RANGE ROVER

Owner's Handbook

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

Owner's Handbook

This handbook covers all current versions of the Range Rover petrol and diesel models and, together with the Service Portfolio book, provides all the information you need to derive maximum pleasure from owning and driving your new vehicle.

For your convenience, the handbook is divided into sections, each dealing with a different aspect of the vehicle. These are listed on the contents page and you will find it worthwhile to take a little time to read each one, and get to know your Range Rover as soon as you possibly can. The more you understand before you drive, the greater the satisfaction once you are seated behind the steering wheel.

IMPORTANT

The specification of each 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 particular vehicle.

Contents

BEFORE YOU DRIVE

Your vehicle has a higher ground clearance and, hence, a higher centre of gravity than ordinary passenger cars. This will result in different handling characteristics. Inexperienced drivers should take additional care, particularly in off-road driving situations and when performing abrupt manoeuvres on unstable surfaces.

SYMBOLS USED

The following symbols used within the handbook call your attention to specific types of information.

 *This recycling symbol identifies those items that must be disposed of safely in order to prevent unnecessary damage to the environment.*

 *This symbol identifies those features that can be adjusted or disabled/enabled by a Land Rover dealer*

*An asterisk appearing within the text, identifies features or items of equipment that are either optional, or are only fitted to some vehicles in the model range.

WARNINGS IN THIS HANDBOOK

WARNING

Safety warnings are included in this handbook. These indicate either a procedure which must be followed precisely, or information that should be considered with great care in order to avoid the possibility of personal injury or serious damage to the vehicle.

SECURITY CARD

The security card, supplied with the literature pack, contains important emergency information. It is ESSENTIAL that you keep the card safe from theft and ensure that it is passed to the new owner if you sell the vehicle.

- **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. You will need to quote this number 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 NUMBER (VIN)', page 194*).

NOTE: *The extended immobiliser code, activated through the audio system, is detailed in the 'In-Car Entertainment' or 'Audio, TV & Navigation System' book in your literature pack.*

WARNING

Never leave the security card inside the vehicle when it is unattended.

SERVICE PORTFOLIO

The Service Portfolio book included in your literature pack contains important vehicle identification information, details of your entitlement under the terms of the Land Rover warranty, as well as useful consumer advice.

Most important of all, however, is the section on maintenance. This outlines the servicing requirements for your vehicle and also includes the service record slips, which the Dealer should sign and stamp to certify that the routine services have been carried out at the recommended intervals.

WARNING LABELS ATTACHED TO THE VEHICLE

Warning labels attached to your vehicle bearing this symbol mean: DO NOT touch or adjust components until you have read the relevant instructions in the handbook.

Warning labels showing this symbol indicate that the ignition system utilises very high voltages. DO NOT touch any ignition components while the starter switch is turned on!

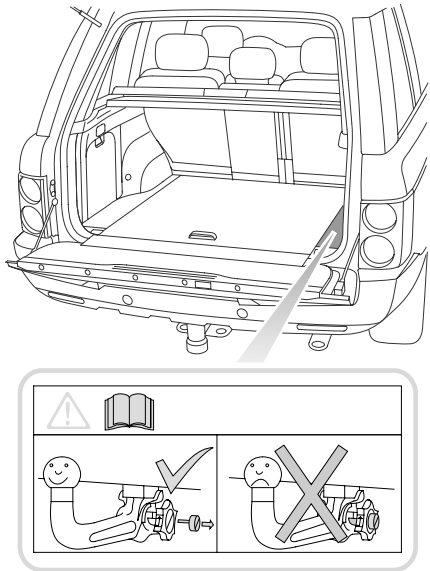
SUN VISOR LABELS

Always take careful note of warning information about the airbag SRS affixed to the upper corner of the passenger's side of the windscreen.

An additional label, located on the 'B' post, warns against the use of rear facing child seats in the front passenger seat.

For further information concerning the airbag SRS and the use of child restraints, consult the relevant sections of this handbook.

TOW BAR LABEL



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A label, located beneath the tow bar assembly in its stowage space under the rear loadspace floor, identifies the importance of removing the locking key from the detachable tow bar assembly before driving. For information on removing and fitting the detachable tow bar, see *'Detachable tow bar*', page 153*.

IN AN EMERGENCY

IMPORTANT INFORMATION

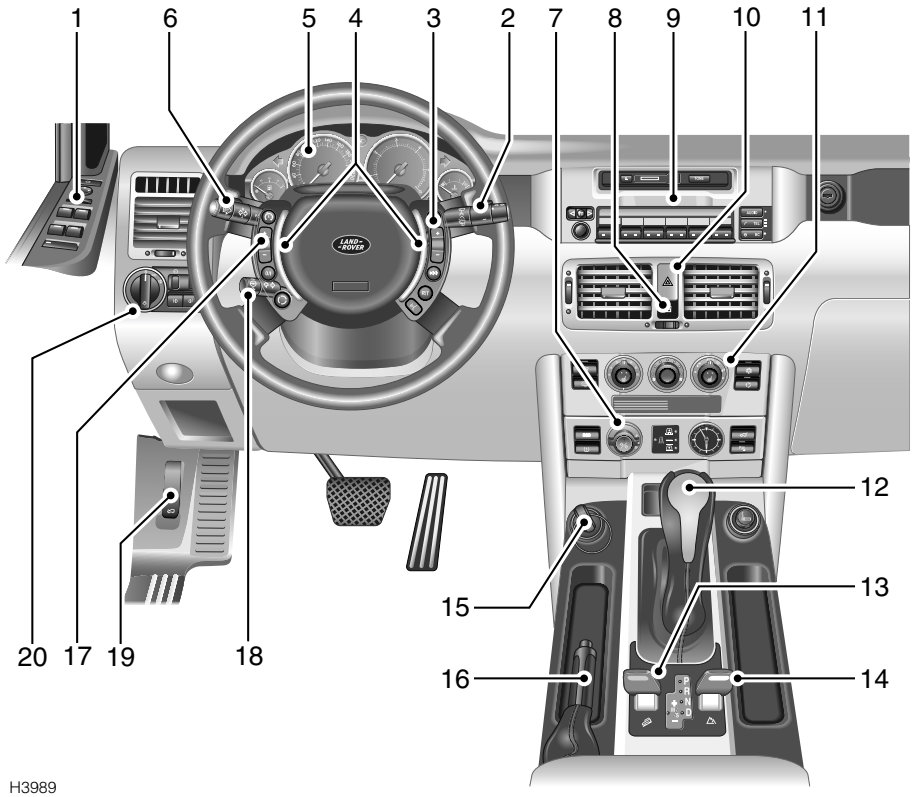
Remember the breakdown safety code

If a breakdown occurs while travelling:

- Wherever possible, consistent with road safety and traffic conditions, the vehicle should be moved off the main thoroughfare, preferably into a lay-by. If a breakdown occurs on a motorway, pull well over to the inside of the hard shoulder.
- Switch on hazard lights.
- If possible, position a warning triangle or a flashing amber light at an appropriate distance from the vehicle to warn other traffic of the breakdown, (note the legal requirements of some countries).
- Consider evacuating passengers through nearside doors onto the verge as a precaution in case your vehicle is accidentally struck by other traffic.

Controls & Instruments

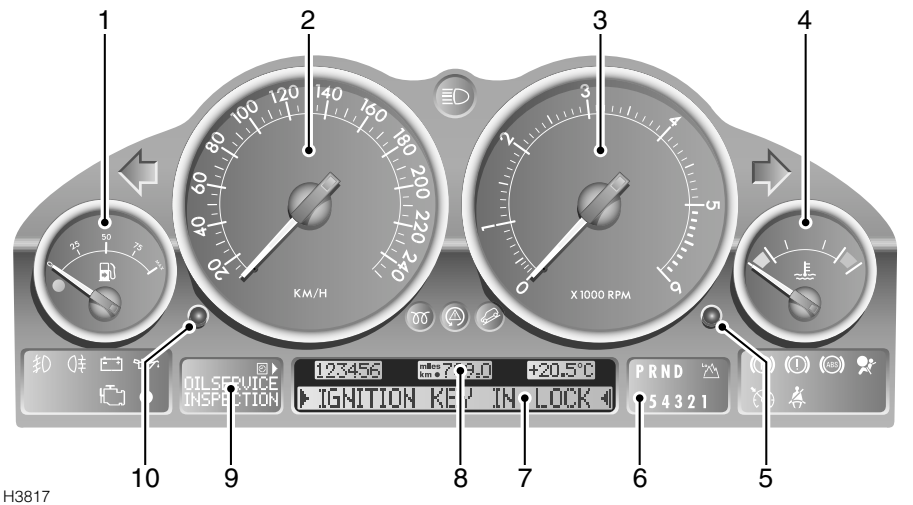
FASCIA



1. Access/electric window/mirror switches
2. Windscreen wiper/washer controls
3. Remote audio controls*
4. Horn switches
5. Instrument panel
6. Lighting and direction indicator controls
7. Air suspension controls
8. Door locking switch
9. Audio system/navigation system*
10. Hazard warning light switch
11. Heater/air conditioning controls
12. Main gear selector
13. Transfer gear switch
14. Hill descent control switch
15. Starter switch
16. Handbrake
17. Cruise control switches*
18. Steering column adjuster
19. Bonnet release lever
20. Main lighting switch

