the unladen vehicle weight and the distribution of the load, to ensure that axle loadings do not exceed the permitted maximum values.

It is your responsibility to limit the vehicle load in such a way that neither the maximum axle loads nor the gross vehicle weight are exceeded (see *'Technical Data'*).

ROOF RACK

Roof bars are available as a factory fitted option for both three and five door models. If roof bars are already fitted, see *'Fitting the cross rails'* later in this section.

The total roof rack load must NEVER exceed 75 kg.

For Your Safety

A loaded roof rack can reduce the stability of your vehicle, particularly when cornering and encountering crosswinds.

Check to ensure the roof rack and load are secure after 50 km of any journey with a loaded roof rack.

Driving off-road with a loaded roof rack is not recommended. If it is necessary to stow luggage on the roof rack while driving off-road, all loads MUST be removed before traversing side slopes.

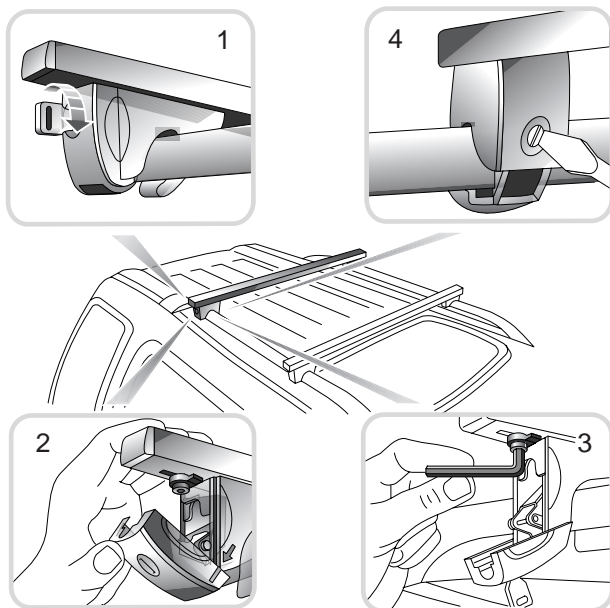
Care Points

All loads should be evenly distributed and secured within the periphery of the rack.

WARNING!

Do not position roof rack loads that could impede the opening of the sunroof.

Load Carrying



H2384A

FITTING THE CROSS RAILS

If roof bars are fitted, two cross rails will have been supplied with the vehicle, along with the keys needed to fit them. The rails should be fitted before carrying a load on the roof rack.

- Unlock the clamps (1) (turn the key in the lock a quarter turn clockwise) at each end of the cross rail and pull the clamp covers down (2).
- Position the cross rails over the roof bars. The outside rubber edge of each clamp should be touching the roof bars, if this is not the case, loosen the bolt (3) with the small Allen key provided and slide the clamp assembly along the cross rail until the correct fit is achieved, then retighten the bolt.
- When the rail is in the desired position, push the clamp covers up. If no resistance is felt at the point where the line and arrow on the side of the clamp casing line up, tighten the grub screw (4) until there is resistance. Do not overtighten the screw as it will then be impossible to close the clamp cover.
- Push the clamp cover fully upwards, check that the rail will not move and lock with the key (turn a quarter turn anti-clockwise).

Operating Tip

On 3-door models, it is recommended that the cross rails are positioned towards the front of the roof bars to keep the weight towards the centre of the vehicle.

WARNING!

DO NOT allow people to sit on the roof rack.

Under no circumstances should passengers be allowed to stand in the rear of the vehicle (even if holding on to the roof rack) when the vehicle is being driven.

Care Points

Only carry loads using the cross-rails supplied - do not attach loads directly onto the roof bars.

It is recommended that Land Rover approved load carrying accessories are used, however if it is necessary to attach a load directly to the cross-rails, use webbing type straps (preferably with a ratchet clamp) - do not use elastic or 'bungee' straps.

Towing

TOWING A TRAILER

It is the driver's responsibility to ensure that the vehicle and trailer are loaded and balanced so that the combination is stable when in motion.

When preparing your vehicle for towing, pay careful attention to the trailer manufacturer's recommendations and also follow the guidelines below:

- Ensure that the towing vehicle tyre pressures are correct and that the trailer tyre pressures are as recommended by the trailer manufacturer.
- Check that the correct trailer flasher unit is fitted to the fuse box (consult your dealer) and check the operation of trailer brakes and lights.
- For maximum stability, ensure that loads are properly secured and unable to shift position during transit. Also, position loads so that most of the weight is placed close to the floor and, where possible, immediately above or close to the trailer axle(s).
- After loading the trailer, check that the weight on the hitch point (this is called the draw-bar loading weight, or nose weight), does not exceed 140 kg.
- Where the load weight can be divided between trailer and tow vehicle, loading more weight into the vehicle will generally improve the stability of the combination.
- The vehicle maximum rear axle weight and maximum gross train weight (see *'Technical Data'*) must not be exceeded, when the trailer is attached and any passengers or luggage are in place inside the vehicle.

For high trailer weights, this may require that passengers and/or luggage be removed from the vehicle.

NOTE: *Towing regulations vary from country to country. It is very important to ensure that national regulations governing towing weights and speed limits are observed (refer to the relevant national motoring organisation for information). The maximum permissible towed weights quoted in 'Technical Data', refer to the vehicle's design limitations and NOT to any specific territorial restriction.*

WARNING!

Only fit accessories that have been designed and approved by Land Rover.

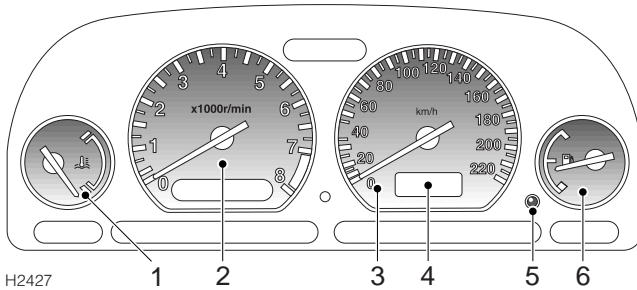
For Your Safety

Ensure that the gross vehicle weight and maximum rear axle weight are not exceeded.

Care Points

DO NOT use the rear lashing eyes for towing purposes - serious damage to the vehicle may result.

Instruments



H2427

INSTRUMENTS

1. Temperature gauge

This gauge indicates the temperature of the engine coolant. As the engine warms up, the pointer will rise to the mid-point of the gauge, where it should remain while the engine is operating at its normal temperature.

If the pointer reaches the RED mark, the coolant is too hot and severe engine damage could result; stop the vehicle as soon as safety permits and seek qualified assistance.

2. Tachometer (petrol model illustrated)

Indicates engine speed in revolutions per minute (x 1000). To protect the engine from damage, NEVER allow the tachometer pointer to enter the RED sector.

NOTE: On diesel models, the tachometer is only calibrated up to 6,000 rev/min.

3. Speedometer

Indicates road speed in kilometres per hour.

4. Total distance and trip recorder (odometer)

The digital display indicates the total distance travelled by the vehicle or, when the reset/mode button is pressed, indicates the trip recorder distance.

5. Trip recorder reset/mode button

Press to alternate between total distance and trip recorders. Press and hold when in trip recorder mode to return the trip recorder to zero.

6. Fuel gauge

The pointer indicates the fuel level, even when the starter switch is turned off. After refuelling, the pointer slowly rises to the new level after the starter switch is turned on.

Operating Tip

Driving on twisting or hilly roads may disturb the accuracy of the fuel gauge. It is advisable to check the fuel level when the vehicle is travelling on a straight, level road.

WARNING!

Never allow the vehicle to run out of fuel - the resultant misfire could damage the catalytic converter.

Warning Lights



Low oil pressure - RED

Illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes when the engine is started. If the light remains on, flashes on and off or illuminates continuously when driving, serious engine damage could occur; stop the vehicle as soon as safety permits and SWITCH OFF THE ENGINE IMMEDIATELY. Seek qualified assistance before driving.



Trailer direction indicators - GREEN

Illuminates in conjunction with the vehicle direction indicator lights to show that all trailer indicator lights are functioning correctly. In the event of a bulb failure on the trailer, the warning light flashes once and then remains off.



Airbag supplementary restraint system - RED

The light illuminates when the starter switch is turned to position 'II' and extinguishes after about five seconds. If the light illuminates at any other time, seek qualified assistance urgently.



Rear fog guard light - AMBER

Illuminates when the rear fog guard lights are switched on.



Hill descent control (HDC) 'information' - GREEN

Illuminates briefly as a bulb check when the starter switch is turned to position 'II' and will illuminate when HDC is selected.

If HDC is selected when either of the operating gears is engaged (1st or reverse), the light will illuminate continuously.

When HDC is selected and a non-operating gear is engaged, the light will flash to inform the driver that HDC is selected, but not operating (see also 'HDC fade-out').

NOTE: When a trailer is not fitted, the warning light will flash once each time the direction indicator switch is operated.

Operating Tip

The trailer direction indicator light will also flash when the hazard warning lights are activated, whether a trailer is attached or not.

Warning Lights



Hill descent control (HDC) 'failure' - AMBER

The light illuminates briefly as a bulb check when the starter switch is turned to position 'II'. The light will flash if the brakes become in danger of overheating and continue flashing until the brakes have cooled sufficiently to enable HDC to operate again (see also '*HDC fade-out*').

If the light illuminates at any other time, a fault in the system is indicated. If this occurs, deselect HDC and consult your Land Rover dealer.



Door open - RED

Illuminates when any of the doors (including the taildoor and bonnet) are not fully closed. DO NOT drive the vehicle with the light illuminated.



Traction control - AMBER

Illuminates as a bulb and system check when the starter switch is turned to position 'II' and extinguishes after approximately 4 seconds. The light illuminates for a minimum of 2 seconds, whenever traction control is operating.

If the light illuminates continuously, a fault with the system is indicated; seek qualified assistance.



ABS - AMBER

Illuminates for approximately 1 second as a bulb and system check when the starter switch is turned to position 'II', and briefly extinguishes before coming on again. If the light does not extinguish and then come on again, then a fault has occurred with the ABS system and you should consult your Land Rover dealer at the earliest opportunity. The warning light will remain on until the vehicle is driven above approximately 7 km/h.

If the light remains on or subsequently illuminates while driving, a fault has been detected by the self-monitoring system. This means that full ABS control may not be available and you should consult your dealer at the earliest opportunity.

Warning Lights



Check engine - AMBER

(diesel models only)

The light illuminates briefly as a bulb check when the starter switch is turned to position 'II'. If the light remains on or illuminates when driving, the emission control system requires attention. Stop the vehicle and switch off the engine for 30 seconds; if the light illuminates again after the engine is restarted, it is permissible to continue driving, but qualified assistance must be sought as soon as possible to prevent potential engine damage.



Glow plugs - AMBER

(diesel models only)

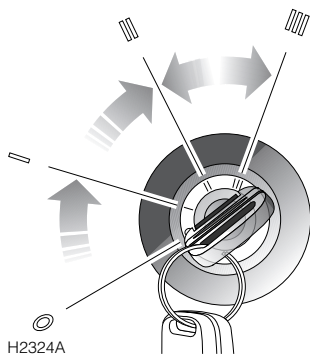
Illuminates when the starter switch is turned to position 'II'. When the engine is cold, wait for the light to extinguish before starting.



Hazard warning lights - RED

Illuminates in conjunction with the direction indicator warning lights, when the hazard warning lights are operated.

Starting & Driving



STARTER SWITCH & STEERING LOCK

The starter switch uses the following sequence of key positions to operate the steering lock, electrical circuits and starter motor.

'0' - Steering locked

With the key removed, the steering column can be locked and most electrical circuits are non-operational.

'I' - Steering unlocked

Turn the switch to position 'I' to unlock the steering. The radio/cassette player can now be operated.

'II' - Electrical circuits on

With the switch in position 'II', all instruments, lights and electrical circuits are operational.

'III' - Starter motor operates

Turn the switch to position 'III' to operate the starter motor; release the key as soon as the engine starts (the key will automatically return to position 'II').

NOTE: On ABS models, immediately after the engine is started, a short, low pitched 'buzz' may be heard; this is the ABS system priming and is no cause for concern.

WARNING!

DO NOT remove the key, or turn the starter switch to position '0', while the vehicle is in motion - once the steering lock is engaged, it is impossible to steer the vehicle.

Operating Tip

Unlocking the steering

After inserting the key, a small movement of the steering wheel will help to disengage the lock before turning the switch to position 'I'.

Locking the steering

After removing the key, turn the steering wheel towards the kerb until the lock engages.

Starting & Driving

PETROL MODELS

Starting the engine

1. Check that the handbrake is on and that the gear lever is in neutral.
2. Switch off all unnecessary electrical equipment (including the air conditioning).
3. Turn the starter key to position 'III' and release the key as soon as the engine has started.

DO NOT press the accelerator pedal while starting and DO NOT operate the starter for more than 15 seconds at a time. If the engine fails to start, switch off and wait for at least 10 seconds before trying again.

What to do if the engine fails to start, or starts but will not continue running:

- Ensure that the engine is remobilised (ie. the alarm indicator light is extinguished).
- Press the accelerator pedal half way down while operating the starter. DO NOT operate the starter for more than 15 seconds and release the accelerator as soon as the engine fires.
- If the engine still fails to start, operate the starter again, this time fully depressing the accelerator pedal to clear the engine of excess fuel. Ensure the starter motor is not operated for more than 15 seconds and release the accelerator as soon as the engine has started.
- DO NOT pump the accelerator pedal during starting.

Cold climates

In freezing conditions, fully depress the clutch pedal while starting and hold it down until the engine is running. Note that engine cranking times will increase and that the battery charging and oil pressure lights may take several seconds to extinguish.

Warming up

In the interest of fuel economy, it is advisable to drive the vehicle soon after starting, remembering that harsh acceleration, or labouring the engine before normal operating temperature has been reached, can damage the engine.

WARNING!

Never start, or leave the engine running, in an unventilated building - exhaust gases are poisonous and contain carbon monoxide, which can cause unconsciousness and may even be fatal.

Care Points

Catalytic converters can be damaged if the wrong fuel is used, or if an engine misfire occurs. Before starting the engine, you should be aware of the precautions detailed under 'Catalytic converter'.

Continued use of the starter will not only discharge the battery, but may damage the starter motor and the catalytic converter.

Operating Tip

In freezing conditions, or when the battery is in a low state of charge, depress the clutch before starting and hold it down until the engine is running.

Starting & Driving

DIESEL MODELS

Starting the engine

1. Check that the handbrake is applied and that the gear lever is in neutral.
2. Switch off all unnecessary electrical equipment (including the air conditioning).
3. Insert the key and turn the starter switch to position 'II'. Wait until the glow plug warning light extinguishes.
4. Turn the key to position 'III' to operate the starter motor; DO NOT press the accelerator pedal during starting and RELEASE THE KEY as soon as the engine is running. If the engine stalls, you MUST return the starter switch to position 'O', then turn the starter switch to position 'II' and wait until the glow plug warning light goes out before attempting to restart; the engine will not start by turning the starter switch from position 'II'.

In temperate climates, DO NOT operate the starter for longer than 10 seconds; if the engine fails to start, switch off and wait for 10 seconds before re-using the starter.

Cold climates

In temperatures of -10° C and below, partially depress the accelerator pedal and fully depress the clutch pedal while starting. Keep the pedals in this position until the engine is running. Note that engine cranking times will increase - but must not exceed 15 seconds - and that the battery charging and oil pressure warning lights may take several seconds to extinguish.

Warming up

In the interests of fuel economy, it is advisable to drive soon after starting, remembering that harsh acceleration, or labouring the engine before normal operating temperature has been reached, can damage the engine.

Switching off

To avoid the possibility of damaging the turbocharger bearings through inadequate lubrication, ALWAYS allow the engine to idle for 10 seconds before switching off.

WARNING!

Never start, or leave the engine running, in an unventilated building - exhaust gases are poisonous and contain carbon monoxide, which can cause unconsciousness and may even be fatal.

Care Points

The engine must not be run above fast idle speed, until the oil pressure warning light extinguishes. This will ensure that the engine and turbocharger bearings are properly lubricated before being run at normal driving speeds.

Catalytic converters can be damaged if the wrong fuel is used, or if an engine misfire occurs. Before starting the engine, you should be aware of the precautions detailed under 'Catalytic converter'.

Continued use of the starter will not only discharge the battery, but may damage the starter motor and the catalytic converter.

Operating Tip

In freezing conditions, or when the battery is in a low state of charge, depress the clutch while operating the starter; this will reduce the load on the battery.

Starting & Driving

ALL MODELS

Parking

After bringing the vehicle to a stop, ALWAYS apply the handbrake and select neutral, before releasing the foot brake and switching off the engine.

RUNNING-IN

The engine, gearbox, brakes and tyres need time to 'bed-in' and adjust to the demands of everyday motoring. During the first 1,000 km, it is essential that you drive with consideration for the running-in process and heed the following advice:

- Do not allow the engine to exceed 3,000 rev/min in any gear.
- Do not operate at full throttle in any gear.
- Do not allow the engine to labour in any gear.
- Avoid heavy braking, where possible.

After the running-in distance has been completed, engine speeds may be gradually increased.

FUEL ECONOMY

Fuel consumption is influenced by two major factors:

1. How your vehicle is maintained.
2. How you drive.

To obtain optimum fuel economy, it is essential that your vehicle is maintained in accordance with the manufacturer's recommendations, but above all, the way in which you drive is most important. Note the operating tips alongside.

WARNING!

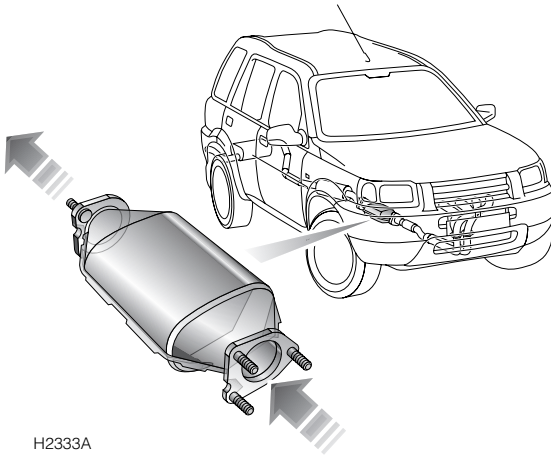
After switching off, cooling fans may continue rotating for several minutes, to prevent the engine from overheating. In some circumstances the cooling fans may commence operating up to 4 minutes after the engine is switched off. If the bonnet is opened, keep clear of fans.

Operating Tip

The following hints may help you to obtain optimum fuel consumption:

- Avoid unnecessary short, start-stop journeys.
- Avoid fast starts. Always accelerate smoothly and gently from rest.
- Do not drive in low gears for longer than necessary.
- Decelerate gently and avoid sudden and heavy braking.
- Anticipate obstructions well in advance and adjust your speed accordingly.
- Check tyre pressures regularly.

Catalytic Converter



H2333A

WARNING!

Exhaust temperatures can be extremely high, do not park on ground where combustible materials such as dry grass or leaves could come into contact with the exhaust system - in dry weather a fire could result.

Catalytic converters are easily damaged through improper use, particularly if the wrong fuel is used, so be sure to take notice of the following precautions to minimise the chance of accidental damage.

Fuel

- Use **ONLY** fuel recommended for your vehicle.
- Never allow the vehicle to run out of fuel - this could cause a misfire which could damage the catalyst.

Starting

- Do not continue to operate the starter after a few failed attempts, seek qualified assistance.
- Do not operate the starter if an engine misfire is suspected and do not attempt to clear a misfire by pressing the accelerator pedal.
- Do not attempt to push or tow start the vehicle.

Catalytic Converter

Driving

- Do not overload or excessively 'rev' the engine.
- Do not switch off the engine when the vehicle is in motion with a drive gear selected.
- Consult your dealer if you think your vehicle is burning too much oil, as this will progressively reduce catalyst efficiency.
- If a misfire is suspected, or the vehicle lacks power while driving, provided the engine has reached its normal operating temperature, it may be driven SLOWLY (at risk of catalyst damage) to a Land Rover dealer for assistance.
- Do not run the engine with a spark plug or lead removed or use any device that requires an insert into a spark plug.
- Do not drive the vehicle on extreme terrain likely to subject the underside of the vehicle to heavy impacts.

IMPORTANT

Any engine misfire, loss of engine performance or engine run-on, could seriously damage the catalytic converter. For this reason, it is vital that unqualified persons do not tamper with the engine and that regular maintenance is carried out by a Land Rover dealer in accordance with the service interval plan in the Service Portfolio book.

Gearbox



H2327A

The gear positions are indicated on the gear lever knob.

Synchromesh engagement is provided on all forward gears.

Selecting reverse

Before selecting reverse gear, ensure the vehicle is stationary; then, fully depress the clutch pedal and pause briefly before moving the gear lever into position.

Hill descent control

(if fitted)

Hill descent control can only be activated when the vehicle is in 1st or reverse gear.

For further information, see '*Hill Descent Control*'.

Care Points

Do not rest your hand on the gear lever when driving - pressure from your hand may cause premature wear to the gear selector mechanism.

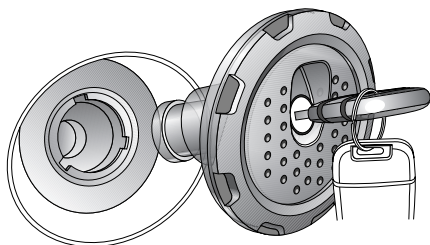
Do not rest your foot on the clutch pedal when driving - excessive wear to the clutch will result.

Do not hold the vehicle stationary on a hill by slipping the clutch. This will wear out the clutch. Always use the handbrake.

Operating Tip

In the neutral position, the gear lever is spring loaded to rest naturally between 3rd and 4th gears.

Fuel System



H2313A

FUEL FILLER

The fuel filler is located in the rear right-hand wing. Insert the key in the lock, turn it anti-clockwise and allow any pressure inside the tank to escape, before removing the cap.

TYPE OF FUEL

Petrol engines:

The RON value (octane rating) and type of petroleum (unleaded or leaded), available at garage forecourts will vary in different parts of the world.

For example, in most European countries 95 RON unleaded fuel is readily available, but in some parts of the world fuel supplies may be limited to leaded or lower octane fuels only.

During manufacture, engines are tuned to suit the fuel supplies commonly available in the market for which the vehicle is destined. However, if a vehicle is later exported to a different country, or is used to travel between different territories, the owner should be aware that the available fuel supplies may not be compatible with the engine specification. If in doubt, consult a dealer for advice.

IN AN EMERGENCY (and only if the correct fuel is unavailable), lower octane rated fuel can be used for very limited periods of moderate, or low speed motoring, provided engine 'knocking' does not occur.

Diesel engines:

The quality of diesel fuel can vary in different countries and only clean, good quality fuel should be used. It is important that the sulphur content of diesel fuel does not exceed 0.3%. In Europe, all supplies should be within this limit, but in other parts of the world, you should check with your supplier.

Ensure that the fuel filter element is changed at the recommended service intervals.

WARNING!

Use only the recommended fuel! Serious damage to the catalytic converter will occur if the wrong fuel is used.

Petrol fuel specification:

95 RON unleaded petrol to EN 228 specification.

Diesel fuel specification:

Good quality diesel fuel to EN 590 specification.

***Operating Tip***

Diesel engines: If loss of engine performance due to the use of low quality fuel is experienced, drain the fuel filter (see later in this section).

Fuel System

FUEL FILLING

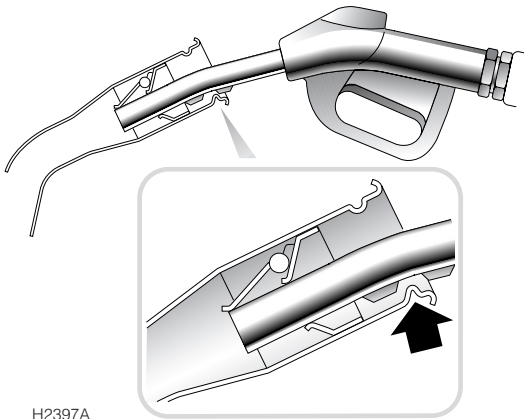
Always fill the tank SLOWLY, until the filler nozzle automatically cuts-off the fuel supply. DO NOT attempt to fill the tank beyond this point, or spillage could result due to expansion of the fuel.

Petrol engines:

The filler tube is designed to accept a narrow filler nozzle, of the type found on pumps that deliver ONLY unleaded fuel. A flap lies across the filler neck; insert the nozzle sufficiently to fully open the flap before filling.

Diesel engines:

The diesel fuel filling system on garage forecourts, is designed to fill at a maximum of 45 litres per minute. Use of commercial vehicle diesel pumps with a higher fill rate, may result in premature pump cut-off and fuel spillage.



H2397A

Filling difficulties

The fuel delivery rate of filling station pumps can vary significantly from one garage forecourt to another. This, coupled with the fact that modern pumps are equipped with a sensor which automatically cuts off the supply as soon as turbulence is detected in the upper part of the vehicle's filler neck, could result in isolated fuel filling problems.

If individual owners experience difficulty, the operating tips alongside may be useful:

For Your Safety

Petroleum gases are highly inflammable and, in confined spaces, are also extremely explosive. Always take care when refuelling:

- Switch off the engine.
- Do not smoke or use a naked flame.
- Avoid spilling fuel.
- Do not overfill the tank.

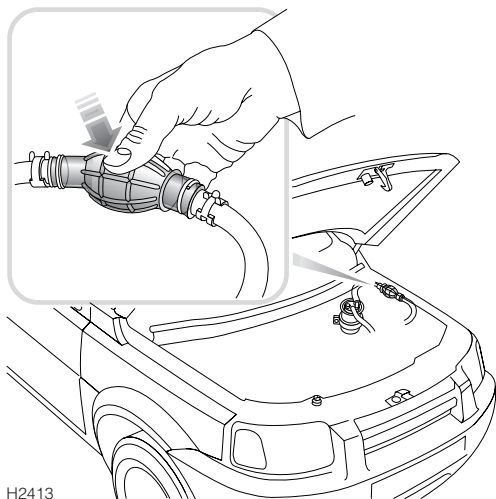
Care Points

DO NOT fully fill the tank if the vehicle is to be parked in direct sunlight, or high ambient temperature - expansion - of the fuel could cause spillage.

Operating Tip

- Fully insert the filler gun, then withdraw the gun up to the first ridge on the underside of the nozzle.
- Hold the filler gun with the trigger directly below the nozzle. Twisting the gun to either side is unlikely to ease the filling process.
- Fill the tank slowly - DO NOT fully squeeze the trigger.

Fuel System



H2413

Empty fuel tank

NEVER allow the vehicle to run out of fuel - the resultant misfire may destroy the catalytic converter.

Petrol engines:

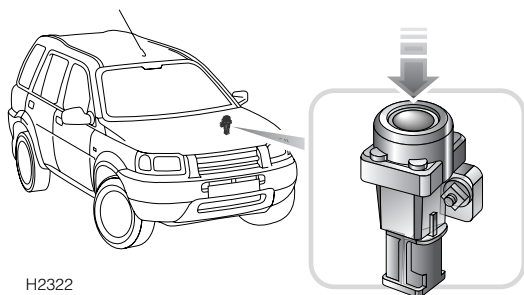
In the event of a fuel tank running dry, contact your Land Rover dealer before attempting to start the engine.

Diesel engines:

In the event of the fuel tank running dry, it will be necessary to hand-prime the fuel system (after filling up) by squeezing the priming bulb in the engine compartment (where shown in illustration), until the bulb feels solid.

Take care to ensure that the primer bulb is not trapped when the bonnet is closed. DO NOT attempt to start the engine until the system is properly primed.

Fuel System



H2322

WARNING!
ALWAYS check for fuel leaks before resetting the fuel cut-off switch.

FUEL CUT-OFF SWITCH

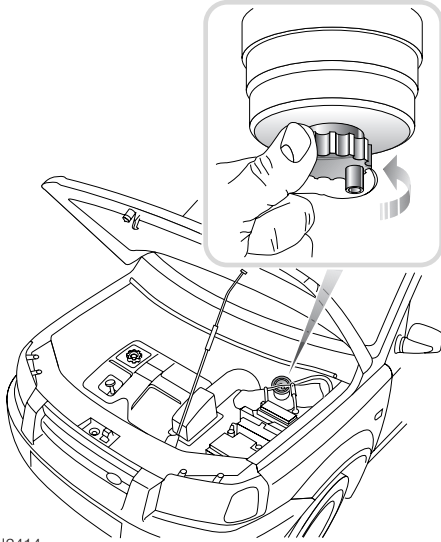
(petrol models only)

The fuel cut-off switch is a safety device which, in the event of a collision or sudden impact, automatically cuts off the fuel supply.

The switch is located on the left hand side of the engine compartment, mounted on the bulkhead. After the switch has been activated, it must be reset by pressing the rubber top (arrowed in illustration) before the engine can be restarted.

See also 'Door locking cut-off switch' under 'Locks & Alarm'.

Fuel System



H2414

DIESEL FUEL FILTER - DRAINING

If running problems or loss of performance are experienced, the fuel filter should be drained, as a precaution against water contamination of the fuel system.

The filter is located under the tool kit cradle at the rear of the engine compartment.

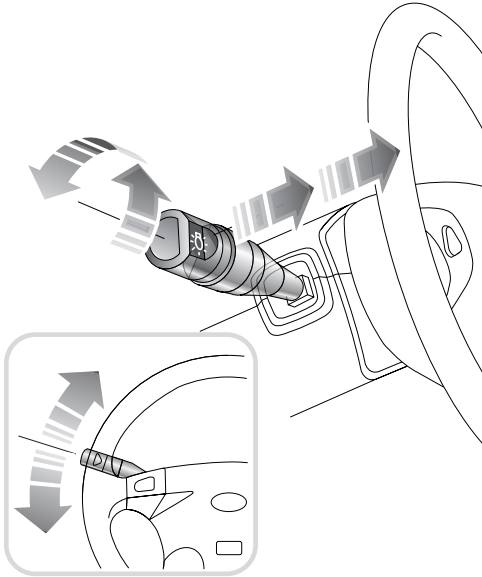
To drain:

Slacken off the drain cap (turn in the direction arrowed) to allow any water to drain off. Retighten the cap as soon as pure diesel is emitted.

Operating Tip

Attach a length of flexible tube to the nozzle on the drain cap, to enable fuel to be drained into a container.

Lights & Indicators



H2379A

Operating Tip

Hold the direction indicator lever half way up or down to indicate a lane change.

The side, tail and headlights operate with the starter switch in any position.

'Lights on' warning buzzer

If the exterior lights are left on after the starter switch is turned off, a warning buzzer will sound as soon as the driver's door is opened. The buzzer will cease as soon as the lights are switched off, or the door is closed.

DIRECTION INDICATORS

Move the lever down to indicate a LEFT turn, or up to indicate a RIGHT turn. The indicators will cancel automatically, once a turn has been completed.

The corresponding GREEN warning light on the instrument panel will flash in time with the direction indicators.

SIDE AND HEADLIGHTS

Turn the control to the first position to illuminate the side, tail and instrument panel lights.

Headlights

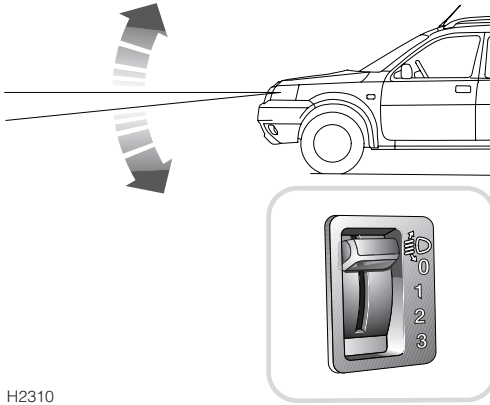
Turn the control to the second position to illuminate the headlights.

Headlight main and dipped beams

Pull the lever fully towards the steering wheel to change headlight beams (the BLUE warning light on the instrument panel illuminates when the headlights are on main beam).

To briefly flash the main beams on and off, pull the lever part way towards the steering wheel and then release.

Lights & Indicators



H2310

Headlight adjuster

The angle of the dipped beams is affected by the distribution of passenger and luggage weight within the vehicle. It is important that the headlights are adjusted to ensure that the point at which they meet the road surface provides adequate illumination ahead of the vehicle without dazzling other road users.

Using the load condition guide alongside, adjust the height of the headlight beams by moving the control.

Position 0:

One person in the driver seat, or driver plus one passenger in the front seats.

Position 1:

All the seats occupied.

Position 2:

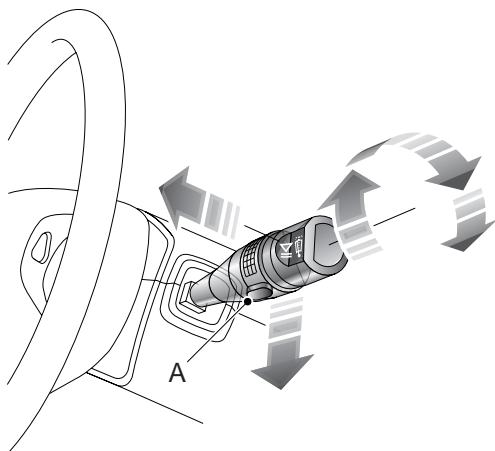
All seats occupied plus an evenly distributed load in the boot within the limits of the maximum permissible axle weight and maximum permissible vehicle weight.

Position 3:

Driver plus an evenly distributed load in the boot within the limits of the maximum permissible axle weight and maximum permissible vehicle weight.

These loading definitions assume that all loads will be within the limits of the maximum permissible axle and vehicle weights.

Wipers & Washers



H2381A

WIPER CONTROLS

The wipers and washers will only operate when the starter switch is turned to position 'II'.

Single wipe

Pull the lever down and release immediately.

NOTE: *With the lever held down, the wipers will operate at high speed until the lever is released.*

Intermittent wipe

Turn the switch to the first position.

Normal speed wipe

Turn switch to second position

Fast speed wipe

Turn the switch to the third position.

Variable delay (A) - intermittent wipe

Rotate the switch to vary the delay between wipes.

Windscreen washer

Pull the lever towards the steering wheel. The windscreen wipers will work in conjunction with the washers for as long as the lever is held in this position, the wipers continuing for a further 3 to 4 wipes after the lever is released.

Care Points

DO NOT operate the front or rear wipers on a dry screen.

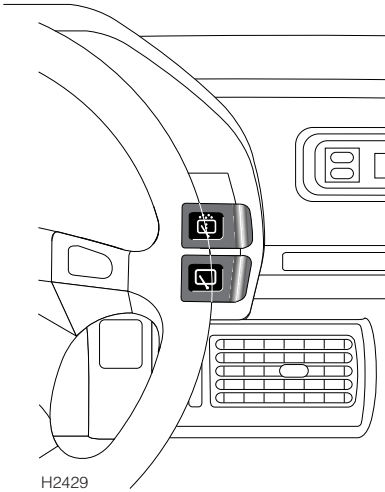
In freezing or very hot conditions, ensure that the blades are not frozen or stuck to the glass before being operated.

In winter, remove snow or ice from around the arms and blades, including the wiped area of the screen.

Operating Tip

If reverse gear is selected while the front wipers are operating (at any speed setting), the rear screen wiper (if fitted) will operate automatically until a neutral or a forward drive gear is selected.

Wipers & Washers



Operating Tip

If reverse gear is selected while the front wipers are operating (at any speed setting), the rear screen wiper (if fitted) will operate automatically until a neutral or a forward drive gear is selected.

Opening the taildoor, or the taildoor glass, will switch the rear screen wiper off.

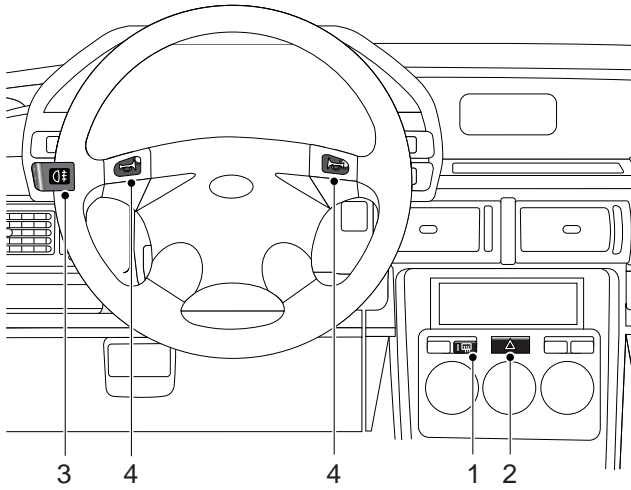
Rear screen wash/wipe - if fitted

Press and hold the upper switch for the required duration of window washing. The wiper operates automatically during washing and continues for a further 4 wipes (approx.) after the switch is released.

Rear screen wiper - if fitted

Press the lower switch to operate; after continuously wiping 3 or 4 times, the wiper operates intermittently (approx once every 6 seconds) until switched off.

Switches



H2430

1. Rear screen demister - if fitted

Press to operate; the indicator light in the switch illuminates whenever the demister is on and extinguishes when the demister is turned off.

NOTE: The rear screen demister will operate only with the taildoor fully closed and when the engine is running and will switch off automatically after approximately 8 minutes.