NOTE: *The precise specification and location of the controls may vary according to territorial requirements and from vehicle to vehicle.*

INSTRUMENT PANEL



H3817

1. **Fuel gauge**
   The pointer drops to zero when the starter switch is turned off, but quickly rises to show the level of fuel in the tank when the switch is turned to position 'II'.
2. **Speedometer**
   Indicates road speed in kilometers per hour.
3. **Tachometer**
   Indicates engine speed in revolutions per minute (x 1000).
4. **Temperature gauge**
   Under normal operating conditions the pointer will rise to a position midway between the RED and BLUE segments.
5. **System check control**
   With the starter switch turned off, press and hold to check whether any system malfunctions have occurred.
6. **Gear selector position display**
   Shows the current gear selector position and indicates when low range is selected. In manual mode, the actual gear engaged will be shown.
7. **Message centre**
   Displays all warning and information messages submitted by the vehicle systems (see *'MAIN MESSAGE CENTRE', page 55*).
8. **Total distance (odometer) and trip recorder**
   Indicates the total distance and the individual journey distance travelled.
9. **Oil service/inspection display**
   Briefly indicates the distance remaining before the next oil service or inspection is due, when the starter switch is turned on.
10. **Trip recorder reset button**
    Press to return the trip recorder to zero.

NOTE: *This is a brief overview of the instrument panel, for a more detailed description of each instrument please refer to 'INSTRUMENT PANEL', page 52.*

KEYS AND HANDSETS

You have been supplied with two remote handsets with integral keys which operate all locks and an emergency key, designed to fit into a wallet or purse. The emergency key can be used to open the doors and start the engine, but has no remote functionality.

NOTE: *The emergency key should not be used for extended periods of time.*

The keys supplied with your vehicle are programmed to your security system - they CANNOT be re-programmed and the engine cannot be started without a key programmed to your vehicle. If a key is lost or broken, a replacement can only be obtained from a Land Rover dealer.

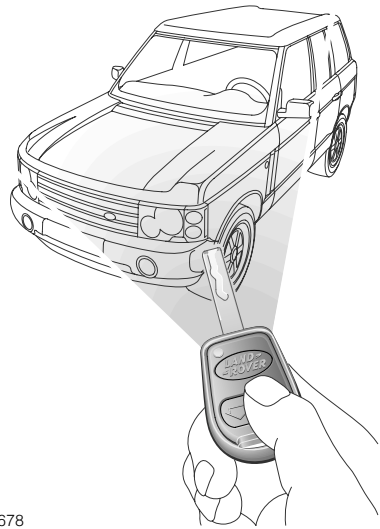
NOTE: *Land Rover dealers do not stock spare keys, time has to be allowed for replacements to be programmed to your security system and then delivered to the dealer.*

If you lose a key, contact your Land Rover dealer; a key reported lost will be deactivated. If the key is recovered, your dealer can have it reactivated.

WARNING

Keep the Security card, emergency key and spare handset key in a safe place - NOT IN THE VEHICLE!

ALARM SYSTEM



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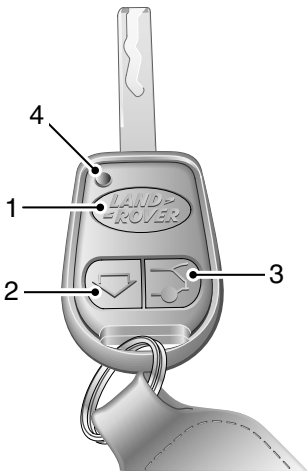
Your vehicle is fitted with a sophisticated electronic anti-theft alarm and engine immobilisation system. There are also a number of additional security features, some of which are selectable options and some are standard features of the vehicle. In order to ensure maximum security and operating convenience, you are strongly advised to gain a full understanding of the features and alternatives available, by thoroughly reading this section of the handbook.

IMPORTANT INFORMATION

FOR MAXIMUM SECURITY ALWAYS SUPERLOCK THE VEHICLE (except when passengers are to be left inside, in which case they must lock the vehicle using the interior locking switch).
If it is necessary to leave a window or sunroof open, lock the vehicle by pressing the lock button (or turning the key) twice.

Using the remote handset



H4677

While it is not necessary to point the handset at the vehicle, the handset must be within range of the vehicle when a button is pressed. Note that the operating range may vary depending upon handset battery condition and may sometimes be limited by physical and geographical factors beyond your control. From a security point of view, it may not be wise to unlock unless you are in close proximity to the vehicle.

Handset buttons

The three buttons on the handset are used as follows:

1. Lock button: Press to superlock all doors and to activate the perimetric alarm and interior space protection and activate the tilt sensor (see *'Superlocking', page 13* and *'Tilt Sensor', page 13*).

   Press twice to superlock all doors and activate the perimetric alarm, but NOT activate interior space protection and tilt sensor.

   Press and hold to activate the lazy locking facility (see *'Lazy locking/unlocking*', page 17*).
2. Unlock button: Press once to disarm the alarm and unlock the driver's door. Press again to unlock the remaining doors (see *'Single point entry', page 15*).

   Press once to activate the memory seats, mirrors and steering column settings (see *'DRIVER'S SEAT MEMORY FACILITY*', page 32*). This will also activate the lazy unlocking facility (see *'Lazy locking/unlocking*', page 17*).
3. Tailgate button: Press to unlock the tailgate and to disarm the interior space protection. All other apertures remain locked and the perimetric protection on the other apertures remains armed.

   Press and hold to activate the panic alarm*.
4. Handset indicator light: Flashes once for each press of any handset button, as confirmation of operation.

Locking
Shut all doors, bonnet and tailgate, then press the lock (Land Rover) button once or turn the key in the driver's door lock towards the rear of the vehicle once:

- all doors are superlocked (see *'Superlocking', page 13*)
- engine immobilised
- perimetric alarm activated (protects the doors, bonnet and taildoor)
- interior space protection activated
- tilt sensor activated

The direction indicator lights flash once and the anti-theft alarm indicator light (below the rear-view mirror) starts to flash to confirm that the vehicle is secure.

Unlocking with the remote handset

- Press the unlock (arrow) button once to disarm the alarm and unlock the driver's door only (see *'Single point entry', page 15*).
- Press the unlock button twice to disarm the alarm and unlock ALL the doors.

In either case, the interior lights illuminate and the direction indicators flash twice.

Unlocking with the key
After a handset lock:
Turn the key in the driver's door lock towards the front of the vehicle to unlock the driver's door - the alarm will sound when the door is opened. Unlocking the door using the key will not disarm the alarm - press the unlock button on the handset, or turn the starter switch to position 'II', to disarm the alarm.

After a key lock:
Turn the key in the driver's door lock towards the front of the vehicle to unlock the driver's door and disarm the alarm. Turn the key a second time to unlock the other doors.

Superlocking

WARNING

For safety, NEVER use Superlocking if passengers are to remain inside the vehicle - in an emergency they would not be able to escape. Also, any movement from within the vehicle would activate the alarm, if interior space protection has been activated.

Superlocking is activated automatically whenever the vehicle is locked using either the handset or the key.

Superlocking immobilises the interior door handles, thereby preventing an intruder from gaining entry by smashing a window and reaching inside the vehicle to operate the door handles.

If superlocking is required, but NOT interior space protection, press the lock button twice within 10 seconds (or turn the key towards the rear of the vehicle twice within the same time period).

Tilt Sensor
Your vehicle is fitted with a tilt sensor which activates the alarm if the vehicle is tilted fore and aft, or side to side, after it has been superlocked.

The alarm will sound if theft is attempted by hoisting onto another vehicle or if a side is lifted to attempt wheel removal.

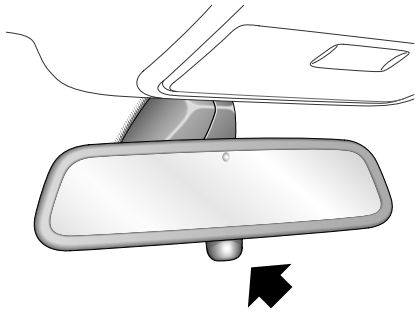
If you wish to have the doors locked but the tilt sensor disabled (eg. when aboard a ferry or having the vehicle transported on a recovery truck) press the lock button twice within 10 seconds (or turn the key in the driver's door lock towards the rear of the vehicle twice within 10 seconds).

Partial arming

If the driver's door is not fully closed when the handset lock button is pressed, all closed doors will lock, but the driver's door will not. If the driver's door is subsequently closed, the locking procedure must be repeated to lock the driver's door.