2. Hazard warning lights

Press to operate. All the direction indicators will flash together. Use only in an emergency to warn other road users when your vehicle is causing an obstruction or is in a hazardous situation. Remember to switch off before driving away.

3. Rear fog guard lights

Press to operate; the warning light on the instrument panel illuminates. The rear fog guard lights operate ONLY when the starter switch is in position 'II' and the headlights are switched on.

4. Horn

To operate, press either of the switches set into the steering wheel.

Care Points

The heating elements on the inside of the taildoor glass are easily damaged. DO NOT scrape or scratch the glass.

DO NOT stick labels over the demister elements, and take note of advice given in 'Cleaning & car care'.

Operating Tip

The rear fog guard lights are switched off automatically when the main lighting switch, or the starter switch is turned off.

WARNING!

Fog lights should ONLY be used when visibility is severely restricted - other road users could be dazzled in clear conditions.

Brakes

BRAKING SYSTEM

The hydraulic braking system operates through dual circuits; if one circuit should fail, the other will continue to function. However, in the event of a brake failure where only one circuit is operational, the vehicle should only be driven at slow speed to the nearest Land Rover dealer. In these circumstances, exercise **EXTREME CAUTION** and be aware that much greater pedal effort and longer stopping distances will be required.

The braking system is servo assisted. This means that if the engine stops running, all servo assistance will be lost, requiring greater pedal effort and resulting in longer stopping distances.

Brake pads

Brake pads and linings require a period of bedding in. For the first 300 km, avoid situations where heavy braking is required.

Remember that regular servicing is vital to ensure that the brake components are examined for wear at the correct intervals and changed whenever necessary to ensure optimum safety and performance.

Brake warning light

If the warning light on the instrument panel illuminates while driving, and the handbrake is fully released, a fault with the braking system is indicated. Check the brake fluid level; if the light continues to illuminate, seek qualified assistance before continuing.

Operating Tip

DO NOT rest your foot on the brake pedal while driving; this may overheat the brakes, reducing their efficiency and causing excessive wear.

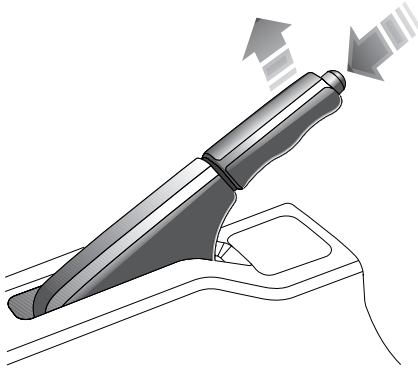
WARNING!

If the brake warning light illuminates while driving, stop the vehicle as soon as safety permits and seek qualified assistance before continuing.

For Your Safety

NEVER move the vehicle without the engine running, servo assistance may not be available. The brakes will still function, but greater pedal pressure will be required.

Brakes



H2308

WARNING!

DO NOT drive with the handbrake applied; this could damage the rear brakes and will also prevent the anti-lock braking system (where fitted) from functioning correctly.

HANDBRAKE

The handbrake operates on the rear wheels only and should not require adjustment. To apply the handbrake, pull the lever up. Always apply the handbrake fully whenever you park the vehicle.

To release, pull the lever up slightly, depress the button (arrowed in illustration) and fully lower the lever (the warning light on the instrument panel will extinguish when the handbrake is fully released).

Brakes

ANTI-LOCK BRAKING SYSTEM

(if fitted)

The anti-lock braking system (ABS) prevents the wheels from locking, thereby helping to maintain steering control. No special driving techniques or effort is required from the driver.

Under normal braking (where sufficient road surface friction exists to reliably bring the vehicle to a halt, without the wheels locking), the anti-lock braking system will not be activated. However, if the force of your braking should exceed the available adhesion between the tyres and the road, causing one or more wheels to lock, then the anti-lock braking system will automatically come into operation. This will be recognised by a rapid pulsation felt through the brake pedal.

Anti-lock braking in action

In an emergency situation, full braking effort should ALWAYS be applied, even when the road surface is slippery. The anti-lock braking system constantly monitors the speed of each wheel and varies braking pressure to each, according to the amount of traction available, thereby ensuring that the wheels do not lock.

Always remember, ABS is designed to maintain steering control under heavy braking conditions.

On soft surfaces such as powdery snow, sand or gravel, braking distances may be greater than those achievable on a vehicle without anti-lock braking. This is because the action of locked wheels on loose surfaces, is to build up a wedge of material in front of the wheels, which assists in bringing the vehicle to a halt. However, even in these circumstances, the anti-lock braking system will provide better stability and steering control.

WARNING!

The anti-lock braking system cannot overcome the physical limitations of stopping the vehicle in too short a distance, cornering at high speed, or aquaplaning, i.e. where a layer of water prevents adequate contact between the tyres and road surface.

The fact that the vehicle is fitted with anti-lock braking, must never tempt the driver into taking risks that could affect his/her safety, or that of other road users. Drivers still have a duty to drive within normal safety margins, having due consideration for the prevailing road surface, weather and traffic conditions.

Brakes

Warning light

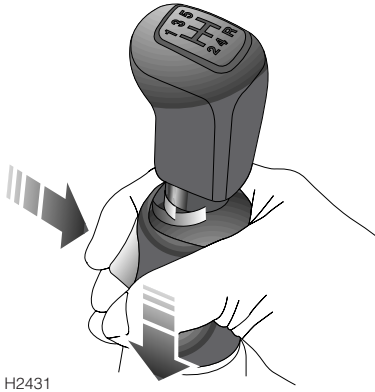
The anti-lock braking system incorporates a monitoring system, which checks that all the electrical components are in working order, as soon as the starter switch is turned to position 'II' and also at frequent intervals during your journey.

The warning light on the instrument panel is an important part of this system. The warning light should illuminate for approximately one second when the starter switch is turned to position 'II' and then briefly extinguishes before coming on again. If the light does not extinguish and then illuminate again, then a fault has occurred with the ABS system and you should consult your Land Rover dealer at the earliest opportunity. The warning light will remain illuminated until the vehicle is driven above approximately 7 km/h.

If the light remains on or subsequently illuminates while driving, a fault has been detected by the self monitoring system and full ABS control may not be available - consult your dealer at the earliest opportunity.

NOTE: *Immediately after the engine is started, a short, low pitched 'buzz' may be heard; this is the ABS system priming and is no cause for concern.*

Hill Descent Control



Operating Tip
Reverse gear can only be selected when the vehicle is stationary.

HILL DESCENT CONTROL (if fitted)

Hill Descent Control (HDC) is of particular value when driving off road, and operates in conjunction with the anti-lock braking system to provide greater control in off-road situations, when descending severe gradients.

To select HDC

HDC can be selected with the vehicle in any gear, but will only operate once 1st or reverse gears are engaged.

Squeeze the yellow trigger mounted in the gear lever and slide the collar section down until the yellow band is visible above the collar, and then release.

If 1st or reverse gear have been engaged, the HDC information light (GREEN) will illuminate (if 1st or reverse gear have not been selected, the information light will flash).

To deselect HDC, squeeze the trigger - the collar will lift automatically.

Hill Descent Control

Hill descent control in action

During a descent, if engine braking is insufficient to control the vehicle speed, HDC (if selected) automatically operates the brakes to slow the vehicle and maintain a speed relative to the accelerator pedal position.

When driving off-road, HDC can be permanently selected, to ensure that control is maintained whenever 1st or reverse gears are engaged. ABS and traction control are still fully operational and will assist if the need arises.

NOTE: *With HDC selected, gear changes can be carried out in the normal way.*

If the brake pedal is depressed when HDC is active, HDC is overridden and the brakes will perform as normal (a pulsation might be felt through the brake pedal). If the brake pedal is then released, HDC, if necessary, will recommence operating.

If the clutch is depressed for longer than 3 seconds while HDC is operating, the HDC information light will flash. If, after 60 seconds the clutch is still depressed, the information light extinguishes and the HDC 'failure' warning light flashes as the system gradually fades out (see '*HDC fade-out*').

In extreme circumstances, the HDC system may cause brake temperatures to exceed their pre-set limits. If this occurs, the information warning light will extinguish and the HDC 'failure' warning light (AMBER) will start to flash. You should stop the vehicle and disengage HDC. If HDC remains operating and the brake temperature continues to rise the HDC system will gradually fade out (see '*HDC fade-out*') and the 'failure' warning light will continue to flash until the brakes have cooled.

Operating Tip

Keep HDC selected while off-road driving, the system will only operate when needed.

For Your Safety

Do not depress the clutch pedal when descending a steep slope - control of the vehicle will be compromised and HDC will no longer function.

Hill Descent Control

HDC fade-out

HDC fade-out gradually decreases the HDC brake intervention with the effect that the rate of hill descent will increase. If this occurs either one of the two HDC warning lights will flash for the period that HDC takes to fade. HDC will be disabled completely once the descent is complete.

If required (eg. the angle of the descent levels out significantly), fade-out may be achieved deliberately by deselecting HDC while the system is operating or by changing out of the appropriate operating gear, in which case the green information light will flash. Fade-out will also occur if the clutch is depressed for longer than 60 seconds, in which case the amber failure light will flash.

If a fault with the HDC system is detected, or if the braking system reaches a pre-set temperature due to extreme conditions, HDC will automatically fade out (amber failure light flashes).

HDC warning lights

The HDC system incorporates two warning lights:



HDC information light - GREEN:

The light illuminates briefly as a bulb check when the starter switch is turned to position 'II'. If HDC is selected when either of the operating gears is engaged (1st or reverse), the light will illuminate continuously. When HDC is selected and a non-operating gear is engaged, the light will flash to inform the driver that HDC is selected, but not operating. The light will also flash to indicate that HDC is fading out (see above).



HDC 'failure' light - AMBER:

The light illuminates briefly as a bulb check when the starter switch is turned to position 'II'. The light will start flashing if the brakes become in danger of overheating and continue flashing until the brakes have cooled sufficiently for HDC to operate again.

If the light illuminates at any other time, a fault in the system is indicated. If this occurs, deselect HDC and consult your Land Rover dealer.

Traction Control

ELECTRONIC TRACTION CONTROL

(if fitted)

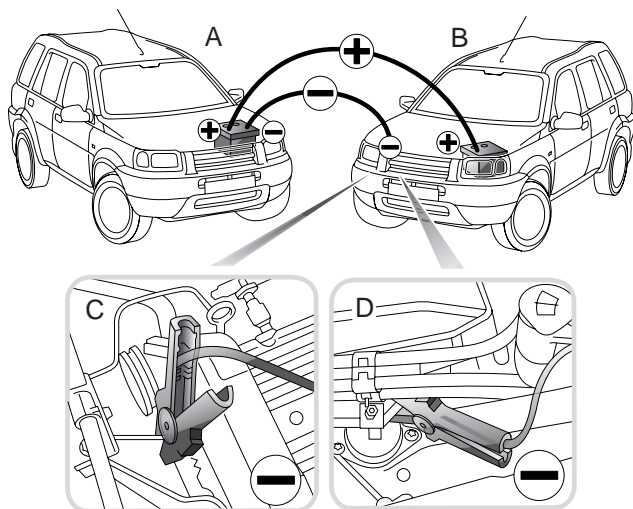
The purpose of electronic traction control is to aid traction when one wheel spins while the other still has good grip, eg. if one side of the vehicle is on ice and the other is on tarmac. The system works by applying the brake to a spinning wheel in order to transfer torque to the other side of the axle.

NOTE: *Traction control only operates below approximately 50 km/h.*

The instrument panel has a traction control warning light (TC) which illuminates whenever the system is active (for a minimum of 2 seconds) and also illuminates as a bulb check (for approximately 4 seconds) when the starter switch is turned to position 'II'.

If there is a fault with the system, then the warning light will illuminate continuously - contact your dealer at the earliest opportunity.

Emergency Starting



H2383A

USING BOOSTER CABLES

Using booster cables (jump leads) from a donor battery, or a battery fitted to a donor vehicle, is the only approved method of starting a vehicle with a flat battery. Push or tow starting is NOT recommended!

1. If a donor vehicle is to be used, the vehicles should be parked with their battery locations adjacent to one another. Ensure that the two vehicles do not touch.
2. Apply the handbrakes and ensure that the gear levers on both vehicles are in neutral ('P' - Park for vehicles with automatic transmission).
3. Turn off the starter switch and ALL electrical equipment of BOTH vehicles.
4. Connect the RED booster cable between the positive (+) terminals of both batteries.
5. Connect the BLACK booster cable from the negative (-) terminal of the donor battery to a good earth point (eg. an engine mounting or other unpainted surface), at least 0.5 m from the battery and well away from fuel and brake lines of the disabled vehicle (see illustration).

IMPORTANT

The illustration identifies the recommended earthing point for your particular vehicle.

- A. Donor vehicle
- B. Disabled vehicle
- C. Petrol engines
- D. Diesel engines

For Your Safety

DO NOT connect a booster cable to the negative (-) terminal of the discharged battery!

WARNING!

During normal use, batteries emit explosive hydrogen gas, sufficient to cause severe explosions capable of causing serious personal injury - ensure sparks and naked lights are kept well away from the engine compartment.

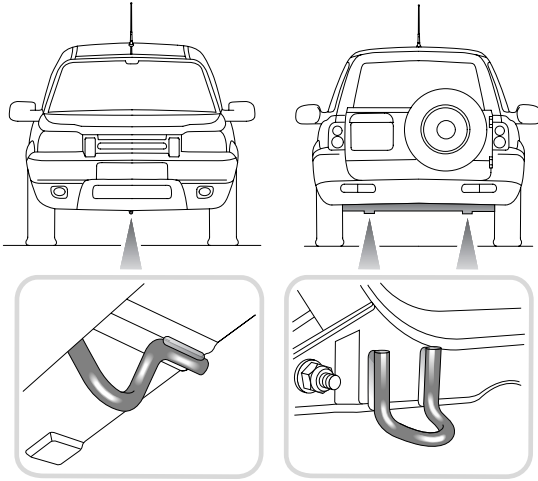
DO NOT disconnect the discharged battery.

Make sure that BOTH batteries are of the same voltage (12 volts), and that the booster cables are approved for use with 12 volt car batteries.

Emergency Starting

6. Check that the cables are clear of moving parts of both engines, then start the engine of the donor vehicle and allow it to idle for a few minutes.
7. Now start the engine of the vehicle with the discharged battery (DO NOT crank the engine for more than 15 seconds).
8. Once both engines are running normally, allow them to idle for two minutes before switching off the engine of the donor vehicle and disconnecting the booster cables. DO NOT switch on any electrical circuits on the previously disabled vehicle, until AFTER the booster cables have been removed.
9. Disconnecting the booster cables must be an exact reversal of the procedure used to connect them, ie: disconnect the BLACK cable from the earth point on the disabled vehicle FIRST.

Vehicle Recovery



H2405

VEHICLE RECOVERY

The recommended method of transporting your vehicle is by means of a trailer or vehicle transporter.

Lashing rings are provided at the front and rear of the vehicle, where shown in the illustration.

Suspended tow

If it is necessary to tow your vehicle on two wheels (ie: suspended from a recovery vehicle), it is essential that the propellor shaft connected to the axle that is to remain on the ground is disconnected by qualified personnel, prior to being towed.

WARNING!

The lashing rings are for lashing only and must NOT be used for towing.

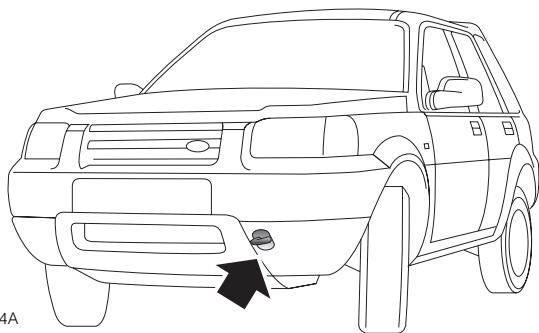
Care Points

DO NOT secure lashing hooks or trailer fixings to any other part of the vehicle.

Do not tow the vehicle on two wheels without disconnecting the appropriate propellor shaft.

Under no circumstances should the vehicle be towed or recovered by lashing to the rear subframe. Serious damage to the subframe and body may occur.

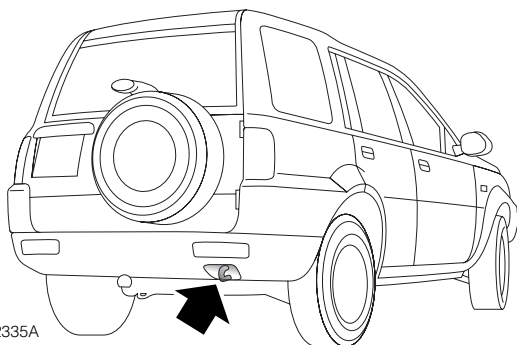
Vehicle Recovery



H2334A

Front towing eye

Use **ONLY** when the vehicle is to be towed with all four wheels on the ground.



H2335A

Rear towing eye

Use **ONLY** when towing another vehicle.

Towing the vehicle on four wheels

If it is necessary to tow the vehicle on four wheels;

- Turn the starter key to position '1' to unlock the steering and then to position 'II' to enable the brake lights, wipers and direction indicators to be operated, if necessary.
- Place the gear lever in neutral.
- Release the handbrake.

WARNING!

DO NOT remove the starter key or turn the starter switch to position '0' while the vehicle is in motion.

For Your Safety

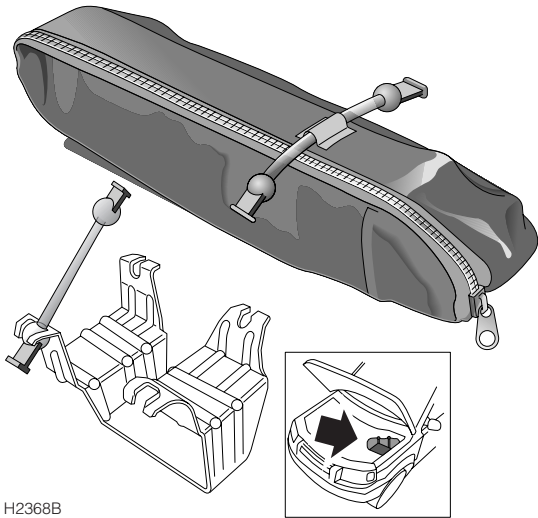
Without the engine running, greater effort will be required to operate the brake pedal and longer stopping distances will be experienced.

If, due to an accident or electrical fault, it is considered unsafe to turn the starter switch to position 'I', disconnect the battery before turning the switch.

For Your Safety

While towing, do not exceed 45 km/h.