If a passenger door or other aperture is not fully closed when the handset lock button is pressed, the 'partial arming' attributes of the security system will enable as much of the system to be armed as possible (all fully closed door, bonnet or tailgate apertures will be protected, but an open door will not!). As soon as the open aperture is closed, the system will automatically revert to an armed state, with interior space protection activating 30 seconds after all apertures are closed.

Anti-theft alarm indicator light



H3920

The light provides information about the status of the alarm system, as follows:

When the alarm is armed:
The light flashes at a slow frequency and continues to flash as an anti-theft deterrent until the alarm is disarmed.

If interior space protection is disabled when the alarm is armed (by a double operation of the lock button or key), the light will illuminate constantly for 1 second as confirmation.

When the alarm is partially armed *(mislock):*
The light flashes rapidly for 10 seconds, then flashes at a slower rate as an anti-theft deterrent until the alarm is disarmed.

If the alarm has been triggered:
When the alarm is triggered, the light flashes rapidly for 5 minutes, before returning to a slow frequency.

If the light flashes rapidly after the vehicle is unlocked, this indicates that the alarm has been triggered during the driver's absence. The light will flash rapidly for 10 seconds.

If the alarm sounds

If the alarm is triggered, the alarm will sound for 30 seconds and the hazard warning lights will flash for 5 minutes, before switching off and resetting itself to the same protection status that existed prior to the alarm being triggered.

To silence the alarm, press the unlock button on the remote handset.

Single point entry

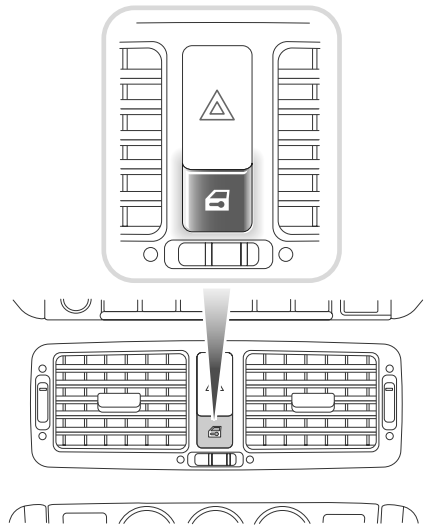
This is a personal security feature, which enables the driver's door only to be unlocked, leaving the other doors in a locked state. It can be operated by the remote handset as follows:

- press the unlock button once to unlock the driver's door (or turn the key in the driver's door lock towards the front of the vehicle, if the vehicle was locked using the key).
- press the unlock button (or turn the key) a second time to unlock the remaining doors.

When the vehicle is unlocked using single point entry, if the interior locking button is then pressed, the driver's door will relock. A second press is required to unlock all the doors.

Single point entry can be disabled on all handset keys, or on individual handset keys, by a Land Rover dealer.

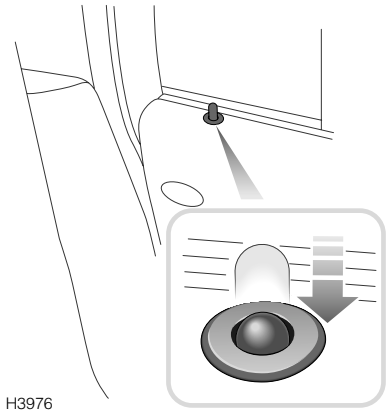
Interior locking switch



This is a personal security feature which allows the driver to lock (or unlock) all the doors from inside the vehicle (while driving or with the vehicle stationary). Press the switch to lock (the alarm will not be armed) or unlock.

NOTE: *If the locks have already been superlocked, the switch will not release the locks.*

Interior door handles and door sill locking buttons



H3976

From inside the vehicle, each door can be individually locked by depressing the appropriate door sill button. However, doors cannot be unlocked by raising the sill button.

Use the door handles to unlock, as follows:

- First operation of the door handle unlocks the door.
- Second operation of the door handle opens the door.

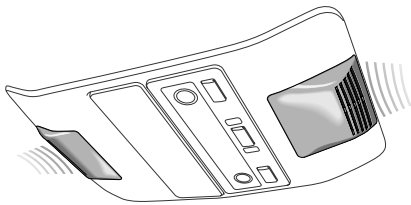
When the interior locking switch is activated, all door locking buttons will be depressed automatically.

Interior space protection

Interior space protection is activated whenever the alarm is armed.

WARNING

Never activate interior space protection if windows or sunroof are to be left open, or if passengers or animals are to be left inside the vehicle - any movement will activate the alarm.



H3802

Interior space protection is designed to protect the interior of the vehicle from intrusion (entry by a thief through a smashed window, for example). A pair of sensors monitors the interior space and activate the alarm if air movement is detected in the passenger compartment.

NOTE: *Interior space protection cannot be activated if a door is open.*

Disabling interior space protection:

If there is a requirement to disable interior space protection (if a window or sunroof is to be left open, for example), press the lock button twice within 10 seconds. If locking with the key, turn the key in the driver's door lock towards the rear of the vehicle twice within 10 seconds.

Speed-related locking*
This security feature locks all the doors automatically when the vehicle speed exceeds 16 km/h.

Note speed-related locking is not selectable by the driver, and that operation of the door locks by any other means (interior locking switch on the fascia panel, for example) will unlock the doors. Speed related locking can be configured by your dealer to automatically relock the doors after they are unlocked, when the vehicle speed exceeds 16 km/h.


Speed related locking can be selected, deselected or reconfigured for individual handset keys, by a Land Rover dealer.

Automatic relock*
If the vehicle is unlocked using the remote, but no door or tailgate is opened after 2 minutes, the vehicle will relock (but not superlock), but the alarm will not be re-armed.


Automatic relock can be selected or deselected by a Land Rover dealer.

Panic alarm*
If the tailgate unlock button (see #####) is pressed and held, the alarm will sound and the hazard warning lights will flash (market permitting). This feature is to draw attention to the vehicle and driver, to deter potential thieves/attackers.


The panic alarm facility can be selected or deselected by a Land Rover dealer.

Lazy locking/unlocking*

WARNING

Accidental closing of an electrically operated window or sunroof on fingers, hands or any vulnerable part of the body, can result in serious injury. Always observe the following precautions:

ENSURE that you have a clear view of all open apertures on the vehicle and that all apertures are unobstructed, before activating the lazy locking feature.

ENSURE children are kept clear whilst raising or lowering windows and opening or closing sunroof.

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

NOTE: *In some markets, the lazy lock/unlock feature is NOT available using the handset, the key must be used.*

'Lazy' locking or unlocking enables you to use the handset to open or close the windows and sunroof at the same time as you secure the vehicle.

Lazy locking:

1. Ensure that all doors, bonnet and tailgate are properly closed.
2. Press and hold the lock button (or turn and hold the key in the driver's door lock towards the front of the vehicle) until all the windows and the sunroof are closed - the vehicle security system will be armed.

   NOTE: *Window and sunroof movement will stop if the button or key is released during this operation.*

Lazy unlocking:

1. Press and hold the unlock button on the remote handset (or turn and hold the key in the driver's door lock rearwards), the windows and then the sunroof will fully lower/open - the vehicle security system will be disarmed and the driver's door will unlock.
2. Release the button or key when the windows and sunroof are open as required.

Lazy locking/unlocking can be selected or deselected by a Land Rover dealer.

ENGINE IMMOBILISATION

Engine immobilisation is an important aspect of the security system, it is designed to safeguard the vehicle from theft, should the driver forget to lock the doors and prevents the engine from being started unless the GENUINE handset key or emergency key is inserted into the starter switch. Engine immobilisation is automatic whenever any of the following conditions occur.

- The vehicle is locked using handset or key.
- Three seconds after the starter switch has been turned off AND the driver's door opened.
- If the key is removed from the starter switch.

NOTE: *The engine will be re-mobilised automatically whenever the genuine handset key is inserted into the starter switch and turned to position 'I'.*

REMOTE HANDSET BATTERY

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.

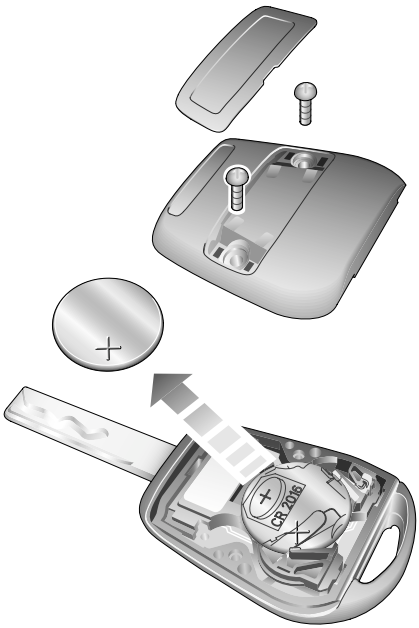
The battery should last for approximately three years dependent upon use. When the battery needs replacing it will be apparent from the following symptoms:

- 'KEY BATTERY LOW' will be displayed in the main message centre.
- A gradual deterioration in range and performance.