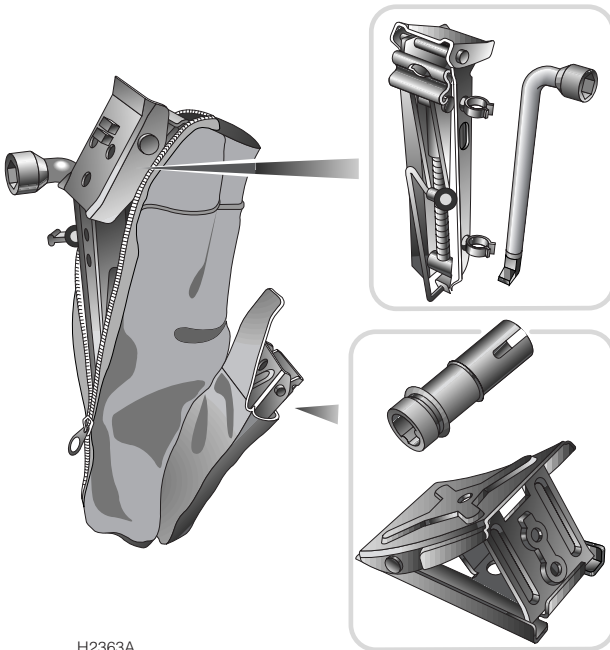
Wheel Changing



H2368B

For Your Safety
Tools stowed in the engine compartment will be hot if the engine has been running.

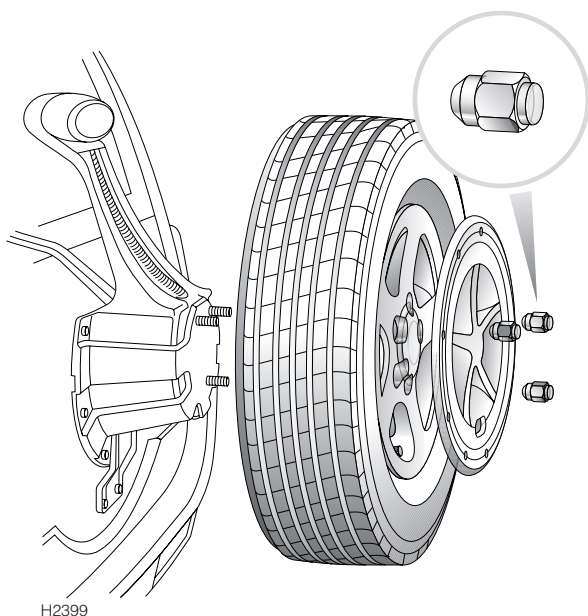
Operating Tip
The chock is designed to fold away and must be assembled as in the illustration before use.



H2363A

The tool kit, containing the chock, jacking tools and wheel nut spanner is stowed in the engine compartment.

Wheel Changing



For Your Safety

The wheels are extremely heavy. Take care when lifting and particularly when removing or replacing the spare wheel on its mounting position on the rear door.

DO NOT use the spare wheel securing nuts in place of the road wheel nuts.

Operating Tip

On vehicles fitted with steel wheels, the spare wheel cover has an aperture at the bottom to allow the tyre pressure of the spare wheel to be checked without removing the cover.

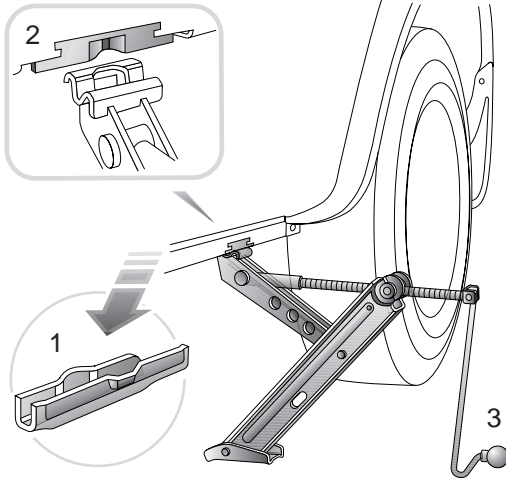
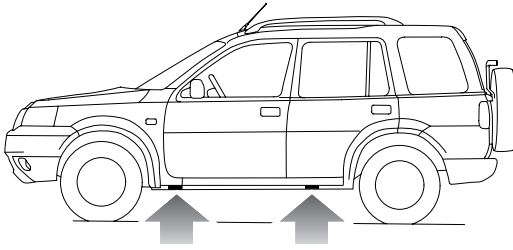
For this to be possible, the spare wheel must be placed on its mounting with the valve at the bottom.

Removing the spare wheel

Use the wheel nut spanner to remove the nuts securing the spare wheel to the carrier on the rear door, remove the spare wheel cover (if fitted) and lift off the wheel.

NOTE: In some markets, vehicles fitted with alloy wheels have a locking wheel nut fitted to each wheel, including the spare (see 'Locking wheel nuts' later in this section).

Wheel Changing



H2372A

For Your Safety

If possible, change the wheel away from the main thoroughfare.

Ensure passengers get out of the vehicle and wait in a safe area, away from other traffic.

Use your hazard warning lights to alert other road users.

Ensure the jack is positioned on firm, level ground; NEVER on soft ground or over metal gratings and manhole covers.

WARNING!

NEVER jack the vehicle with passengers inside, or with a caravan or trailer attached.

NEVER work beneath the vehicle with the jack as the only means of support. The jack is designed for wheel changing only.

CHANGING A WHEEL

Before changing a wheel, apply the handbrake and select 1st gear. Jacking on a slope is NOT recommended, but if it is unavoidable, chock the wheel diagonally opposite the one to be removed on the downhill side, using the chock provided in the tool kit.

Positioning the jack

1. Use the flat wedge end of the wheel nut spanner to lever off the appropriate jacking point cover.
2. Position the jack with the base directly under the jacking point nearest the wheel to be removed and with the handle dropping vertically to almost reach the ground (see illustration).
3. Turn the jack screw clockwise to raise the jack until the jack head fits snugly around the centre of the jacking point.

Wheel Changing

Changing the wheel

- Before raising the vehicle, use the wheel nut spanner to slacken each of the wheel nuts half a turn.
- Turn the jack handle clockwise to raise the vehicle until the tyre is clear of the ground. Remove the wheel nuts and wheel.
- On alloy wheels, use an approved anti-seize compound to treat the wheel mounting spigot, to minimise the tendency for adhesion between wheel and the spigot. Ensure that no oil or compound comes into contact with the brake components or the wheel nut threads. If, due to an emergency situation, this treatment is not practicable, refit the spare wheel for the time being and treat the wheel at the earliest opportunity.
- Fit the spare wheel and tighten the wheel nuts (domed side towards the wheel) until the wheel is firmly seated against the hub.
- Lower the vehicle and remove the jack and wheel chock, then FULLY tighten the wheel nuts in alternate sequence with the wheel nut spanner provided. Have the wheel nut torque checked at the earliest opportunity.
- Refit the jacking point cover
- Refit the wheel nut cover (on steel wheels) , then remount the replaced wheel and the spare wheel cover (if fitted) on the taildoor.
- Finally, return the tools to their bag and strap the bag into its cradle in the engine compartment.

Operating Tip

On vehicles fitted with steel wheels, use the flat, wedge shaped end of the wheel nut spanner to lever off the wheel nut cover

For Your Safety

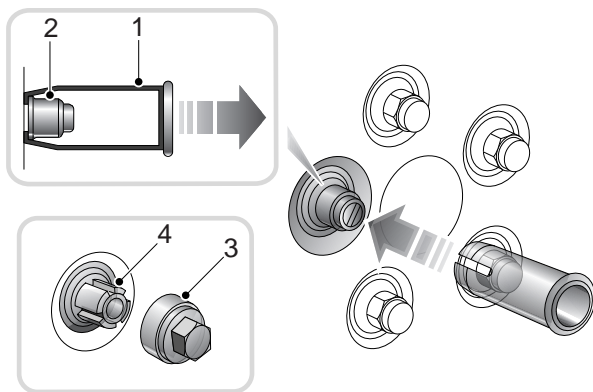
Avoid contact with a hot exhaust system.

After changing a wheel, have the tyre pressure and wheel nut torque checked as soon as possible.

Care Points

Avoid placing wheels face down on the ground. This may scratch the surface.

Wheel Changing



H2396A

IMPORTANT

A code number is stamped on the face of the socket. Ensure the number is recorded on the Security Information card supplied with the literature pack. Quote this number if replacements are required. For security reasons, DO NOT keep the card in the vehicle.

LOCKING WHEEL NUTS

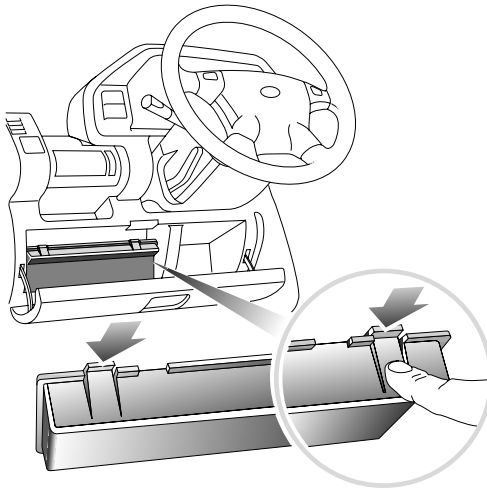
One locking wheel nut is fitted to each alloy road wheel (including the spare). Locking wheel nuts are visually similar to standard wheel nuts, but can only be removed using the special tools provided, as follows:

Push the extractor (1) firmly over the head of the locking wheel nut. Pull to remove the nut cover (2).

Fit the key socket (3) over the locking wheel nut (4) then, using the wheel nut spanner, undo the nut in the normal way.

NOTE: *The key socket can be retained inside the extractor tube when not in use. Both extractor tube and key socket can be kept in the pocket of the toolkit bag.*

Fuses



H2434

In brief

Fuses are simple circuit breakers, which protect the vehicle's electrical equipment by preventing the electrical circuits from being overloaded.

A blown fuse may be indicated when the item of electrical equipment it protects, stops working.

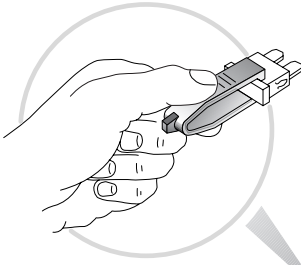
Operating Tip

A label in the fuse box cover shows the electrical circuits protected, the fuse values and their locations. They are also listed later in this section.

MAIN FUSE BOX - Checking or renewing a fuse

1. Turn off the starter switch and all electrical equipment.
2. Remove the fuse box cover (depress the two catches arrowed in illustration), then refer to the chart to identify the suspect fuse.

Fuses



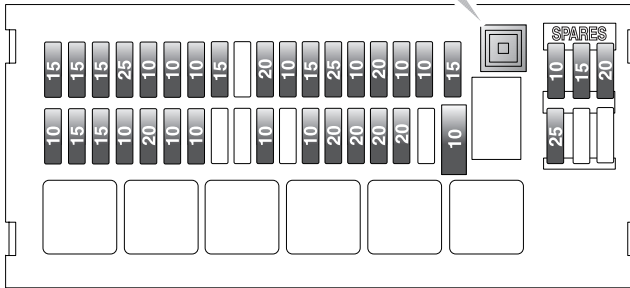
For Your Safety

Turn off the starter switch and all electrical equipment before changing a fuse.

Only replace a fuse with one of the same, or lower, rating.

Fuse colours:

RED 10 amp
BLUE 15 amp
YELLOW 20 amp
CLEAR 25 amp
GREEN 30 amp
ORANGE 40 amp



H2364A

1. Press the removal tweezers (located in the fuse box) onto the head of the fuse and pull to remove. A blown fuse can be recognised by a break in the wire.
2. Replace a blown fuse with another of the same, or lower, rating. Note that there are a number of spare fuses located on the right hand side of the fuse box.

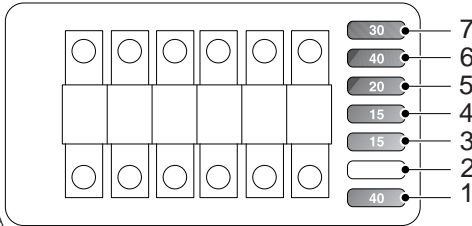
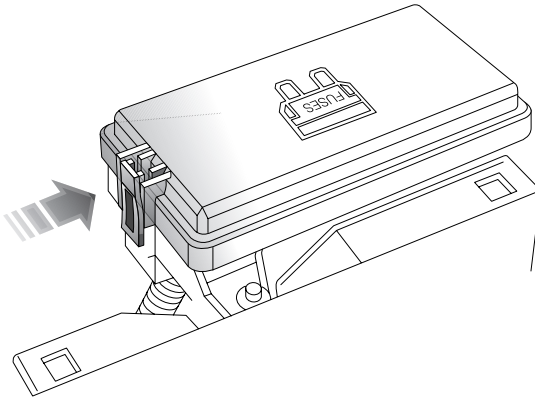
If a replacement fuse fails almost immediately, refer the problem to your dealer.

Fuses

MAIN FUSE BOX (inside the driver's glovebox)

Fuse No	Rating (amps)	Circuits protected
F1	15	Rear screen washers
F2	15	Stop lights, reversing lights
F3	15	Windscreen wash/wipe
F4	25	Heater, blower
F5	10	Starter motor
F6	10	Engine cut-off
F7	10	Anti-lock brakes
F8	15	Direction indicators
F9	-	-
F10	20	Cigar lighter
F11	10	In-car entertainment
F12	15	Sunroof
F13	25	Electrical accessories socket
F14	10	Interior lights
F15	20	Central door locking
F16	10	Sidelights - RH
F17	10	Electric mirrors
F18	15	Headlight main beam - RH
F19	10	Fuel system
F20	15	Headlight main beam - LH
F21	15	Front fog lights
F22	10	Rear fog guard lights
F23	20	Rear screen demister
F24	10	Headlight dipped beam - LH
F25	10	Headlight dipped beam - RH
F26	-	-
F27	-	-
F28	10	Sidelights - LH
F29	-	-
F30	10	Rear screen wiper
F31	20	Taildoor glass lift/drop
F32	20	Anti-lock brakes
F33	20	Window - front LH
F34	20	Window - front RH
F35	-	-
F36	10	Airbag SRS (yellow surround)

Fuses



H2325A

NOTE: Owners are advised against removing or replacing the fusible links identified on the underside of the fuse box lid as:

ALTERNATOR (120 A),
IGNITION 1 (60 A),
PASSENGER FUSEBOX (60 A),
IGNITION 2 (60 A),
LIGHTING (60 A)
ABS PUMP (30 A).

Failure of any of these items should be investigated by a qualified dealer.

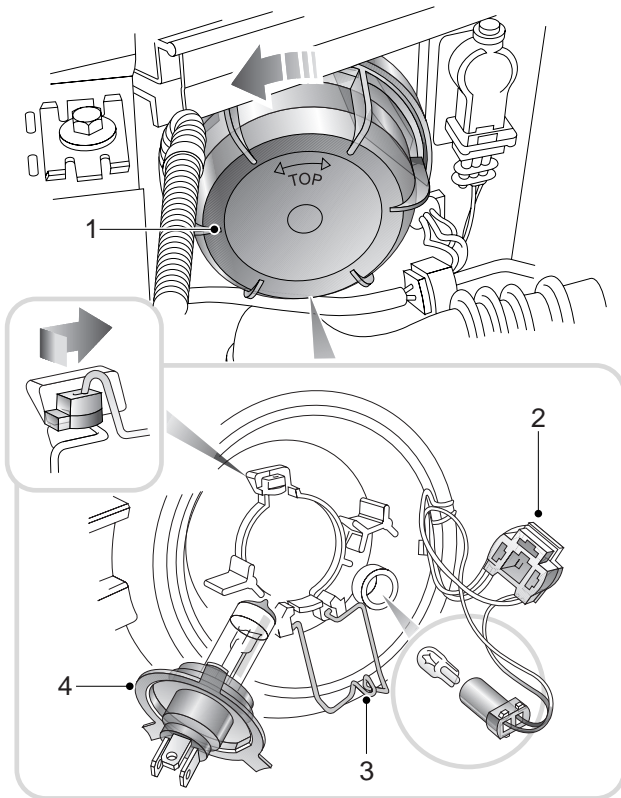
ENGINE COMPARTMENT FUSES

The fuse box is located on the left hand side of the engine compartment.

Press the catch (arrowed in illustration) to release the cover.

Fuse No	Rating (amps)	These units not operating
1	40	Cooling fan
2	-	-
3	15	Horn
4	15	Hazard warning lights
5	20	Fuel pump and fuel injectors
6	40	Condenser fan
7	30	Starter solenoid

Bulb Replacement



H2371A

For Your Safety

Check the operation of all exterior lights before you use the vehicle.

Before replacing a bulb, turn off the lighting switch to avoid any possibility of a short circuit.

Care Points

Only replace bulbs with the same type and specification.

During use, headlight bulbs may shatter if the glass has been scratched, or contaminated with oil or perspiration. DO NOT touch the glass. If handled, clean with methylated spirits and a clean cloth.

Operating Tip

When fitting the new bulb, ensure that the larger of the rectangular metal tabs is located in the upper recess.

A full list of replacement bulb ratings is given later in this section.

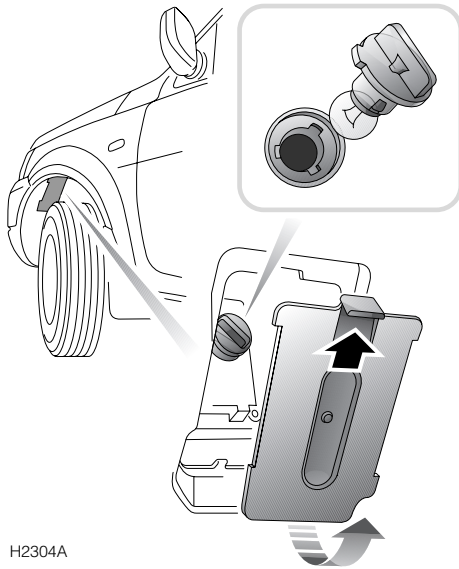
Headlight - dip/main beam

1. Turn the circular plastic cover a quarter turn anti-clockwise and pull rearwards to remove.
2. Detach the electrical connector from the rear of the bulb.
3. Unhook the wire securing clip (arrowed in small inset) and pivot it away from the rear of the bulb.
4. Remove the bulb.

Sidelight

The sidelight holder is immediately adjacent to the headlight bulb. With the circular plastic cover removed, pull the bulb holder from the light unit and pull the bulb to remove.

Bulb Replacement



H2304A

Front direction indicators

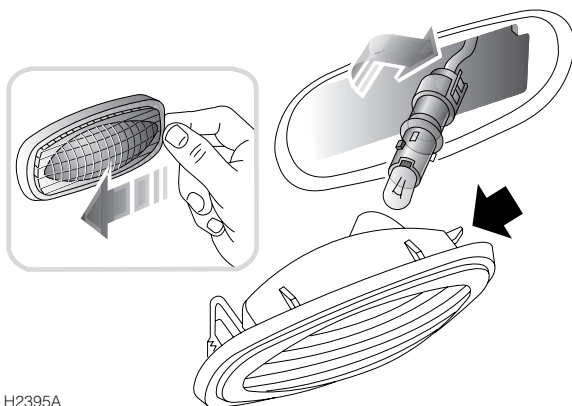
The front direction indicator lights are reached through an access panel in the wheel arch liner.

1. Push the release tab upwards (as arrowed) to open the access panel.
2. Reach into the recess and turn the bulb holder anti-clockwise to remove.
3. Twist the bulb anti-clockwise to release it from the bulb holder.

When replacing the access panel, insert the top first, then lower the panel so that the bottom edge slots onto the wheel arch liner.

Ensure that the access panel is secure before driving.

Bulb Replacement



H2395A

Side repeater lights

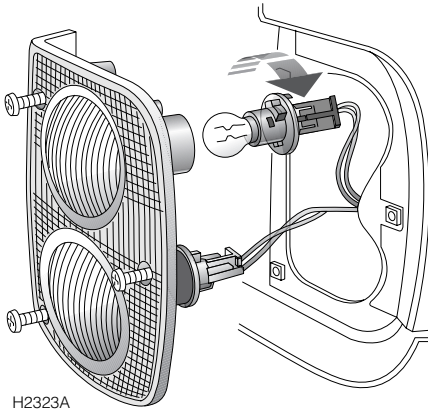
Push the lens firmly towards the rear of the vehicle and withdraw the light unit from the wing.

Twist to release the bulb holder from the light unit, then pull the bulb from its socket.

When refitting the light unit, ensure that the little tabs (arrowed in illustration) are pointed towards the front of the vehicle.

REPLACEMENT BULBS	Watts
Headlight dip/main	60/55
Sidelight.....	5
Direction indicators	21
Side repeater lights	5
Reverse lights	21
Rear fog guard lights	21
Tail/stop lights	21/5
High mounted stop light	21
Number plate light	5
Courtesy lights.....	10
Map reading lights	5
Loadspace light	10
Glovebox light	5

Bulb Replacement



H2323A

Care Points

When refitting the light unit, ensure that the foam seal is correctly positioned.

Operating Tip

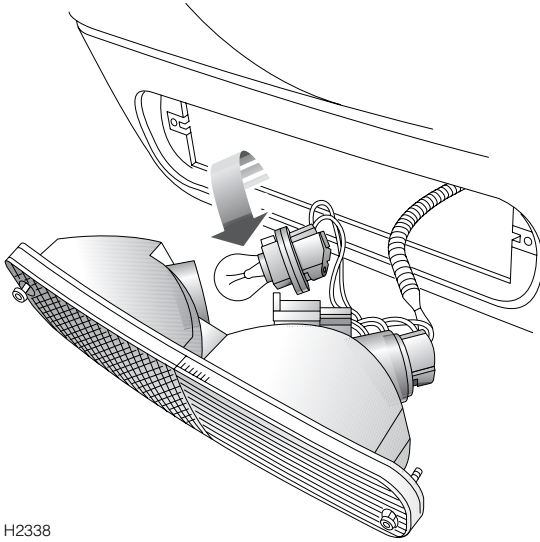
The electrical connectors are colour coded to ease correct reconnection, white for reverse and red for the rear fog guard lights.

Rear Lights

Reverse & rear fog guard lights:

- Remove the three Torx (20) screws securing the light unit and withdraw the unit from the vehicle body.
- Twist the bulb holder anti-clockwise to release, then twist the bulb to remove.

Bulb Replacement

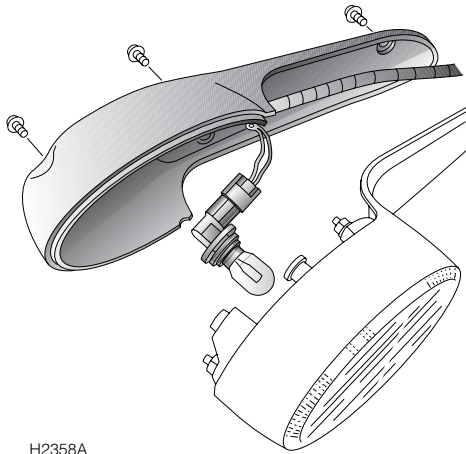


H2338

Rear direction indicator & tail/stop lights

1. Remove the two Torx (20) screws securing the light unit to the rear bumper.
2. Withdraw the unit from the bumper.
3. Twist the appropriate bulb holder anti-clockwise to release, then twist the bulb to remove.

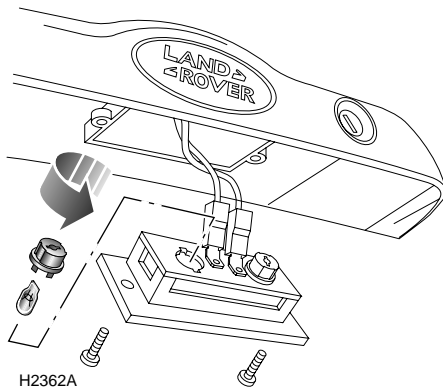
Bulb Replacement



H2358A

High mounted stop light

1. Lower the rear screen.
2. Remove the three screws securing the front of the light unit.
3. Twist the bulb holder anti-clockwise, then pull the bulb to remove.

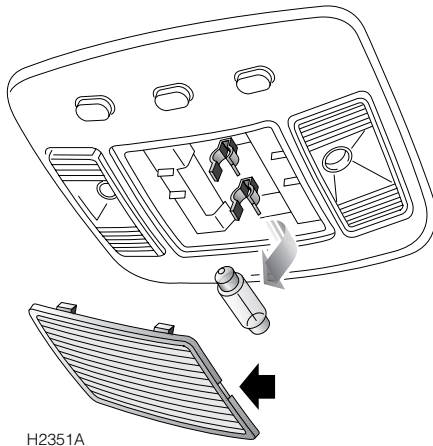


H2362A

Number plate light

1. Remove both screws to release the light unit.
2. Withdraw the unit from its surround.
3. Twist the appropriate bulb holder anti-clockwise to release, then pull the bulb to remove.

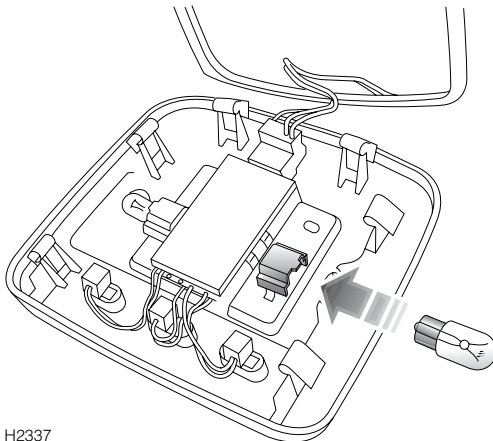
Bulb Replacement



Front courtesy & map reading lights - 5-door models

Front courtesy light:

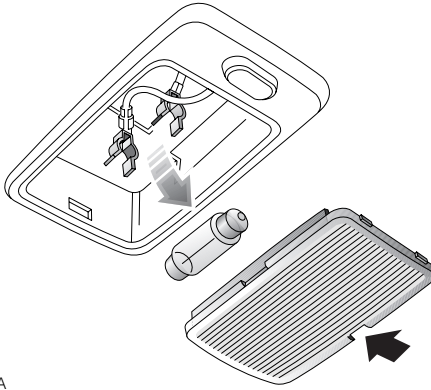
Insert a small flat bladed screwdriver into the indent on one side of the centre lens (arrowed in illustration). Prise the centre lens from the light unit, then pull the bulb out from the clips.



Map reading lights:

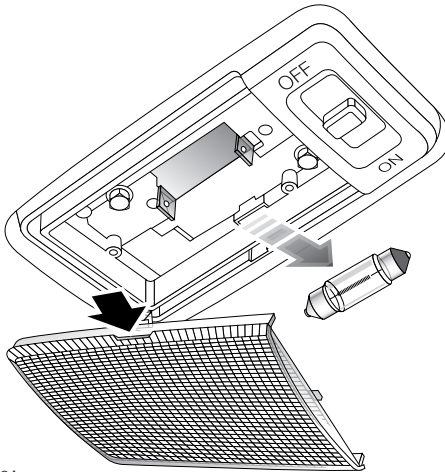
Use a flat bladed screwdriver to prise the courtesy light unit from the headlining, then pull the bulbs to remove.

Bulb Replacement



Rear courtesy light - 5-door models

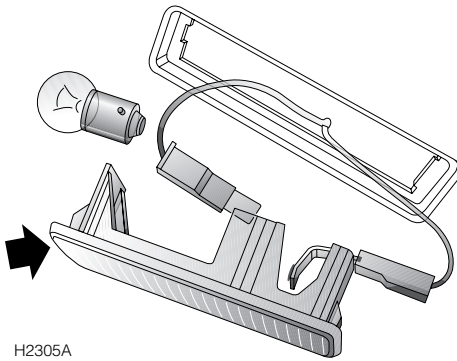
Insert a small flat-bladed screwdriver into the indent on the side of the lens and prise the lens from the light unit, then pull the bulb out from the clips.



Courtesy light - 3-door models

Insert a small flat-bladed screwdriver where arrowed and carefully prise the lens from the light unit, then pull the bulb to remove.

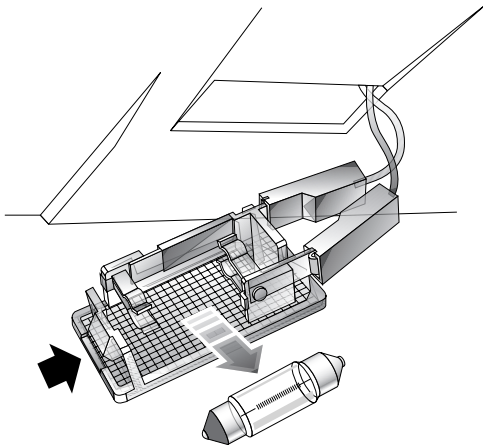
Bulb Replacement



H2305A

Loadspace light

Insert a small flat-bladed screwdriver into the indent on one of the narrow sides of the lens (see arrow on illustration) and carefully prise the unit from the loadspace trim panel. Push and twist the bulb to remove.



H2402A

Glovebox light

Insert a small flat-bladed screwdriver (preferably with a short handle, due to limited access) into the indent on the right hand side of the light unit, and carefully prise the unit from the glovebox panel. Remove the bulb from its clips.

Parts & Accessories

PARTS & ACCESSORIES

Your vehicle has been designed, manufactured and proven to cope with rigorous driving conditions. As such, fitting parts and accessories that have been developed and tested to the same stringent standards is essential to guarantee the continued reliability, safety and performance of the vehicle.

To augment the vehicle's ability, a comprehensive and versatile range of spare parts and accessories are available to fulfill a wide variety of roles, both enhancing and protecting the vehicle in the many tasks to which it can be applied.

Genuine Land Rover parts are the ONLY parts built to original equipment specifications AND approved by Land Rover designers; this means that every single part and accessory has been rigorously tested by the same engineering team that designed and built the vehicle and can therefore be GUARANTEED for twelve months with UNLIMITED MILEAGE.

A full list and description of all accessories is available from your Land Rover dealer.

Always consult a dealer for advice regarding the approval, suitability, installation and use of any parts or accessories before fitting.

WARNING!

The fitting of parts and accessories of inferior quality, or carrying out of non-approved conversions, may be dangerous and could affect the safety of the vehicle and occupants and invalidate the terms and conditions of the vehicle warranty.

For Your Safety

It is extremely hazardous to fit parts or accessories where installation requires the dismantling of, or addition to, either the electrical or fuel systems.

An airbag SRS is fitted to your vehicle, ALWAYS consult your Land Rover dealer before fitting any accessory.

Parts & Accessories

After sales service

The After Sales Parts service is of paramount importance, both in the UK and across the world. In the UK there are over 100 authorised Land Rover dealers, all computer linked for rapid ordering of parts and accessories.

In addition, with franchised representation in over 100 countries worldwide, Land Rover are able to support your vehicle wherever you go. A full list of Land Rover dealers is included in the literature pack.

Only Land Rover dealers are able to provide the full range of recommended parts and accessories that meet our rigorous standards of safety, durability and performance.

Travelling abroad

In certain countries, it is illegal to fit parts which have not been made to the vehicle manufacturer's specification.

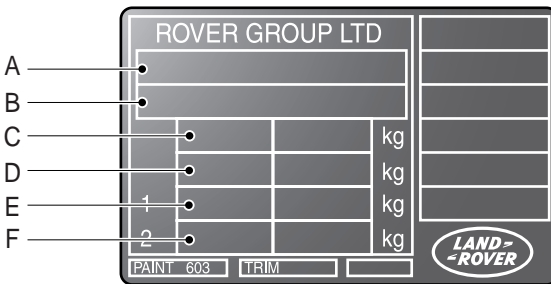
Owners should ensure that any parts or accessories fitted to the vehicle while travelling abroad, will also conform to the legal requirements of their home country.

Vehicle Identification

IDENTIFICATION NUMBERS

When communicating with your dealer, always quote the Vehicle Identification Number (VIN). If your communication concerns the engine or gearbox, it may be necessary to quote these numbers as well.

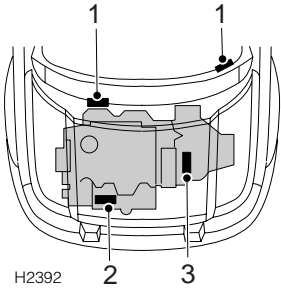
The VIN (and recommended maximum vehicle weights) is stamped on a plate at the foot of the left hand door pillar and also stamped into the bulkhead, at the top, inside the engine compartment. In addition, as a deterrent to car thieves and to help the police, the VIN is stamped into a plate, visible at the bottom left hand corner of the windscreen.



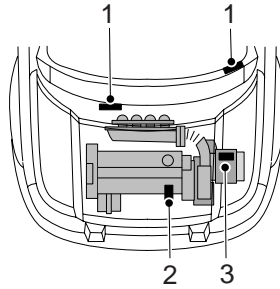
H2390

- A. Vehicle Identification Number (VIN)
- B. Type approval
- C. Gross vehicle weight (where required)
- D. Gross train weight (where required)
- E. Maximum front axle load (where required)
- F. Maximum rear axle load (where required)

Vehicle Identification



Diesel engines



Petrol engines

1. Vehicle identification number (VIN)

(see previous page)

2. Engine number

Petrol models:

Stamped into the front face of the right hand side of the cylinder block.

Diesel models:

Stamped into the front face of the engine block, where shown.

3. Manual gearbox number

On a label attached to the upper face of the gearbox housing.

Maintenance

ROUTINE SERVICING

The safety, reliability and performance of your vehicle will depend partly on how it is maintained.

Maintenance is the owner's responsibility; make sure that all routine services and warranty inspections are carried out according to the manufacturers' recommendations and at the intervals shown in the Service Portfolio book. You will find this book in the literature pack.

The Service Portfolio book also includes a Service Record section, which enables a record to be kept of all the routine services carried out on the vehicle - ensure your dealer signs and stamps the book after each service.

Emission control

Your vehicle is fitted with emission and evaporative control equipment designed to meet specific territorial and legal requirements. You should be aware that unauthorised replacement, modification or tampering with this equipment by an owner or motor vehicle repairer could be unlawful and subject to legal penalties.

In addition, engine settings must not be tampered with. These have been established to ensure that your vehicle complies with stringent exhaust emission regulations. Incorrect engine settings may adversely affect exhaust emissions, engine performance and fuel consumption, as well as causing high temperatures, which could result in damage to the catalytic converter and the vehicle.

OWNER MAINTENANCE

In addition to the routine services and warranty inspections referred to above, a number of simple checks must be carried out more frequently. These are listed alongside. You can carry out these checks yourself and advice is given on the following pages.

Daily Checks

- Operation of lights, horn, direction indicators, wipers, washers and warning lights.
- Operation of seat belts and brakes.
- Look for fluid deposits beneath the vehicle that might indicate a leak.

Weekly Checks

- Engine oil level.
- Coolant level.
- Operate air conditioning (if fitted).
- Brake and power steering fluid levels.
- Screen washer fluid level.
- Tyre pressures and condition.

Maintenance

SPECIAL OPERATING CONDITIONS

When a vehicle is operated in extremely arduous conditions or a dusty, wet or muddy terrain, more frequent attention must be paid to servicing requirements.

For example; if your vehicle experiences deep wading conditions, even DAILY servicing could be necessary to ensure the continued safe and reliable operation of the vehicle.

Contact a Land Rover dealer for advice.

SAFETY IN THE GARAGE

If you need to carry out maintenance, observe the following safety precautions at all times:

- Keep your hands, tools, and clothing away from drive belts and pulleys.
- If the vehicle has been driven recently, DO NOT TOUCH exhaust and cooling system components until the engine has cooled.
- DO NOT TOUCH electrical leads or components while the engine is running, or with the starter switch turned on.
- NEVER leave the engine running in an unventilated area - exhaust gases are poisonous and extremely dangerous.
- DO NOT work beneath the vehicle with the wheel changing jack as the only means of support.
- Ensure sparks and naked lights are kept away from the engine compartment.
- Remove metal wrist bands and jewellery before working in the engine compartment.
- DO NOT allow battery leads or terminals to make contact with tools or metal parts of the vehicle.

Poisonous fluids

Fluids used in motor vehicles are poisonous and should not be consumed or brought into contact with open wounds. These include; battery acid, anti-freeze, brake and power steering fluid, petrol, diesel, engine oil and windscreen washer additives. Obey all instructions printed on labels and containers.

WARNING!

Cooling fans may commence operating up to 4 minutes after the engine is switched off, and continue operating for up to 8 minutes. Keep clear of all fans while working in the engine compartment.

For Your Safety

Any significant or sudden drop in fluid levels, or uneven tyre wear, should be reported to your dealer without delay.

Care Points

Engine oil should be checked more frequently, if the vehicle is driven for prolonged periods at high speeds.