Always fit a Panasonic CR2016 replacement battery (available from a Land Rover dealer).

Battery replacement

1. With the handset face down, insert the blade of a small flat-bladed screwdriver into the slot at the rear of the handset and prise the screw cover upwards.
2. Remove the two screws and carefully remove the back of the handset.
3. Use a small flat-bladed screwdriver to prise the battery from its mounting (see illustration), taking care to avoid touching the circuit board or the metal battery contacts.
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.



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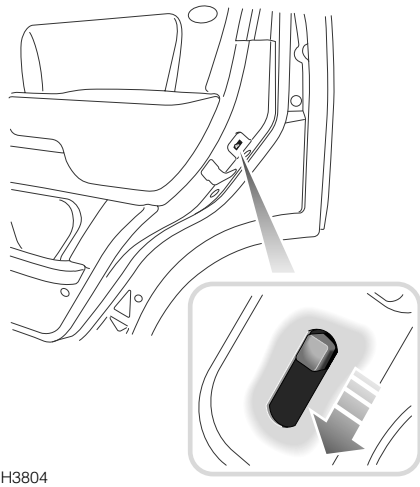
Refit the back of the handset, insert and tighten the screws and firmly press the screw cover back into position. The handset is now ready for use.

CHILD-PROOF LOCKS



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Move the locking levers on the rear doors down to engage the child locks.

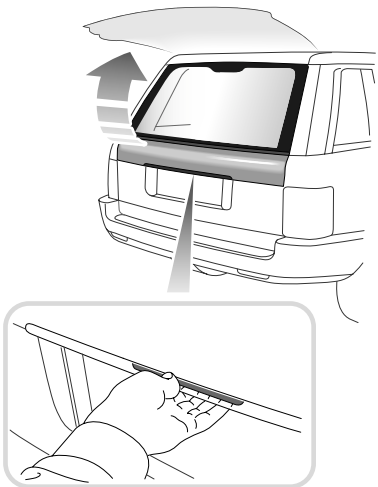
With the child-proof locks engaged, the rear doors cannot be opened from inside the vehicle, thereby avoiding the risk of a door being opened accidentally while the vehicle is moving.

WARNING

NEVER leave children unsupervised in the vehicle.

TAILGATE

Opening the upper tailgate



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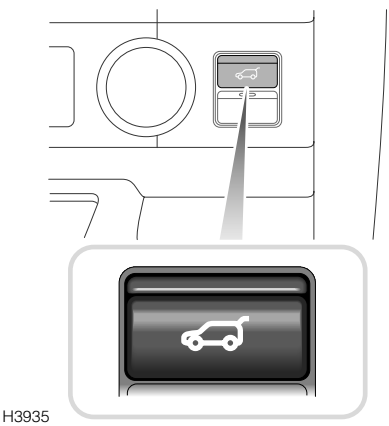
With all doors unlocked, press the switch on the bottom edge of the upper tailgate and lift to open.



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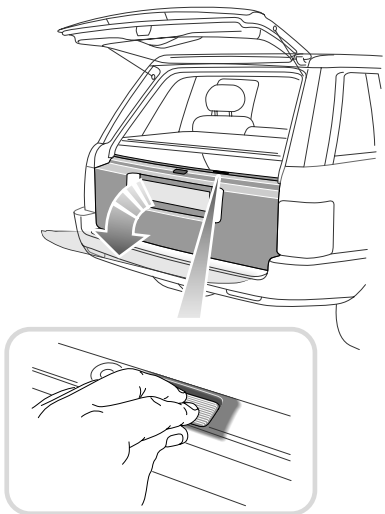
If single point entry has been used and only the driver's door is unlocked, press the tailgate release button (illustration above).

Opening the lower tailgate

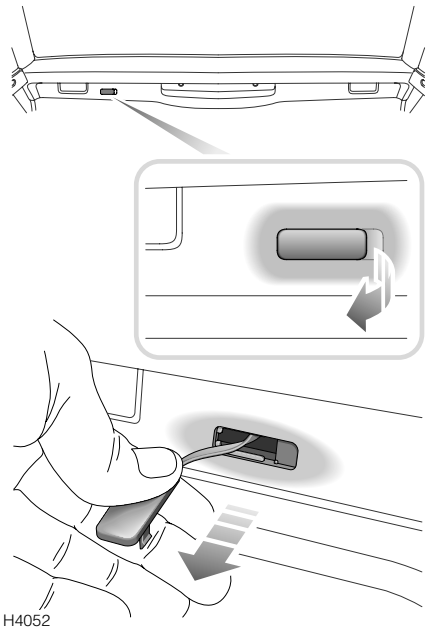


H3930

With the upper tailgate open, press the release switch on the top of the lower tailgate (see inset), then lower the tailgate.

Emergency manual operation

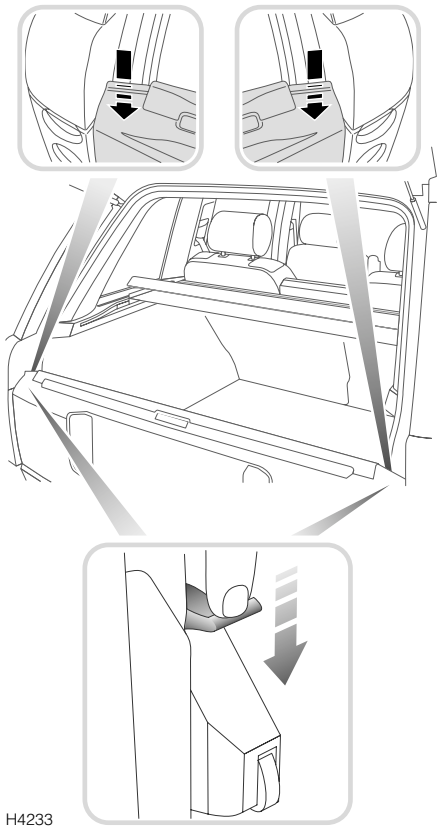
Upper tailgate:



If the battery has been disconnected or has discharged, the tailgate can be opened manually as follows:

- Fold the rear loadspace cover (see *'Folding the loadspace cover from inside the vehicle', page 110*, for instructions).
- From the rear loadspace, lever out the plastic tab (see inset).
- Pull the tab to release the upper tailgate.
- Raise the upper tailgate.

Lower tailgate:



With the upper tailgate open, push down on the two hidden catches (see upper insets), either side of the tailgate. The catches can be operated either one at a time, or simultaneously.

MANUALLY OPERATED FRONT SEATS

WARNING

To avoid the risk of loss of control and personal injury, DO NOT adjust the driver's seat while the vehicle is in motion.

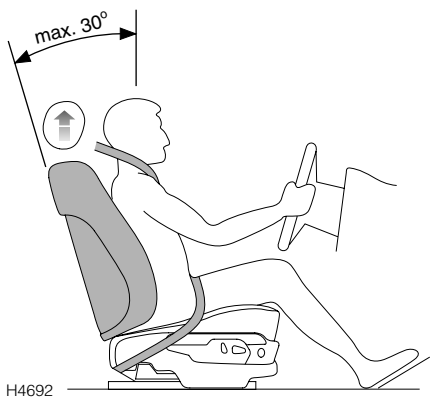
The driver and front passenger seats should be positioned as far rearward as practical. Ideally the seat should be positioned so that the steering wheel can be held with the arms slightly bent and the seat back in a nearly upright position.

Make sure your driving position is comfortable and enables you to maintain full control of the vehicle. A properly adjusted seat helps reduce the risk of injury from sitting too close to an inflating airbag.

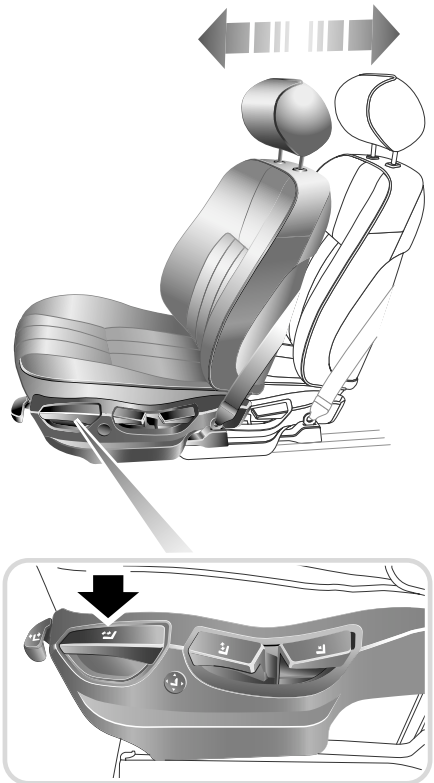
Sitting correctly

The seats, head restraints, seat belts and airbags all contribute to the protection of the occupants. Optimal use of these components will give you more protection. Therefore, observe the following points:

- Sit in the most upright position with the base of your spine as far back as possible and the backrest not reclined more than 30 degrees.
- Adjust the head restraints so that the top of the head restraint is level with the upper portion of the head.
- Do not move the front seat too close to the instrument panel. The driver should hold the steering wheel with slightly bent arms. The legs should also be slightly bent so that the pedals can be pressed to the floor.
- The seat belt should rest in the centre of the shoulder. The lap part should fit tightly across the hips and not on the stomach.



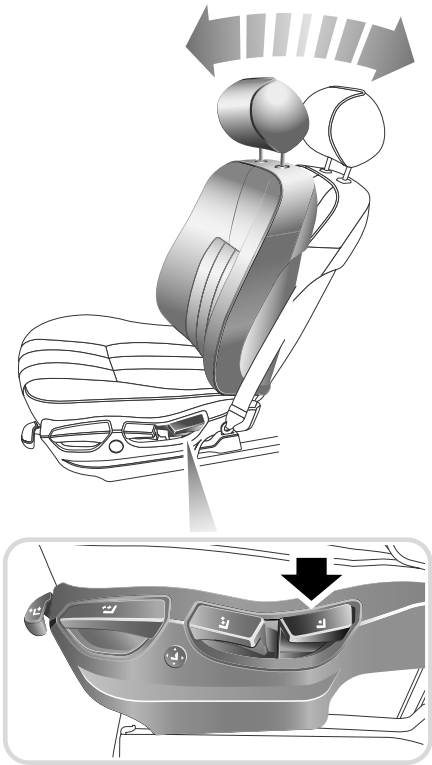
Forward/backward adjustment



H3780

Lift the lever (arrowed in inset) to slide the seat forward or back. Ensure the seat is locked in position before driving.

Seat back adjustment



H3777

Lift the lever (arrowed in inset) and lean forwards or backwards in the seat until the desired angle is achieved. Release the lever to lock in place.

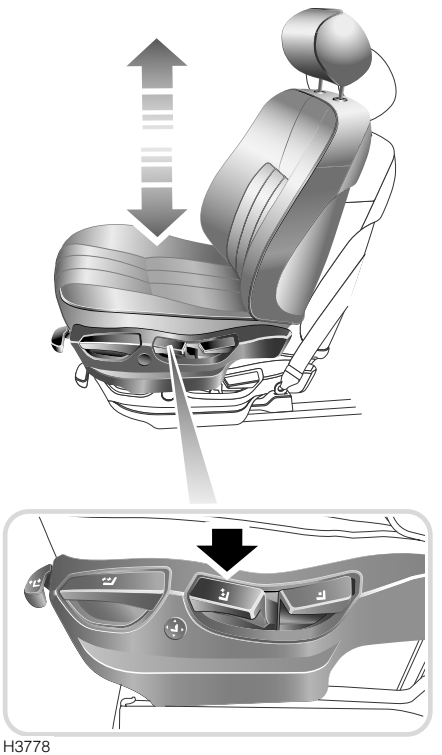
WARNING

DO NOT travel with the seat backs reclined steeply rearwards. Optimum benefit is obtained from the seat belt with the seat back angle set to no more than 30 degrees from the upright (vertical).

Seat height adjustment

WARNING

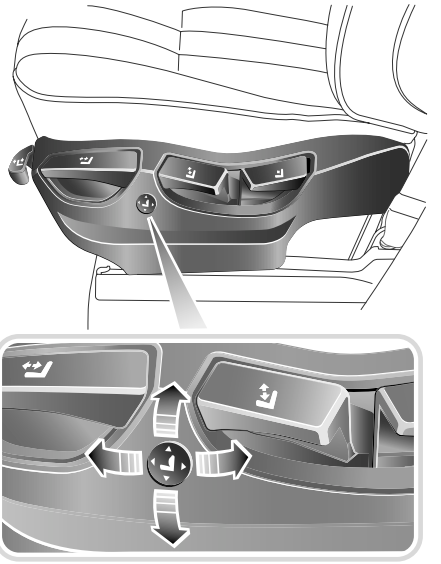
Take care when adjusting the height of the driver's seat - a rear seat passenger's feet might become trapped when lowering the seat rearwards.



H3778

Lift the lever (arrowed in inset) and apply weight to lower the seat rearwards, or allow the seat to rise forwards, as required.

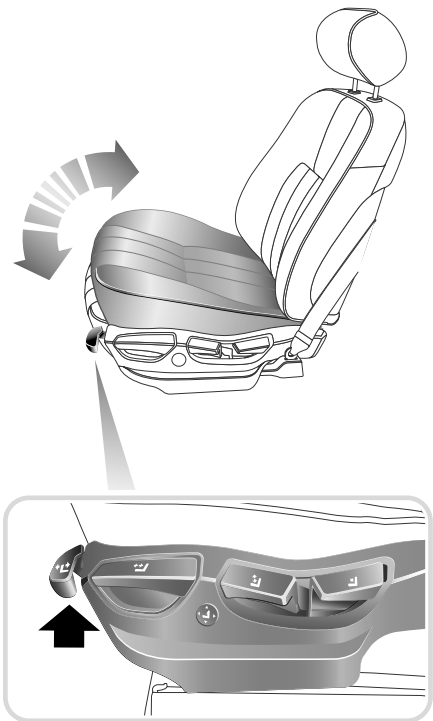
Lumbar support adjustment



H3781

Press the right or left of the switch to increase or decrease support to the lumbar region of the back. Press the top or bottom of the switch to increase support at the top or bottom of the seat back.

Cushion front edge adjustment (driver's seat only)*



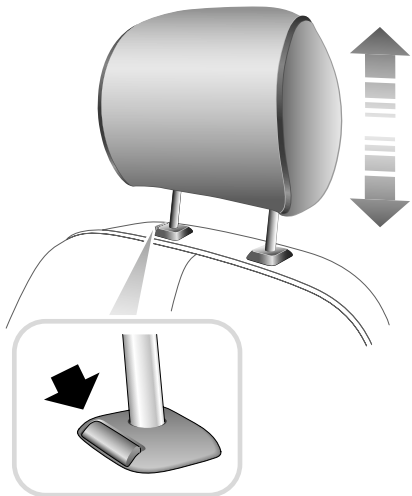
H3779

Lift the lever (arrowed in inset) repeatedly to raise the front edge of the seat to the desired height. Push down on the lever repeatedly to lower the front edge.

Head restraint adjustment

WARNING

Adjust the head restraint so that the cushion is level with the back of the head - NOT THE NECK!



H3782

Head restraints are designed to restrain rearward movement of the head in the event of an accident or sudden stop - a properly adjusted head restraint can considerably reduce the risk of neck and head injuries.

Push the restraint down to lower, pull the restraint up to raise. To fully lower the restraint, press the button (arrowed) while pushing down on the restraint.

The angle of the restraint can be adjusted. Tilt the restraint to ensure it is as close to the back of the head as possible.

To remove the head restraint, press the button on the left hand mounting and pull the restraint upwards.

WARNING

DO NOT drive with a head restraint removed from an occupied seat - serious injury could occur in the event of an accident.

POWER OPERATED FRONT SEATS*

WARNING

To avoid the risk of loss of control and personal injury, DO NOT adjust the driver's seat while the vehicle is in motion.

The seat adjustment controls are situated on the outboard side of the seat plinth.

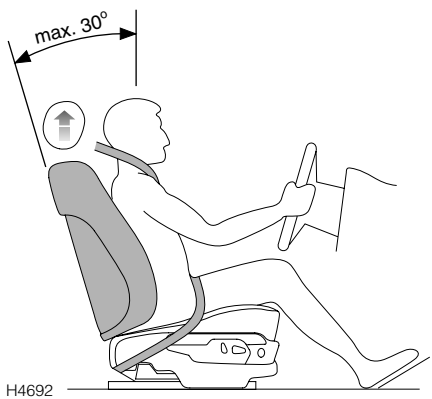
The driver and front passenger seats should be positioned as far rearward as practical. Ideally the seat should be positioned so that the steering wheel can be held with the arms slightly bent and the seat back in a nearly upright position.

Make sure your driving position is comfortable and enables you to maintain full control of the vehicle. A properly adjusted seat helps reduce the risk of injury from sitting too close to an inflating airbag.