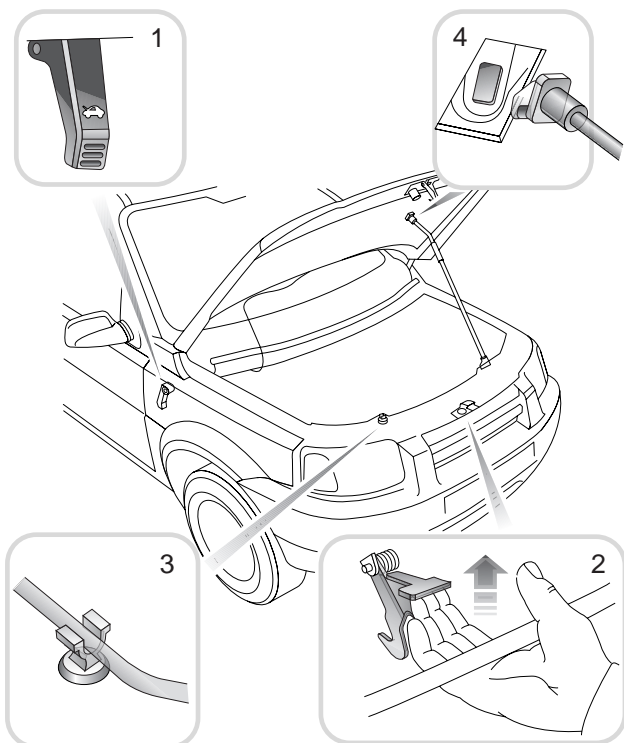
For Your Safety

Prolonged contact with engine oil may cause serious skin disorders, including dermatitis and cancer of the skin. Wash thoroughly after contact.

Environment

It is illegal to pollute drains, water courses or soil. Use authorised waste disposal sites to dispose of used oil and toxic chemicals.

Bonnet Opening



H2328A

1. From inside the vehicle, pull the bonnet release handle.
2. Lift the bonnet safety catch lever and raise the bonnet.
3. Unclip the support stay.
4. Fit the support stay into the cut-out in the underside of the bonnet.

Closing the bonnet

Replace the support stay in its retaining clip, then lower the bonnet, allowing it to drop for the last 30 centimetres approx.

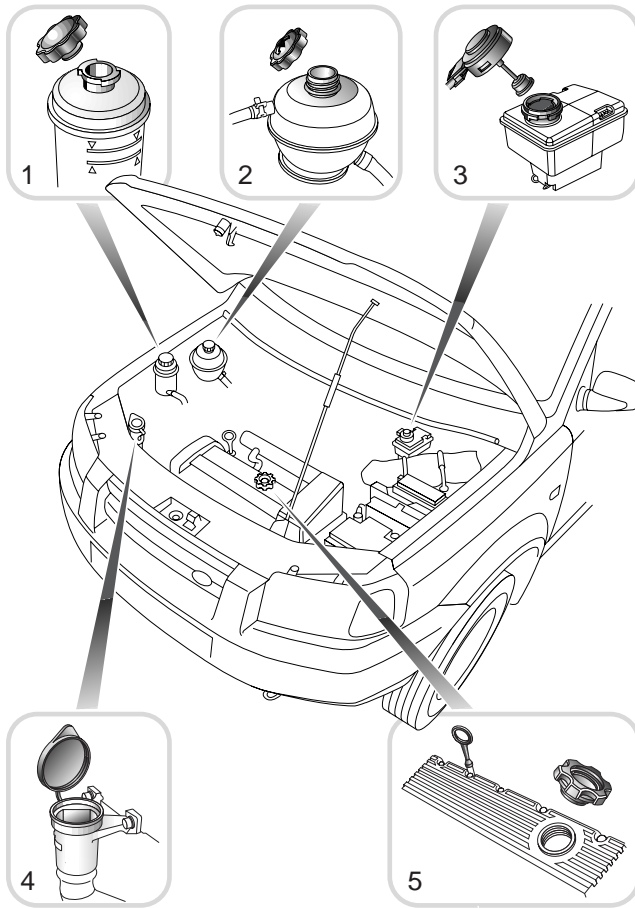
WARNING!

DO NOT drive with the bonnet retained by the safety catch alone.

For Your Safety

After closing the bonnet, check that the lock is fully engaged by attempting to lift the front edge of the bonnet. This should be free from all movement.

Engine Compartment



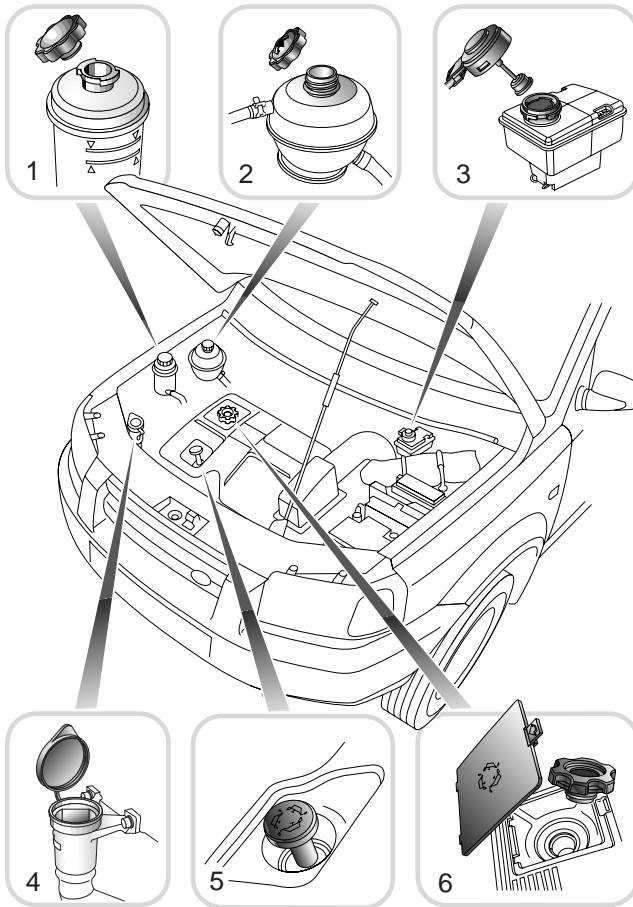
WARNING!
While working in the engine compartment, always observe the safety precautions listed under 'Safety in the garage' on a previous page.

1. Power steering reservoir
2. Cooling system reservoir
3. Brake reservoir
4. Washer reservoir (blue cap)
5. Engine oil filler and dipstick

H2432

Petrol engines

Engine Compartment



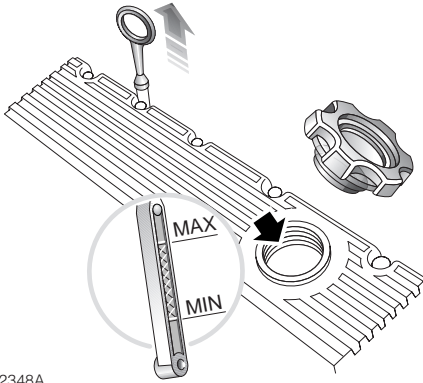
WARNING!
While working in the engine compartment, always observe the safety precautions listed under 'Safety in the garage' on a previous page.

1. Power steering reservoir
2. Cooling system reservoir
3. Brake reservoir
4. Washer reservoir (blue cap)
5. Engine oil dipstick (yellow)
6. Engine oil filler

H2433

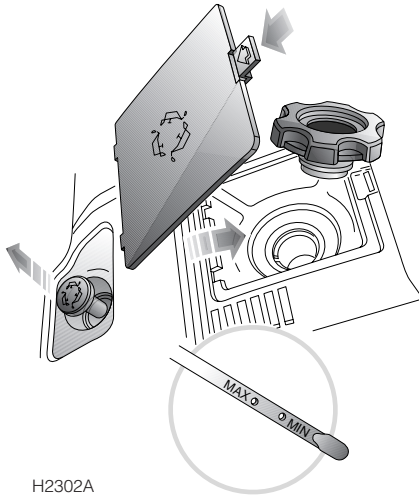
Diesel engines

Engine



H2348A

Petrol engines



H2302A

Diesel engines

Oil specification

For petrol engines:

10W/40 engine oil meeting RES.22.OL.G4 or ACEA A2:96.

For diesel engines:

10W/40 or 15W/40 engine oil meeting RES.22.OL.PD2 or ACEA B2:96

Oils manufactured to the above specifications are suitable for use in temperatures between -20° C to +30° C (if climatic temperature falls outside these limits, seek advice from your dealer).

Mixing oil additives with the engine oil is not recommended and could damage the engine.

Engine

OIL LEVEL CHECK & TOP-UP

Check the oil level weekly, or whenever you fill up with fuel. Ideally the oil level should be checked with the engine cold and the vehicle resting on level ground. If the engine is already warm, then wait for at least two minutes after switching off before checking the level.

1. Withdraw the dipstick and wipe the blade clean.
2. Reinsert the dipstick and withdraw again to check the level.
3. If the oil level is near to the lower mark on the dipstick, unscrew the filler cap and add oil to maintain the level between the upper and lower marks on the dipstick.

NOTE: *On diesel models, it is necessary to open the access flap - lift the release tab (arrowed) and open. Wipe the area around the access flap clean before removing, and remember to refit the flap when topping-up is complete.*

4. Wait for a few minutes and then recheck the level, adding more oil if necessary.
5. Finally, ensure the filler cap is replaced and fully tightened. On diesel models, refit the access flap.

If the oil consumption seems excessive, check the system for leaks and contact your dealer.

Operating Tip

Check the oil level when you fill up with fuel (refuel first, then check the oil - this allows time for the oil to drain into the sump before you check the level).

Care Points

Take care to avoid spilling engine oil onto a hot engine - a fire may result!

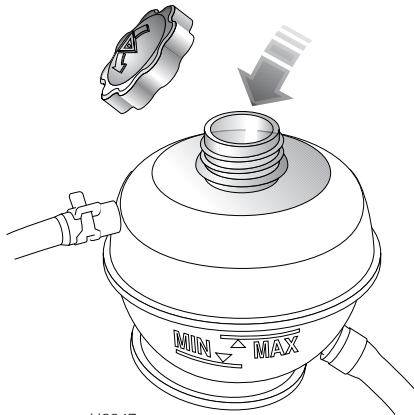
DO NOT fill above the upper mark!

Check the engine oil more frequently if the vehicle is driven at high speeds for prolonged periods.

WARNING!

Driving the vehicle with the engine oil level ABOVE the upper mark, or BELOW the lower mark on the dipstick, will damage the engine.

Cooling System



COOLANT CHECK & TOP-UP

The coolant level should be checked weekly when the cooling system is cold and with the vehicle resting on level ground. If the level is below the 'MIN' mark on the side of the reservoir, top-up to the 'MAX' mark with a mixture of 50% anti-freeze and 50% water.

If the level falls appreciably during a short period, suspect leakage or overheating and arrange for your dealer to examine the vehicle.

If the cooling system is to be topped-up before the vehicle is to be left undriven over the winter, mix the anti-freeze and water together thoroughly BEFORE adding it to the cooling system.

Ensure the cap is tightened fully after top-up is completed.

WARNING!

If anti-freeze contacts the skin or eyes, rinse immediately with plenty of water.

Anti-freeze is poisonous and can be fatal if swallowed - keep out of the reach of children. If accidental consumption of anti-freeze is suspected, seek medical attention immediately.

For Your Safety

DO NOT remove the reservoir cap when the cooling system is hot - escaping steam or water could cause serious injury.

Take care not to spill anti-freeze onto a hot engine - a fire may result.

Care Points

DO NOT add rust inhibitors or other additives to the coolant - these may not be compatible with the coolant or engine components. Anti-freeze will damage painted surfaces.

Cooling System

Anti-freeze

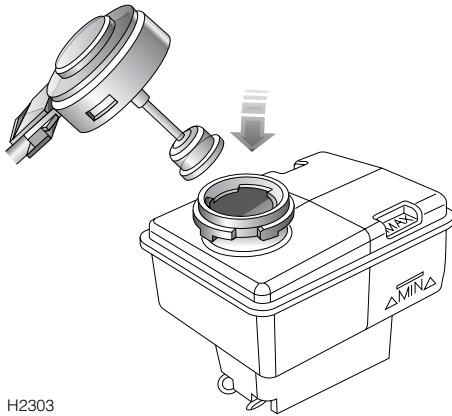
The anti-freeze content of the coolant must be maintained at a minimum of 50% (but must never exceed 60%) all year round. To ensure that the anti-corrosion properties of the coolant are retained, the anti-freeze content should be checked by your dealer once a year and the coolant completely renewed every two years, regardless of mileage.

For maximum corrosion prevention, use Land Rover Parts RTC5779A anti-freeze and summer coolant. If this is unavailable, use an ethylene glycol based anti-freeze which meets specification BS 6580 and BS 5117.

Coolant specification

50% mix of water and *Land Rover Parts RTC5779A* anti-freeze and summer coolant, or any ethylene glycol based anti-freeze which meets specification BS 6580 and BS 5117.

Brakes



BRAKE FLUID CHECK & TOP-UP

Fluid level in the brake reservoir may fall slightly during normal use, but should not drop below the 'MIN' mark. If there is any appreciable drop in level over a short period, consult your Land Rover dealer.

Topping-up

Wipe the cap clean to prevent dirt entering the reservoir. Unscrew the cap and top-up the reservoir to the 'MAX' mark using a recommended fluid.

Use only new fluid from a sealed container (old fluid from uncapped containers or fluid previously bled from the system will have absorbed moisture, and adversely affect braking performance).

NOTE: On manual gearbox vehicles the clutch requires no maintenance. The hydraulic operating system is sealed, making topping-up the reservoir unnecessary.

Fluid specification

- AP New Premium Super DOT 4 brake fluid.
- Castrol Universal DOT 4 brake fluid.

For Your Safety

Brake fluid is highly toxic - keep containers sealed and out of the reach of children. If accidental consumption of brake fluid is suspected, seek medical attention immediately.

If brake fluid should come into contact with the skin or eyes, rinse immediately with plenty of water.

Care Points

Take care not to spill brake fluid onto a hot engine - a fire may result.

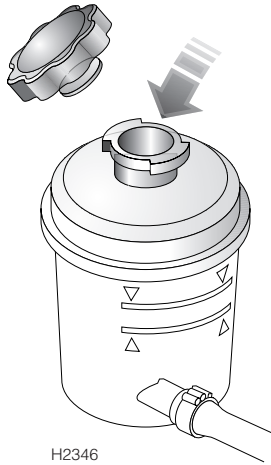
Brake fluid will damage painted surfaces: Soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.

WARNING!

DO NOT drive the vehicle if the fluid level is below the 'MIN' mark.

Brake fluid must be completely replaced every three years or 60,000 km.

Power Steering



POWER STEERING FLUID LEVEL

Check and top-up the fluid level **ONLY** when the engine is cold. You should also ensure that the front wheels are in the straight ahead position before stopping the engine and checking the fluid level.

Wipe the filler cap clean to prevent dirt from entering the reservoir. Rotate the cap half a turn, lift off and top-up the reservoir to the upper level mark with a power steering fluid meeting Dexron IID or III specification.

Do not overfill!

NOTE: *The colour of commercially available fluids may differ from that of the power steering fluid used to fill the system during manufacture. This is not cause for concern.*

Emergency operation

Any large or sudden drop in the fluid level must be investigated by a qualified dealer immediately.

If it can be established that fluid loss is slow, then the reservoir may be topped-up to the upper level mark to enable the vehicle to be driven to the nearest dealer for examination.

Fluid specification

Dexron IID or III specification.

Oils manufactured to the above specifications are suitable for use in temperatures between -20°C to $+30^{\circ}\text{C}$ (if climatic temperature falls outside these limits, seek advice from your dealer).

WARNING!

If the fluid level has dropped below the lower level mark, top-up the reservoir before starting the engine, or damage to the steering pump could result.

For Your Safety

Power steering fluid is highly toxic - keep containers sealed and out of the reach of children. If accidental consumption of power steering fluid is suspected, seek medical attention immediately.

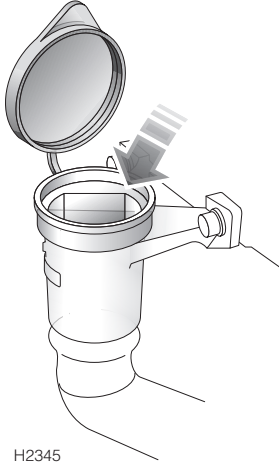
If power steering fluid should come into contact with the skin or eyes, rinse immediately with plenty of water.

Care Points

Take care not to spill power steering fluid onto a hot engine - a fire may result.

Power steering fluid will damage painted surfaces: Soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.

Washers



H2345

WINDSCREEN WASHERS

The windscreen washer reservoir supplies both front and rear screen washer jets. Check the reservoir level at least every week and to prevent freezing in cold weather, top-up with a mixture of water and Land Rover Parts STC8249 screenwash. Preferably mix the recommended quantities of water and screenwash in a separate container before topping-up the system, and always follow the instructions on the container.

Washer jets

The washer jets are set during manufacture and should not require adjustment.

NOTE: The rear screen washer jet is integral with the wiper arm and requires no maintenance.

Care Points

If a washer jet becomes blocked, use a thin wire or needle as a probe to clear the obstruction.

WARNING!

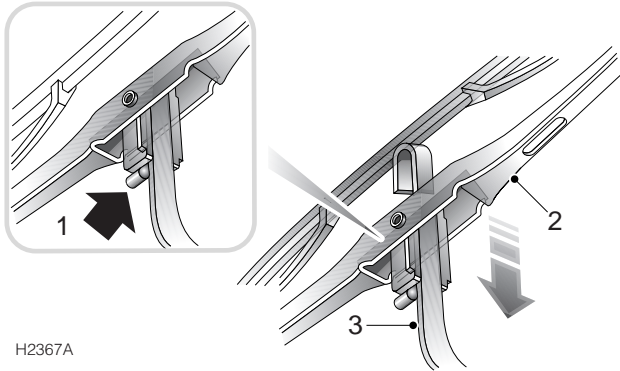
Do not use anti-freeze or vinegar/water solution in the screen washer reservoir - anti-freeze will damage painted surfaces, while vinegar can damage the windscreen washer pump.

WARNING!

Some screenwash products are inflammable, particularly if high or undiluted concentrations are exposed to sparking. Do not allow screenwash to come into contact with naked flames or sources of ignition.

Body panels may suffer discoloration as a result of screenwash spillage. Take care to avoid spillage, particularly if an undiluted or high concentration of screenwash is being used. If spillage occurs, wash the affected area immediately with water.

Wipers



H2367A

WIPER BLADE REPLACEMENT

Front wiper blades

Lift the wiper arm away from the windscreen. With the blade at 90° to the arm as shown, disconnect the blade by pushing in the locking tab (1) and sliding the blade (2) down the arm (3).

Fitting a replacement blade is a reversal of this process; position the new blade assembly on the wiper arm and slide the blade fully towards the hooked end of the arm until it locks in place. Check that the blade is securely locked before returning the wiper assembly to the windscreen.

Only fit replacement wiper blades that are identical to the original specification.