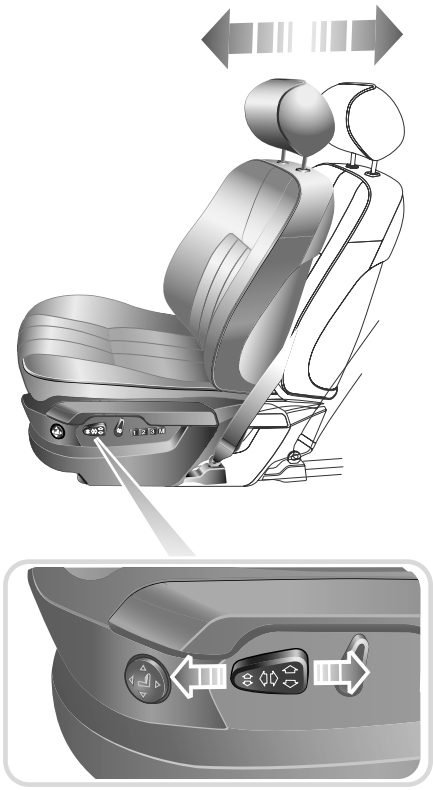
Sitting correctly

The seats, head restraints, seat belts and airbags all contribute to the protection of the occupants. Optimal use of these components will give you more protection. Therefore, observe the following points:

- Sit in the most upright position with the base of your spine as far back as possible and the backrest not reclined more than 30 degrees.
- Adjust the head restraints so that the top of the head restraint is level with the upper portion of the head.
- Do not move the front seat too close to the instrument panel. The driver should hold the steering wheel with slightly bent arms. The legs should also be slightly bent so that the pedals can be pressed to the floor.
- The seat belt should rest in the centre of the shoulder. The lap part should fit tightly across the hips and not on the stomach.



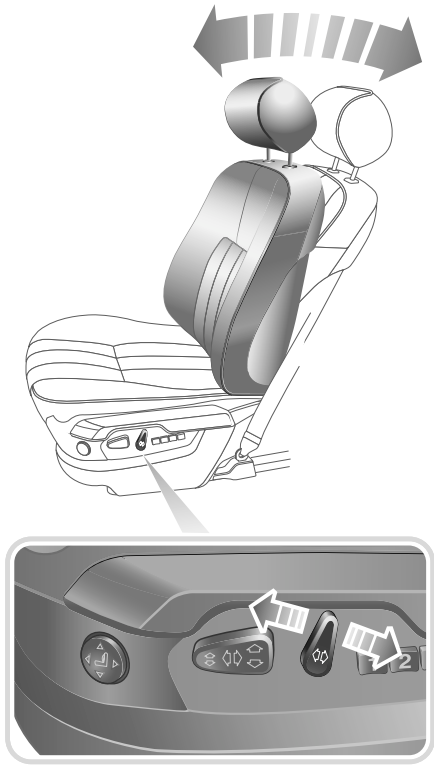
Forward/backward adjustment



H3845

Push and hold the switch forwards or backwards to move the seat to the desired position.

Seat back adjustment



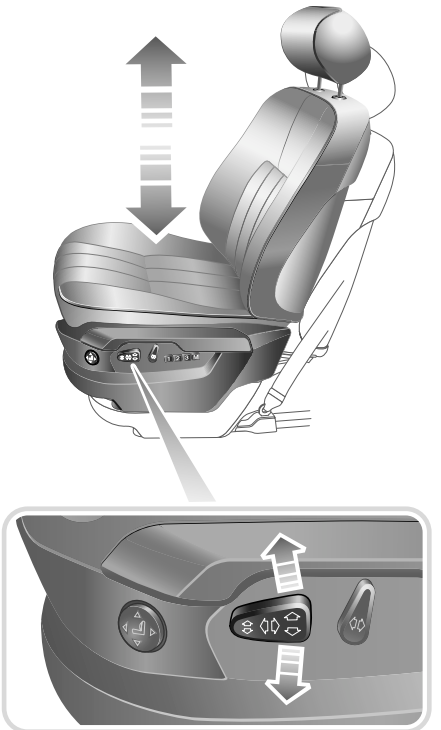
H3842

Twist the switch forward or backward until the desired seat back angle is achieved.

WARNING

DO NOT travel with the seat backs reclined steeply rearwards. Optimum benefit is obtained from the seat belt with the seat back angle set to no more than 30 degrees from the upright (vertical).

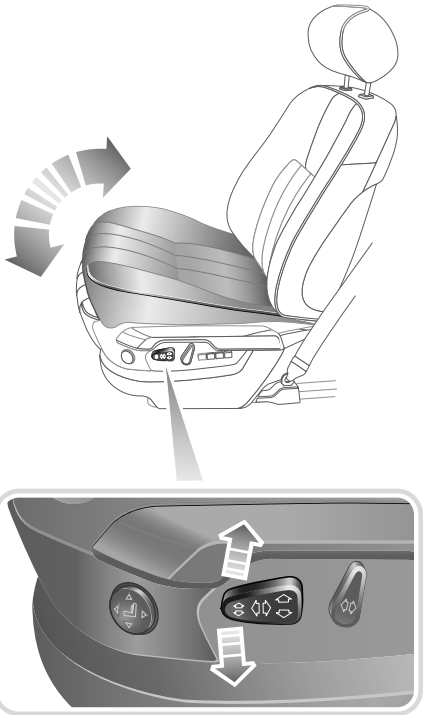
Seat cushion height adjustment (driver's seat only)



H3843

Push the switch up or down to raise or lower the cushion.

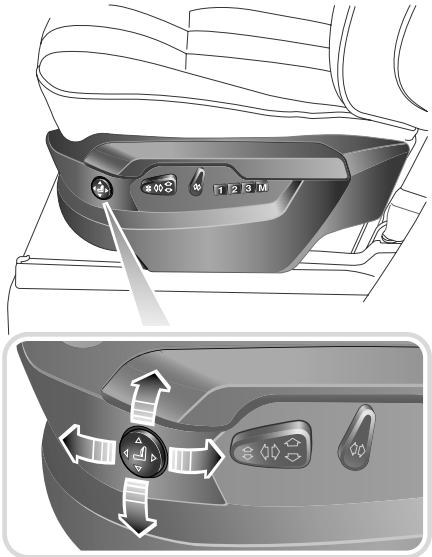
Seat cushion angle adjustment



H3844

Twist the front of the switch to tilt the seat cushion to the desired position. Note that the front and rear of the switch work independently - the front tilting the front of the cushion, the rear of the switch adjusts the height of the seat cushion.

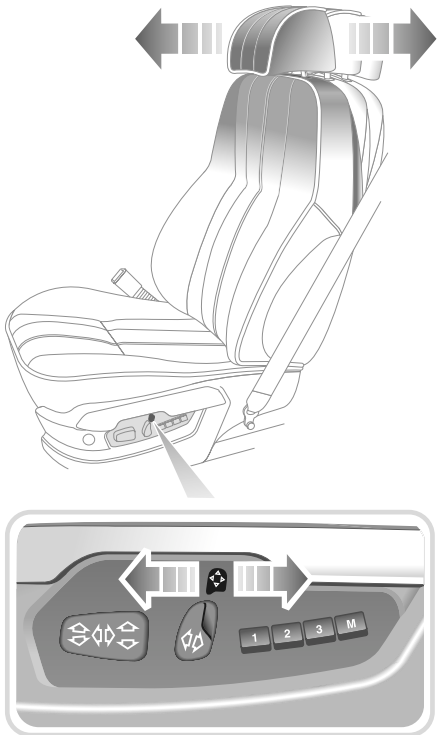
Lumbar support adjustment



H3846

Press the right or left of the switch to increase or decrease support to the lumbar region of the back. Press the top or bottom of the switch to increase support at the top or bottom of the seat back.

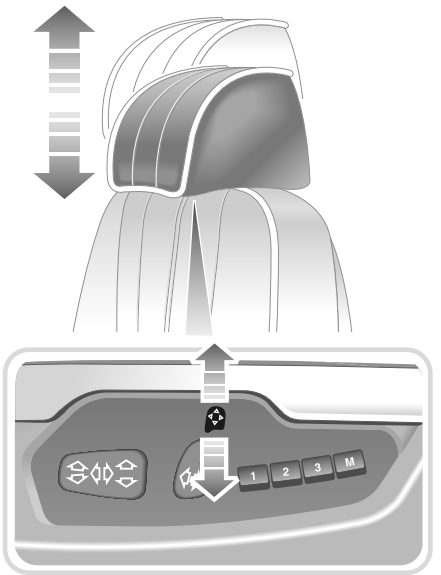
Shoulder support adjustment*



H4040

Push the control forward or rearward to increase or decrease shoulder support.

Head restraint adjustment*



H4042

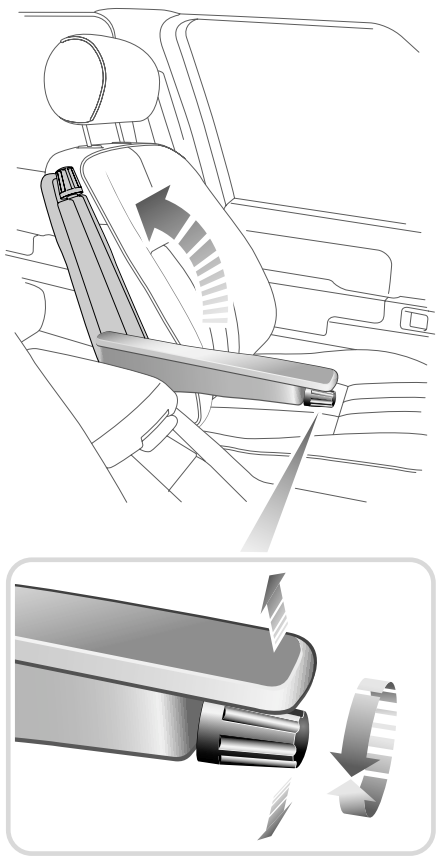
Push the switch up or down until the head restraint cushion is level with the back of the head.