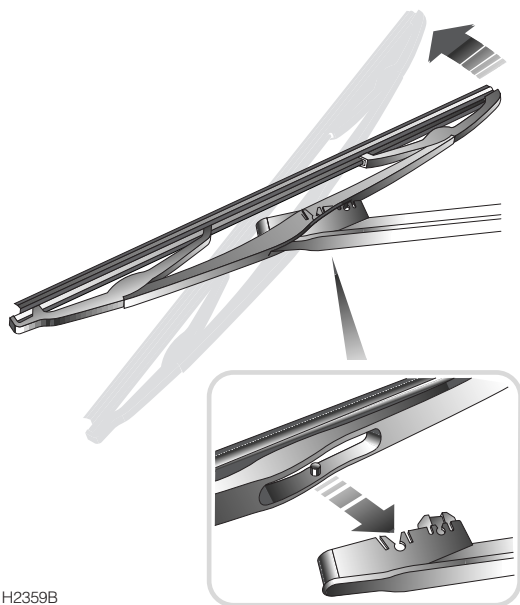
Care Points

Grease, silicone and petrol based products impair the blade's wiping capability. Wash the wiper blades in warm soapy water and periodically check their condition.

If signs of hardness or cracking in the rubber are found, or if the wipers leave streaks or unwiped areas on the windscreen during use, then the wiper blades should be replaced.

Clean the windscreen regularly with an approved glass cleaner and ensure the screen is thoroughly cleaned before fitting replacement wiper blades.

Wipers



H2359B

Rear wiper blade

(if fitted)

Lift the wiper arm away from the rear screen, as far as the spare wheel carrier will allow. Pivot the blade assembly away from the arm (as arrowed), levering against resistance, until the two retaining lugs detach from their slots at the end of the arm. Carefully replace the arm to its stowed position.

To replace, position the wiper arm into the aperture in the middle of the blade assembly, line up the retaining lugs with the corresponding slots in the wiper arm and push firmly into position until the blade clips into place.

Tyres

CARING FOR YOUR TYRES

Always drive with consideration for the condition of the tyres, and regularly inspect the tread and side walls for any sign of distortion (bulges), cuts or wear.

The most common causes of tyre failure when driving on-road are:

- Bumping against kerbs
- Driving with under or over-inflated tyres

Off-road driving places additional wear and tear on the tyres so more frequent and careful inspections of the tyres will be necessary.

If possible, protect tyres from contamination by oil, grease, fuel and other automotive fluids.

Tyre pressures

Correctly inflated tyres will ensure that you enjoy the best combination of tyre life, ride comfort, fuel economy and road handling.

Under-inflated tyres wear more quickly and unevenly, cause a loss of handling on-road, a reduction in fuel economy and an increased likelihood of tyre failure. Over-inflated tyres give a harsher ride, wear unevenly and are more prone to damage.

Check the pressures (including the spare wheel) at least every week (more frequently if regularly driving off-road), preferably when the tyres are cold - be aware that it only takes 1.6 km of driving to warm up the tyres sufficiently to affect the tyre pressures.

Air pressure naturally increases in warm tyres; if it is necessary to check the tyres when they are warm (after the vehicle has been driven for a while, even in cold weather), you should expect the pressures to have increased between 0.3 and 0.4 bar. In this circumstance, DO NOT let air out of the tyres in order to match the recommended pressures.

The recommended pressures for cold tyres are shown in 'Technical Data' later in this handbook.

WARNING!

DEFECTIVE TYRES ARE DANGEROUS! DO NOT drive your vehicle if any tyre is excessively worn or damaged, or is inflated to an incorrect pressure.

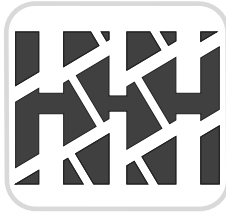
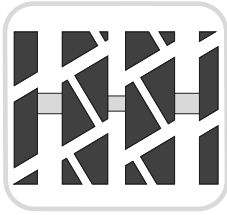
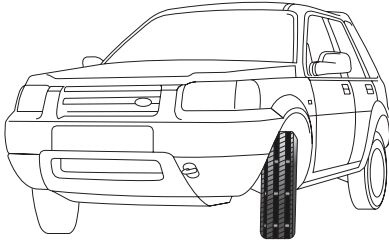
For Your Safety

Incorrect tyres can affect the stability of your vehicle - only fit replacement tyres that are identical to the original specification.

Operating Tip

The spare tyre pressure on vehicles fitted with steel wheels can be checked through the aperture in the wheel cover (provided the wheel is correctly positioned on the carrier).

Tyres



H2377

WARNING!
ALWAYS use the same make and type of radial-ply tyres front and rear. DO NOT use cross-ply tyres.

For Your Safety
DO NOT replace wheels with any type other than genuine Land Rover parts. Wheels and tyres are designed for both off-road and normal road use and have a very important influence on vehicle handling. Alternative wheels, which do not meet original equipment specifications, should not be fitted.

Care Points
Keep the valve caps screwed down firmly - they prevent dirt from entering the valve. Check the valve for leaks (listen for a tell-tale hissing) when you check the tyre pressure.

Tyre wear indicators

The tyres on your vehicle have wear indicators moulded into the tread pattern at several points around the circumference. When the tread has worn down to 1.6 mm, the indicators will come to the surface of the tread pattern, producing the effect of a continuous band of rubber across the width of the tyre.

The indicators provide warning that there is insufficient tread remaining, to provide good traction, particularly on wet roads. For safety, a tyre **MUST** be replaced as soon as a wear indicator becomes visible.

If tyre wear is uneven (on one side of the tyre only) or becomes abnormally excessive, the wheel alignment should be checked by your dealer.

Punctured tyres

Your vehicle is fitted with tubeless tyres, which will not normally leak if penetrated by a sharp object, provided it remains in the tyre. If you are aware of this occurring, reduce speed immediately and drive with caution until the spare wheel can be fitted. Remember, punctured or damaged tyres must be permanently repaired or replaced as soon as possible. **DO NOT DRIVE WITH A FLAT TYRE!**

Tyres

Replacement tyres

For your own safety, **ONLY** fit replacement tyres that are identical to the original specification shown in 'Technical Data' later in this handbook. In addition, ensure that the load rating shown on the side wall of the tyre, is the same as that of the original equipment. Contact your Land Rover dealer for further information or assistance.

Ideally, tyres should be replaced as sets of four, but if this is not possible, replace the tyres as axle sets. When replacing tyres in axle sets, always fit the new tyres to the rear axle.

Always have the wheels and tyres re-balanced after replacing.

Snow chains

Snow chains can only be fitted to vehicles equipped with 195/80 x 15 tyres.

Unsuitable snow chains could damage the tyres, wheels, suspension, brakes or bodywork of your vehicle. Only fit snow chains that are recommended by a Land Rover dealer and have been approved for use on your vehicle.

Land Rover approved snow chains are designed for on-road use in extreme snow conditions only, and are not recommended for off-road use. In use, always observe the following precautions:

- **ONLY** Land Rover approved chains may be fitted.
- Chains can be fitted to the front wheels only, or to all four wheels.
- Always adhere to the snow chain fitting and retensioning instructions and the speed limitations for varying road conditions. **NEVER** exceed 50 km/h.
- Avoid tyre damage and excessive chain wear by removing snow chains when driving on snow free roads.

For further information about approved snow chains, consult your Land Rover dealer.

WARNING!

DO NOT fit unapproved snow chains - this could damage brake components.

Cleaning & Vehicle Care



H2326

WASHING YOUR VEHICLE

Cleaning the paintwork

If the vehicle is particularly dirty, use a hose to flush grime and grit from the painted surface, prior to washing. Then, wash the vehicle using cold or lukewarm water containing a good quality wash and wax shampoo. Always use plenty of water to ensure that grit is flushed from the surface and not ground into the paintwork. After washing, rinse the vehicle with clean water and dry off with a chamois leather.

NOTE: On 3-door vehicle fitted with composite Targa roof panels, do not apply wax polish to the panels, the wax will become ingrained in the textured finish.

Cleaning the underside

During winter months if salt has been used on the roads, use a hose to wash the underside, paying particular attention to wheel arches and panel seams, and to removing accumulations of mud.

Removing tar spots

Use white spirit to remove tar spots and stubborn grease stains. Then wash immediately with soapy water to remove all traces of the spirit.

WARNING!

Some high pressure cleaning systems will penetrate door, window and sunroof seals, and damage lock mechanisms. DO NOT aim water jets directly at components that might be easily damaged.

Care Points

- DO NOT use hot water to wash the vehicle.
- DO NOT use detergents or washing up liquid.
- In hot weather, DO NOT wash the vehicle in direct sunlight.
- If using a hose, DO NOT direct the water directly at window, door or sunroof seals, at the soft-back canopy (if fitted), or through wheel apertures onto brake components.
- If using an automatic car wash (5-door models only), remove the radio aerial before entering the car wash. DO NOT wash a 3-door model in an automatic car wash.

Engine compartment

WARNING!

DO NOT use a high pressure hose to clean the engine compartment - damage to the vehicle's electronic systems may occur.

Cleaning & Vehicle Care

Cleaning the softback canopy and hardback

- Use a soft brush to remove dust and flaking dirt from the canopy or hardback (not the windows), then soak with a mild soap and water solution to soften encrusted dirt and remove stains, prior to washing.
- Wash using a mild soap and water solution, before rinsing the canopy or hardback with clean lukewarm or cold water. Rinse until all traces of soap are removed.
- Never use spirit, petrol or chlorine based cleaning agents, or wash/wax compounds to clean the canopy, hardback and windows - wax polishes will become ingrained in the textured finish.
- Never use an automatic car wash, or a high pressure hose.
- Do not aim jets of water at zips or seals.
- Ensure the canopy is dry before folding or removing.
- Improper cleaning and lack of care may cause damage to the canopy and window panels, resulting in water penetration.

Cleaning the softback or hardback windows

- DO NOT use brushes, solvents, petrol, hot water, strong detergents or abrasive cleaners on the window panels.
- Wipe off any dust or dirt using a damp soft cloth.
- DO NOT wipe the window panels when they are dry.
- Wash the windows with a clean, grit-free sponge or cloth and a mixture of a mild dishwashing detergent and cold or lukewarm water. Rinse the window panels thoroughly and wipe with a soft moist cloth.
- Remove frost, ice and snow using lukewarm water - do not use a scraper. Take care when clearing ice or snow from the window panels, as they are easily scratched and could crack at low temperatures.
- Do not put adhesive backed material (badges, stickers etc) onto the window panels - this may result in damage and discolouration.

WARNING!

***DO NOT use abrasive or solvent cleaners on the canopy or hardback and especially NOT on the window panels.
Use only mild detergents.***

Care Points

The removable window panels fitted to the softback, are susceptible to scratching from the effects of dirt and grit. For this reason, it is important to wash them frequently.

Always stow the window panels in the bag provided when not in use - ensure the panels are dry before stowing.

Cleaning & Vehicle Care

Protecting paint damage

After washing, examine the paintwork for damage. Treat paint chips and scratches with a Land Rover paint touch-up pencil. If the damage has revealed bare metal, use a coloured primer first, then apply the base coat and finish off with a lacquer pencil, if appropriate. Carry out this treatment after washing but before polishing or waxing.

More extensive damage to paint or bodywork must be repaired in accordance with the manufacturer's recommendations. Ask your Land Rover dealer for advice.

Polishing

Occasionally treat the paint surface with an approved polish containing the following properties:

- Very mild abrasives to remove surface contamination without removing or damaging the paint.
- Filling compounds that will fill scratches and reduce their visibility.
- Wax to provide a protective coating between the paint and the elements.

Wiper blades

Wash in warm soapy water. DO NOT use spirit or petrol based cleaners.

Windows and mirrors

Regularly clean all windows, inside and out, using an approved glass cleaner.

Windscreen:

In particular, clean the outside of the screen with glass cleaner after washing the vehicle with wash and wax products, and before fitting new wiper blades.

Rear screen:

Clean the inside with a soft cloth, using a side to side motion to avoid damaging the heating elements. DO NOT scrape the glass or use abrasive cleaners - this will damage the heating elements.

Mirrors:

Wash with soapy water. Use a plastic scraper to remove ice. DO NOT use abrasive cleaners or metal scrapers.

Care Points

- If possible, avoid applying polish or wax products to window glass or rubber seals.
- DO NOT scrape or use abrasive cleaners on the inside of the rear screen - this will damage the heating elements.
- DO NOT use car polish containing coarse abrasives - these will remove the paint film and damage the gloss finish.

Cleaning & Vehicle Care

CLEANING THE INTERIOR

Plastic materials

Clean with diluted upholstery cleaner and wipe with a damp cloth.

Leather materials

Clean leather seats and trim with warm water and a non-detergent soap. Dry and polish the leather with a dry, clean, lint-free cloth.

Carpet and fabrics

Clean with diluted upholstery cleaner - test a concealed area first.

Airbag module covers

To prevent damage to the airbag SRS, the steering wheel and area of the fascia panel containing the passenger airbag should ONLY be cleaned sparingly with a damp cloth and upholstery cleaner.

DO NOT allow these areas to be flooded with liquid and DO NOT use petrol, detergent, furniture cream or polishes.

Instrument pack, clock and radio

Clean with a dry cloth - DO NOT use cleaning fluids or sprays.

Seat belts

Extend the belts, then use warm water and a non-detergent soap to clean. Allow the belts to dry naturally; DO NOT retract them or use the vehicle until they are completely dry.

Fascia mounted rubber mats

The mats are removable for cleaning - replace with care.

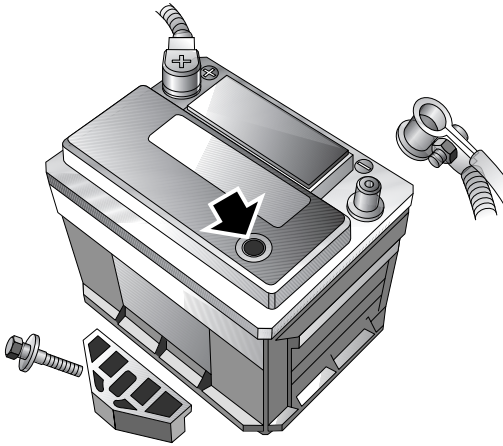
Care Points

- DO NOT polish plastic fascia components - these should remain non-reflective.
- DO NOT use bleaches, dyes or cleaning solvents on seat belts.

RECOMMENDED VEHICLE CARE PRODUCTS

De-icer	STC717
Wheel cleaner	STC718
Glass cleaner	STC719
Bumper cleaner	STC721
Shampoo	STC722
Exterior wax polish	STC723

Battery



H2355A

Battery maintenance

The battery is designed to be maintenance free, so topping-up is unnecessary. On the top of the battery there is a battery condition indicator (arrowed in illustration). Examine the indicator periodically to check the battery's condition. When the indicator shows:

- GREEN - the battery is in a good state of charge.
- DARK (turning to black) - the battery needs charging.
- CLEAR (or light yellow) - the battery must be replaced. Do not charge the battery or jump start the car in this condition.

If the green dot is missing, the battery needs charging.

WARNING!

Batteries contain sulphuric acid, which is both corrosive and poisonous. If spillage occurs:

On clothing or the skin - remove any contaminated clothing immediately, flush the skin with large amounts of water, and seek medical attention urgently.

In the eyes - flush with clean water immediately for at least 15 minutes. Seek medical attention urgently.

Swallowing battery acid can be fatal unless IMMEDIATE action is taken - seek medical attention urgently.

Operating Tip

When checking the battery condition indicator:

- If necessary, clean the battery top to ensure a clear view. Use a torch if natural light is poor.
- If the indicator shows clear or yellow, tap the indicator with a screwdriver to disperse any air bubbles. If the indicator colour is unchanged, the battery must be replaced.

Battery

Battery removal and replacement

Before disconnecting the battery, disarm the alarm, and ensure that the starter switch and all electrical equipment is turned off.

To remove; disconnect the negative ('-') cable first and then the positive ('+') cable. When reconnecting, connect the positive cable first and then the negative cable. Do not allow the battery terminals to make contact with metal parts of the car.

To release the battery from the car, undo the bolt and remove the battery clamping plate (see illustration).

Replacement batteries

Only fit a replacement battery of the same type and specification as the original - other batteries may vary in size or have different terminal positions which could cause a fire hazard when connected to the car's electrical system.

For Your Safety

Remove any metal wrist bands and jewellery before working in the engine compartment.

Do not allow the battery terminals or leads to make contact with tools or metal parts of the car.

Care Points

NEVER run the engine with the battery disconnected, or disconnect the battery while the engine is running.

DO NOT reverse the polarity of the battery - the electrical system may be damaged if the battery leads are connected to the wrong terminals.

Keep the battery upright at all times - damage will be caused if the battery is tilted more than 45 degrees.

Battery

Battery charging

As the battery ages, it may not retain its charge as effectively as when it was new. Cars that are used infrequently, or are used excessively for short journey motoring, or operation in cold climates, may need the battery to be charged regularly. Always check the battery condition indicator before charging.

Batteries generate explosive gases, contain corrosive acid and produce levels of electric current sufficient to cause serious injury. While charging, always heed the following precautions.

- Before charging, disconnect and remove the battery from the car - charging the battery with the cables connected may damage the car's electrical system.
- Make sure the battery charger leads are securely clamped to the battery terminals BEFORE switching on the battery charger. Do not move the leads once the charger is switched on.
- Shield your eyes, or avoid leaning over the battery.
- Keep the area around the top of the battery well ventilated.
- Do not allow naked lights near the battery (batteries generate inflammable hydrogen during and after charging).
- When charging is finished, switch off the battery charger BEFORE disconnecting the leads from the battery terminals.

After charging, leave the battery for one hour before returning it to the car - this will allow time for explosive gases to disperse, thereby minimising the risk of fire or explosion.

WARNING!

DO NOT charge the battery if it is connected to the car - this may seriously damage the car's electrical system.

DO NOT charge the battery if it is suspected of being frozen.

DO NOT attempt to charge the battery if the battery condition indicator is clear or light yellow.

Operating Tip

Be aware that a battery will take longer to charge in a cold environment.

The battery will be sufficiently charged once the battery condition indicator shows GREEN.

Environment

Used batteries can be recycled. They are also hazardous. Seek advice about disposal from your Land Rover dealer or local authority.

Battery

THE EFFECTS OF BATTERY DISCONNECTION

Some of the car's electrical systems will be affected if the battery is disconnected. These are listed below, together with the symptoms you might experience once the battery is reconnected and the actions required to restore operation.

Radio/cassette player

The word 'CODE' will appear in the display and the set will fail to operate. To restore operation, enter the security code using the procedure described in the 'In-car Entertainment' book.

Taildoor glass

If the battery has been disconnected, the taildoor glass will need to be recalibrated. If the alarm was armed when the battery was disconnected (or discharged), disarm the alarm after reconnection - the taildoor glass will fully lower. This will happen automatically if the alarm was in a disarmed state when the battery was disconnected.