WARNING

Head restraints are designed to support the back of the head (NOT THE NECK), and to restrain rearward movement of the head in the event of a collision. The restraint must be positioned level with the head to be effective.

FOLDING ARMRESTS*

Front

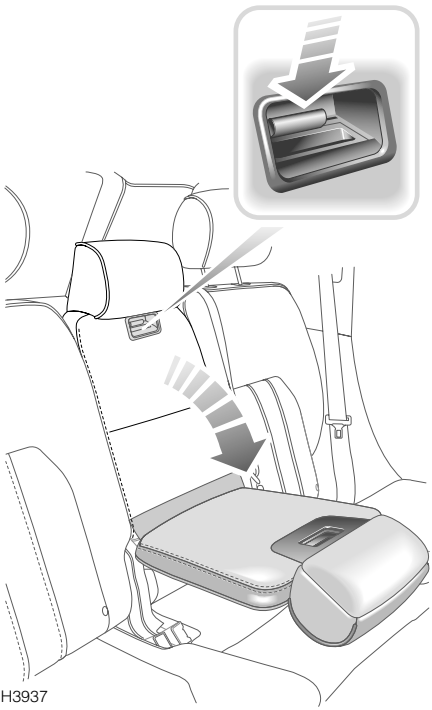


H3791

Some vehicles are fitted with adjustable front seat armrests, which can be either; stowed vertically in line with the seat backrest when not required, or folded horizontally to serve as an arm/elbow rest.

The set height/angle of each armrest can be adjusted by turning the knob set into the end of the armrest: clockwise to raise and anti-clockwise to lower (see inset).

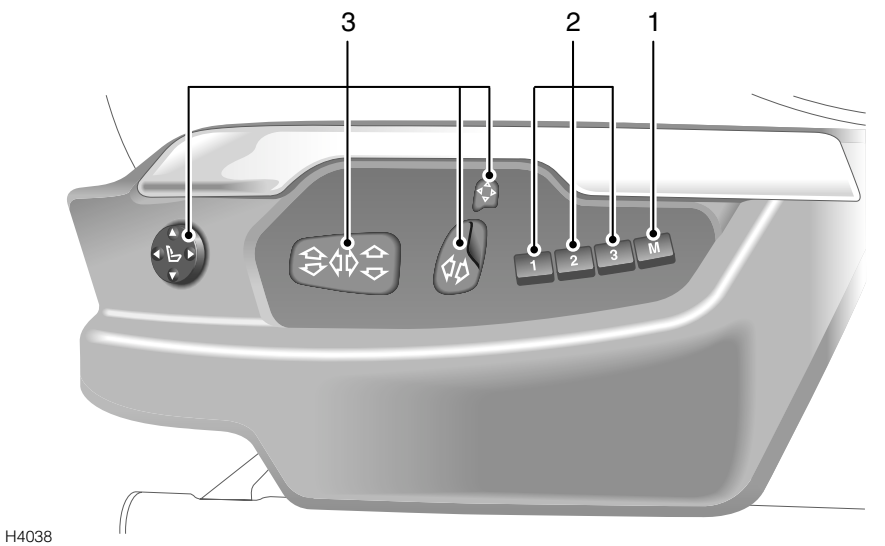
Rear



To fold down the armrest, press the catch (beneath the centre rear seat head restraint. With the armrest in position, the head restraint can be opened to access the rear cup holders (see *'CUP HOLDERS', page 100* for further information).

NOTE: *The rear armrest can not be used if a passenger is seated in the centre rear seat.*

DRIVER'S SEAT MEMORY FACILITY*



Model fitted with 'contour' seats illustrated

WARNING

Before activating the seat memory, ensure that the area immediately surrounding the seat is clear of obstructions and that all occupants are clear of moving parts.

1. Memory store button
2. Memory pre-set buttons
3. Seat adjustment controls (see *'POWER OPERATED FRONT SEATS*', page 26* for further information).

NOTE: *For information on adjusting the mirrors, see 'EXTERIOR MIRRORS', page 50, or steering wheel, see 'STEERING WHEEL ADJUSTMENT', page 49.*

Your vehicle can memorise up to three different driver seating positions (as well as the associated mirror and steering wheel positions). Enabling three separate driver's to achieve optimum comfort at the touch of a button.

Setting the memory pre-sets

Adjust the seat, exterior mirrors and the steering column to the desired position. Press the memory store button (1) to activate the memory function (switch indicator light illuminates), then press the desired pre-set button (2) to store a seat/mirror/steering wheel setting. A second press of the button (before pressing a pre-set) cancels the memory function (light extinguishes).

If a pre-set is not pressed within approximately 7 seconds of the memory function being activated, the operation will cancel (switch indicator light extinguishes).

Recalling a stored seat position
Open the driver's door, then press the pre-set button associated with the desired driving position. The seat, mirrors and steering column automatically move to the position stored by that pre-set.

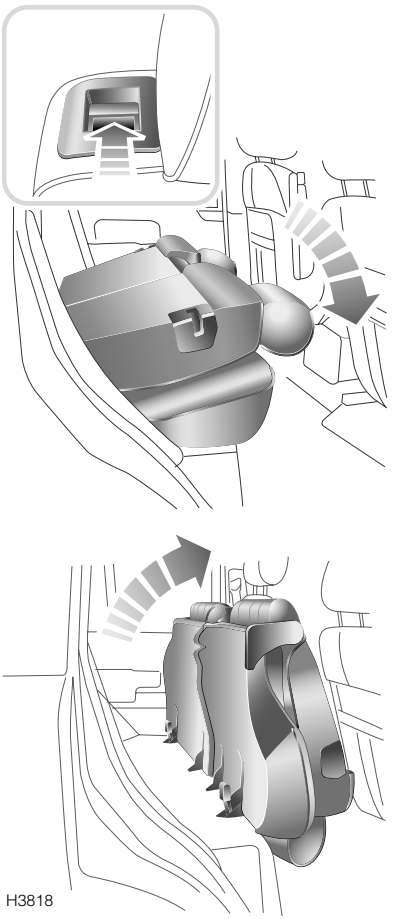
If it is required to recall a seating position once the driver's door is shut, insert the starter key and turn it to position 'I'.

NOTE: *To stop seat movement at any time when recalling a memory setting, press any seat adjustment control.*

Lazy seats*
When the vehicle is unlocked using the handset, the vehicle adjusts the driver's seat to the position the seat was in when that particular starter key was last in used. Each handset key can therefore be used to store an individual seating position. This feature can also be programmed to adjust the driver's seat when the driver's door is opened.

 *Lazy seats and associated options can be selected or deselected by a Land Rover dealer.*

FOLDING THE REAR SEATS



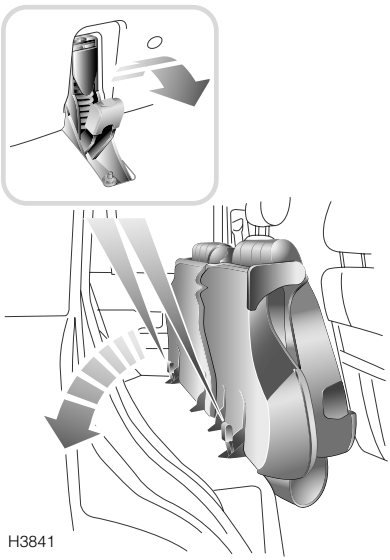
One or both parts of the split rear seat can be either partially or fully folded to further increase the rear loadspace.

1. Ensure the head restraints are fully lowered and the armrest is stowed.
2. To release either part of the backrest, lift the lever shown in the inset and then fold the backrest onto the seat base.
3. To fold the whole assembly forward, lift the rear of the seat base upwards, the assembly can be folded forward as shown.

WARNING

DO NOT adjust any part of a seat while the vehicle is in motion.

Returning the seat to the upright position



Pull the release lever (see inset) rearwards, then push the seat assembly back onto the floor - the floor catches should latch with the base of the seat. Then raise the backrest.

If the backrest cannot be raised easily, DO NOT force it. This indicates that the seat base has not fully engaged with the floor catches (note that the seat assembly is designed to prevent the backrest from being raised unless the seat is properly secured to the floor).

With the seat base secure, the backrest can be raised and locked in position (none of the RED panel on the release lever should be visible when the backrest is correctly latched).

WARNING

After the seat is returned to the upright position, the latching mechanism should be checked and physically tested to ensure that both the seat base and backrest are secure before driving.