After battery reconnection, fully raise the taildoor glass (if the glass is not fully raised, an error 'beep' will sound) - the taildoor glass is now recalibrated.

Alarm system

The alarm system will automatically reset to the status in operation prior to battery disconnection, but the handset will need to be re-synchronised (see '*Locks & Alarm*').

Off-Road Driving

BASIC OFF-ROAD TECHNIQUES

These basic driving techniques are an introduction to the art of off-road driving and do not necessarily provide the information needed to successfully cope with every off-road situation.

We strongly recommend that owners who intend to drive off-road frequently, should seek as much additional information and practical experience as possible.

Before driving off-road, it is important that you check the condition of the wheels and tyres and that the tyre pressures are correct. Worn or incorrectly inflated tyres will adversely affect the performance, stability and safety of the vehicle.

Gear selection

Correct gear selection is possibly the single most important factor for safe and successful off-road driving. While only experience will tell you which is the correct gear for any section of ground, the following basic rules apply:

- NEVER change gear or de-clutch while negotiating difficult terrain - the drag on the wheels may cause the vehicle to stop when the clutch is depressed and restarting may be difficult.
- Generally, and especially where level but slippery or soft ground conditions prevail, the higher the gear you select the better.
- When descending steep slopes, always select 1st (or reverse if descending backwards) and engage Hill Descent Control (HDC) - if fitted.

Slipping the clutch

Use of excessive clutch slip to prevent the engine stalling will result in premature clutch wear. Always select a gear low enough to enable the vehicle to proceed without needing to slip the clutch.

Care Points

DO NOT drive with your foot resting on the clutch pedal; driving across uneven terrain could cause you to inadvertently depress the clutch, resulting in loss of control of the vehicle.

DO NOT drive if the fuel level is low - undulating ground and steep inclines could cause fuel starvation to the engine and consequent damage to the catalytic converter.

For Your Safety

- Off-road driving can be hazardous - DO NOT take unnecessary risks.
- Be prepared for emergencies at all times.
- Familiarise yourself with the recommended driving techniques in order to minimise risk to yourself, your vehicle and your passengers.

WARNING!

Always wear a seat belt for personal protection in all off-road driving situations.

Off-Road Driving

Braking

As far as possible, vehicle speed should be controlled through correct gear selection. Application of the brake pedal should be kept to an absolute minimum. Unless hill descent control (HDC) and ABS have been fitted, any braking on wet, muddy or loose surfaces is likely to cause one or more wheels to lock - the resultant slide could prove dangerous.

Hill descent control (HDC) - if fitted

During a descent, if engine braking is insufficient to control the vehicle speed, HDC (if selected) automatically operates the brakes to slow the vehicle and maintain a speed relative to the accelerator pedal position.

When driving off-road, HDC can be permanently engaged, to ensure that control is maintained whenever 1st or reverse gears are selected. ABS and traction control are still fully operational and will assist if the need arises.

NOTE: *With HDC selected, gear changes can be carried out in the normal way.*

Use of engine for braking

For vehicles NOT fitted with HDC; before descending steep slopes, stop the vehicle at least its length before the descent, select 1st gear.

While descending the slope it should be remembered that the engine will provide sufficient braking effort to control the rate of descent and that the brakes should not be applied.

Accelerating

Use the accelerator with care - any sudden surge of power may induce wheel spin and result in loss of control of the vehicle.

Off-Road Driving



Ground clearance

Don't forget to allow for ground clearance beneath the body and under the front and rear bumpers (see 'Dimensions' in 'Technical Data'). Note that the suspension arms are situated below the body. Note also that there are other parts of the vehicle which may come into contact with the ground - take care not to ground the vehicle.

Ground clearance is particularly important at the bottom of steep slopes, or where sudden changes in the slope of the ground are experienced.

ALWAYS attempt to avoid obstacles that may foul the underside of the vehicle.

Loss of traction

On vehicles not fitted with Traction control, if the vehicle is immobile due to loss of wheel grip, the following hints could be of value:

- On vehicles not fitted with traction control, avoid prolonged wheel spin; this will only make matters worse.
- Remove obstacles rather than forcing the vehicle to cross them.
- Clear clogged tyre treads.
- Reverse as far as possible, then attempt an increased speed approach - additional momentum may overcome the obstacle.
- Brushwood, sacking or any similar material placed in front of the tyres will improve tyre grip.

For Your Safety

DO NOT hold the steering wheel with your thumbs inside the rim - a sudden 'kick' of the wheel as the vehicle negotiates a rut or boulder could seriously injure them.

Always grip the wheel on the outside of the rim (as shown alongside) when traversing uneven ground.

IMPORTANT

Servicing requirements

- *Vehicles operated in arduous conditions, particularly on dusty, muddy or wet terrain, and vehicles undergoing frequent or deep wading conditions will require more frequent servicing (see 'Maintenance' and contact a Land Rover dealer for advice).*

Off-Road Driving

DRIVING ON SOFT SURFACES & DRY SAND

The ideal technique for driving on soft ground and dry sand requires the vehicle to be kept moving at all times - soft sand causes excessive drag on the wheels resulting in rapid loss of motion once driving momentum is lost. For this reason, gear changing should be avoided.

Stopping on soft ground, in sand or on an incline

If you do stop the vehicle, remember: Starting on an incline or on soft ground or sand may be difficult. Always park on a firm level area, or with the vehicle facing downhill.

If forward motion is lost, avoid excessive use of the throttle - this will cause wheel spin and tend to dig the vehicle into the sand. Clear sand from around the tyres and ensure that the body is not bearing on the sand before again attempting to move.

If the wheels have sunk, use an air bag lifting device or high lift jack to raise the vehicle, and then build up sand under the wheels so that the vehicle is again on level ground. If a restart is still not possible, place sand mats or ladders beneath the wheels.

DRIVING ON SLIPPERY SURFACES

(ice, snow, mud, wet grass)

- Select the highest gear possible.
- Drive away using the minimum throttle possible.
- Drive slowly at all times, keeping braking to a minimum and avoiding violent movements of the steering wheel.

IMPORTANT

After driving off-road:

Before rejoining the public highway, or driving at speeds above 40 km/h consideration should be given to the following:

- ***Wheels and tyres must be cleaned of mud and inspected for damage.***
 - ***If wheels and tyres are not cleaned properly, damage to the wheels, tyres, braking system and suspension components could occur.***
 - ***Brake discs and calipers should be examined and any stones or grit that may affect braking efficiency, removed.***
-

Off-Road Driving

CLIMBING STEEP SLOPES

Select 1st gear and engage hill descent control (HDC) - if fitted.

ALWAYS follow the fall line of the slope - travelling diagonally could cause the vehicle to slide broadside down the slope.

If the surface is loose or slippery, use sufficient speed in the highest practical gear to take advantage of your vehicle's momentum - hill descent control only operates in 1st and reverse gears, but ABS and traction control (where fitted) will still be operational when required. However, too high a speed over a bumpy surface may result in a wheel lifting, causing the vehicle to lose traction if traction control is not fitted. In this case try a slower approach.

If the vehicle is unable to complete a climb, do not attempt to turn it around while on the slope. Instead, adopt the following procedure to reverse downhill to the foot of the slope.

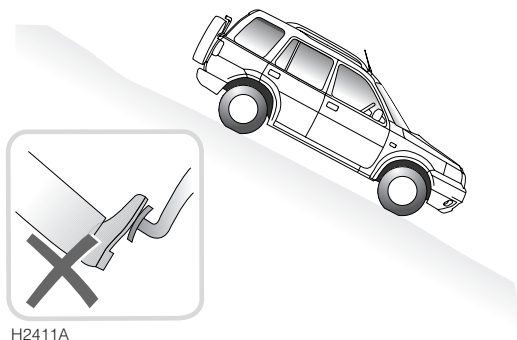
1. Hold the vehicle stationary using both foot and hand brakes.
2. Restart the engine if necessary.
3. Engage reverse gear and HDC (if fitted).
4. Release the handbrake. Then release the foot brake and clutch simultaneously and allow the vehicle to reverse down the slope.
5. Unless it is necessary to stop the vehicle to negotiate obstructions, DO NOT apply the brake or clutch pedal during the descent.
6. If HDC is not fitted or has not been selected and the vehicle begins to slide, accelerate slightly to allow the tyres to regain grip (on vehicles with HDC operating, acceleration is automatically controlled to ensure traction).

When the vehicle is back on level ground or where traction can be regained, a faster approach will probably enable the hill to be climbed. However, DO NOT take unnecessary risks, if the hill is too difficult to climb, find an alternative route.

WARNING!

DO NOT attempt to reverse down the slope without the engine running.

Off-Road Driving



H2411A

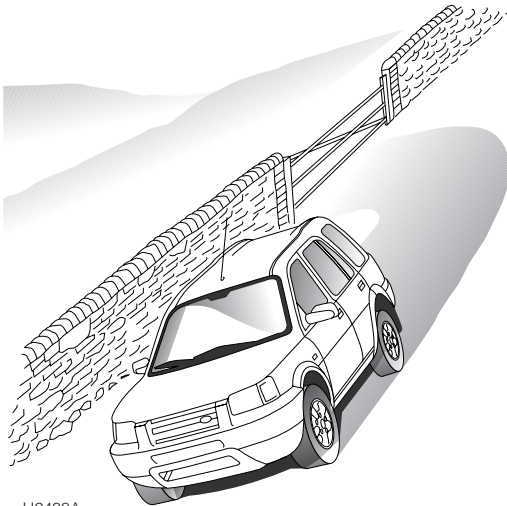
WARNING!

Failure to follow these instructions may cause the vehicle to roll over.

DESCENDING STEEP SLOPES

1. Stop the vehicle at least a vehicle length before the slope and engage 1st gear and hill descent control (HDC) - if fitted.
2. Unless it is necessary to stop the vehicle in order to negotiate obstructions, **DO NOT** touch the brake or clutch pedals during the descent - the engine (or HDC -if fitted) will limit the speed, keeping the vehicle under control. If HDC is not fitted and the vehicle begins to slide, accelerate gently to maintain directional stability (this occurs automatically with HDC) - **DO NOT** use the brakes or attempt to change gear.
3. Once level ground is reached, select a suitable gear for the next stage of your journey.

Off-Road Driving



H2408A

WARNING!

Failure to follow these instructions may cause the vehicle to roll over.

TRAVERSING A SLOPE

Before crossing a slope, **ALWAYS** observe the following precautions:

- Check that the ground is firm and not slippery.
- Check that the wheels on the downhill side of the vehicle are not likely to drop into depressions in the ground and that the uphill wheels will not run over rocks, tree roots or similar obstacles that could suddenly increase the angle of tilt.
- Ensure that passenger weight is evenly distributed, that all roof rack luggage is removed, and that all other luggage is properly secured and stowed as low as possible. Always remember; any sudden movement of the load could cause the vehicle to overturn.
- Rear seat passengers should sit on the uphill side of the vehicle or, in extreme conditions, should vacate the vehicle until the sloping ground has been safely negotiated.

NEGOTIATING A 'V' SHAPED GULLY

Observe extreme caution! Steering up either of the gully walls could cause the side of the vehicle to be trapped against the opposite gully wall.

Off-Road Driving

CROSSING A RIDGE



H2407A

Operating Tip

Cross ridges by approaching at a right angle so that both front wheels cross the ridge together - on vehicles NOT fitted with traction control, an angled approach could cause traction to be lost through diagonally opposite wheels lifting from the ground at the same time.

CROSSING A DITCH



H2409A

Operating Tip

Cross ditches at an angle so that three wheels always remain in contact with the ground (if approached head on, both front wheels will drop into the ditch together, possibly resulting in the body and front bumper being trapped on opposite sides of the ditch).

DRIVING IN EXISTING WHEEL TRACKS

As far as possible, allow the vehicle to steer itself along the bottom of the ruts. However, always keep a light hold of the steering wheel to prevent it spinning free.

Particularly in wet conditions, if the steering wheel is allowed to spin free, the vehicle may appear to be driving straight ahead in the ruts, but in actual fact (due to the lack of traction caused by wet ground, is unknowingly on full left or right lock. Then, when level ground is reached, or if a dry patch of ground is encountered, the wheels will find traction and cause the vehicle to suddenly veer to the left or right.

Off-Road Driving

WADING

If the water is likely to exceed 0,4 metre, the following precautions should be observed:

- Fix a plastic sheet in front of the radiator grille to prevent water from soaking the engine and mud from blocking the radiator.
- Ensure that the silt bed beneath the water is free of obstacles and is firm enough to support the vehicle's weight and provide sufficient traction.
- Ensure that the engine air intake is clear of the water level.
- Select 1st gear and maintain sufficient throttle to prevent the engine from stalling. This is particularly important if the exhaust pipe is under water.
- Drive slowly into the water and accelerate to a speed which causes a bow wave to form, then maintain that speed.

Keep the doors fully closed at all times.

After wading

- Drive the vehicle a short distance and apply the foot brake to check that the brakes are fully effective.
- DO NOT rely on the handbrake to hold the vehicle stationary until the brakes are thoroughly dried out; in the meantime, leave the vehicle parked in gear.
- Remove any protective covering from in front of the radiator grille.
- If the water was particularly muddy, remove any blockages (mud and leaves) from the radiator to reduce the risk of overheating.
- If deep water is regularly negotiated, check the transmission oils for signs of water contamination - contaminated oil can be identified by its 'milky' appearance. In addition, check the air filter element for water ingress and replace if wet, consult your dealer if necessary.

WARNING!

The maximum advisable wading depth is 0.4 metre.

Severe electrical damage may occur if the vehicle remains stationary for any length of time when the water level is above the door sills.

Care Points

Vehicles required to undergo frequent or deep wading conditions will require more frequent servicing. See 'Maintenance' and contact a Land Rover dealer for advice.

Technical Data

Engine 1.8 petrol

Fuel.....	UNLEADED 95 RON minimum to EN 228 specification
Capacity	1796 cm ³
Firing order.....	1-3-4-2
Idle speed.....	775 ± 50 rev/min
Bore	80 mm
Stroke.....	89.3 mm
Number of cylinders.....	4 in-line
Compression ratio	10.5:1
Ignition system.....	MEMS 1.9 breakerless, electronic
Spark plugs	Champion RC8 PYP
Spark plug gap	0.85 mm ± 0.1

Engine - 2.0 diesel

Fuel.....	Diesel to EN 590 specification
Capacity	1994 cm ³
Firing order.....	1-3-4-2
Idle speed.....	875 ± 50 rev/min
Bore	84.5 mm
Stroke.....	88.9 mm
Number of cylinders.....	4 in-line
Compression ratio	19.5:1

Electrical

Battery type:	
Petrol models.....	Sealed for life - Delco Freedom type 011
Diesel models.....	Sealed for life - type 096
Rating	
Petrol models.....	55 amp/hr
Diesel models.....	75 amp/hr
Voltage and polarity	12 V, negative (-) earth

Technical Data

Wheels & tyres

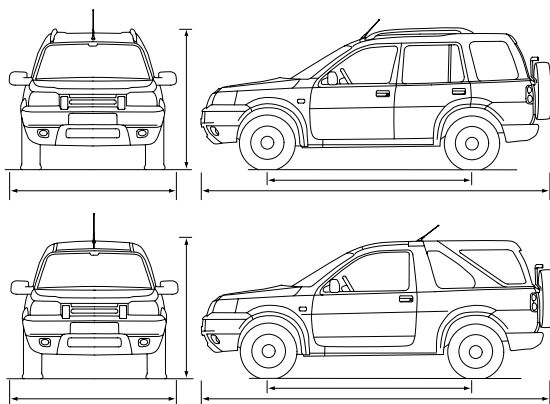
Wheel size and type	
Steel wheels	5.5J x 15
Alloy wheels	
15" wheels	5.5J x 15
16" wheels	6.0J x 16
Road wheel nut torque	115 Nm
Spare wheel nut torque.....	45 Nm
Tyre size	
5.5J x 15.....	195/80 R15
(steel & alloy)	'Multi terrain' tyre
6.0J x 16.....	215/65 R16
(alloy)	'Multi terrain' tyre
Tyre pressures - all models (up to 4 passengers and luggage)	
Front	1.8 bar
Rear.....	1.8 bar
Tyre pressures - all models (maximum Gross Vehicle Weight and towing)	
Front	2.1 bar
Rear.....	2.1 bar

Capacities

Fuel tank (usable)	59 litre
Engine oil (and filter) refill:	
Petrol engines	4.5 litre
Diesel engines	4.5 litre
Engine oil (and filter) fill from dry:	
Petrol engines	4.8 litre
Diesel engines	4.8 litre
Gearbox fill from dry.....	2.2 litre
Cooling system fill from dry	
Petrol engines	5.5 litre
Diesel engines	7.1 litre
Washer reservoir	4.0 litre

Technical Data

Dimensions



H2391

Overall length (inc. spare).....	4.368 - 4.394 m
Overall width (inc. mirrors).....	2.068 m
Overall height*	1.708 m
Overall height* (inc. roof bars & cross rails)	
5 door	1.828 m
3 door	1.808 m
Wheelbase	2.557 m
Track	
Front	1534 mm
Rear	1545 mm
Steering wheel turns lock to lock	3.16
Castor angle*	3° 30' ± 1°
Swivel pin inclination	12° 18'
Turning circle	11.6 m
Wheel alignment	
Front (toe out)	20' ± 15"
Rear (toe in)	20' ± 15"
Ground clearance* (minimum).....	186 mm
Max wading depth	400 mm
Max approach angle*	30.5°
Max departure angle (with towbar)*	24°
Max departure angle (without towbar)*	33.9°
Maximum breakover angle*	24°

* At EEC kerb weight

Technical Data

Weights

Approximate unladen vehicle weight (full fuel tank, excluding options):

Petrol models 1380 - 1425 kg
Diesel models 1480 - 1525 kg

Max gross vehicle weight

Petrol models 1960 kg
Diesel models 2050 kg

Max rear axle load:

Petrol models 1120 kg
Diesel models 1120 kg

Max front axle load

Petrol models 1050 kg
Diesel models 1050 kg

Towing weights

Max trailer weight

Petrol models 2000 kg
Diesel models 2000 kg

Max nose weight*

Petrol models 140 kg
Diesel models 140 kg

Gross train weight

(maximum weight of vehicle plus trailer)

Petrol models 3760 kg
Diesel models 3850 kg

Max roof rack load 75 kg

NOTE: If the trailer weight exceeds 1800 kg, the vehicle payload must be restricted (ie. to less than the Gross Vehicle Weight) to ensure the loaded combination is within the Gross Train Weight limit.

* To improve stability, it is recommended that you adjust the nose weight to the maximum limit, when loading to the maximum trailer weight (also see note above).

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