HEATED SEATS*

For information on operating the front and rear seat heaters, please refer to *'SEAT HEATERS*', page 91*.

SEAT BELT SAFETY

The seat belts fitted to the front and rear seats are intended for use by adult sized occupants. Each belt should be used by one occupant only.

Observe the following precautions:

- DO make sure ALL passengers are securely strapped in at all times - even for the shortest journeys.
- ALWAYS adjust seat belts to eliminate any slack in the webbing. DO NOT slacken the webbing by holding the belt away from the body - to be fully effective, the seat belt must remain in full contact with the body at all times.
- ALWAYS fit the lap strap as low on the hips as possible (never across the abdomen), and ensure that the diagonal belt passes across the shoulder without slipping off or pressing on the neck.
- 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 large items of luggage that are to be carried on the seats - in the event of an accident, insecure items become flying missiles capable of causing serious injury.
- DO NOT use a seat belt that is twisted or obstructed in any way that could impede its smooth operation.
- 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 seat back angle set to approximately 25 degrees from the upright (vertical) position.
- DO NOT allow foreign matter (particularly sugary food and drink particles) to enter the seat belt locks - such substances can render the locks inoperative.
- 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.

WARNING

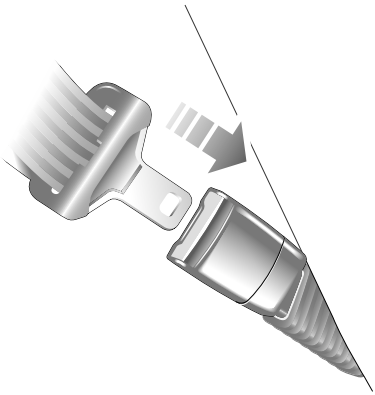
The airbag supplementary restraint system (SRS) is designed to add to the overall effectiveness of the seat belts. It does not replace them. SEAT BELTS MUST ALWAYS BE WORN!

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.

SEAT BELTS

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'*.

Fastening the seat belts



H3900

Inertia reel belts are fitted to all front and rear seating positions.

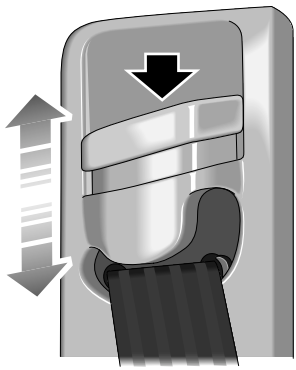
Pull the belt over the shoulder and across the chest and, ensuring that the webbing is not twisted, insert the metal tongue plate into the buckle nearest the wearer - a 'CLICK' indicates that the belt is securely locked.

Seat belts are designed to bear upon the bony structure of the body (pelvis, chest and shoulders) and can only be worn safely with the seats in a normal upright position - DO NOT allow front seat occupants to travel with the seat steeply reclined.

Releasing the belt

Press the RED button on the seat belt buckle.

Upper anchorage adjustment



H3803

The height of the seat belt upper anchorage can be adjusted for comfort AND safety on both front seats and also the two outer rear seats. Press down (solid arrow) to release the catch, then lift or push down to adjust the height of the anchorage. For safety, the seat belt should always be worn with the webbing crossing the shoulder MIDWAY BETWEEN THE NECK AND THE EDGE OF THE SHOULDER.

Ensure the anchorage has 'clicked' into one of the locked positions before driving.

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

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 *'HOW THE AIRBAG SRS WORKS', page 45*). 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 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.*

IMPORTANT INFORMATION

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.

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.

Service information

WARNING

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

After fifteen years from the original date of registration (or the installation date of a replacement pre-tensioners), some components will need to be replaced by a Land Rover dealer (note the 'Seat belt pre-tensioner replacement date' shown on page 2 of the Service Portfolio book).

In addition, ALWAYS contact your dealer if:

- an airbag inflates.
- a pre-tensioner activates.
- the front or side of the vehicle is damaged, even if the pre-tensioner has not activated.

CARING FOR SEAT BELTS

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

DO NOT bleach or dye the webbing and avoid contaminating the webbing with polish, oil or chemicals (see *'CLEANING THE INTERIOR', page 193*).

Testing inertia reel belts

- With the seat belt fastened, give the webbing near the buckle a quick upward pull. The buckle must remain securely locked.
- With the seat belt unfastened, unreel the webbing to the limit of its travel. Check that unreeling is free from snatches and snags and then allow the belt to FULLY retract.
- Partially unreel the webbing, then 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.

WARNING

Always replace a seat belt that shows signs of webbing damage or has withstood the strain of a severe vehicle impact.

Child Restraints

CHILD SEATS

The seat belts fitted to your vehicle are designed for adults and larger children. It is very important that all infants and young children are restrained in a suitable child safety seat appropriate to their age and size. Safety seats approved for use in your vehicle are available from your Land Rover dealer.

Only fit a child seat that has been approved for use in your vehicle, and ensure the manufacturer's fitting instructions are followed exactly.

For optimum safety, children should travel in the rear of the vehicle at all times. However, if 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!

The above symbol affixed to the passenger side 'B' post of your vehicle, warns against the use of a REAR FACING child seat in the front passenger seat, when a passenger airbag is fitted. This type of child seat could cause serious injury to a child in the event of an airbag deployment.

WARNING

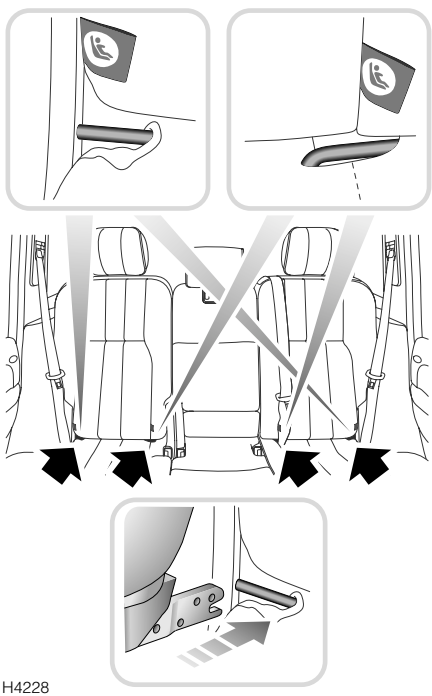
DO NOT install a rearward facing child seat in a front passenger seat equipped with an airbag system. Failure to follow this advice could result in serious injury, or even death for the child.

Mass Group **As indicated on child safety seat packaging.**	**Seating Positions**		
	Front Passenger	Rear Outboard	Rear Centre
0 = Up to 10 kg (0-9 months)	X	U	X
0+ = Up to 13 kg (0-18 months)	X	U	X
I = 9 to 18 kg (9 months - 4 years)	UF	U	X
II & III =15 to 36 kg (4-12 years)	U	U	X

U = Suitable for 'universal' category restraints approved for this mass group.
UF = Suitable for forward facing 'Universal' category restraints approved for this mass group.
X = Seat position not suitable for children in this mass group.

ISOFIX CHILD RESTRAINTS*

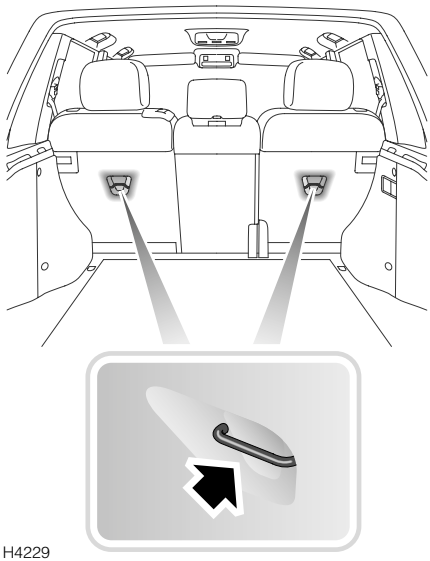
In some markets, child restraint systems complying with International Standard Organisation regulations and approved for fitting in your vehicle may be available. These restraints are different to conventional child seats, requiring anchor bars built into the vehicle seat in order to accept the ISOFIX locking mechanism.



H4228

Both outer, rear (second row) seating positions in your vehicle are equipped to accept ISOFIX restraints.

Two lower and one upper tether anchorages are provided at each seating position equipped to accept Isofix child restraints as shown in the following illustration.



H4229

NOTE: *Always ensure that, if an upper tether is provided, it is secured and tightened properly as this provides the maximum protection for your child.*

WARNING

DO NOT attempt to fit ISOFIX restraints to the centre seating position - the anchor bars are not designed to hold an ISOFIX restraint in this position.

Fitting ISOFIX child restraints

ISOFIX child restraints should only be fitted in the two outer seating positions of the second row seats. Anchor bars built into the rear seat frame (arrowed in illustration), enable the ISOFIX restraints to be securely attached to the vehicle seat in these positions only. The anchor bars are shown in the illustration insets above.

In addition, two tether anchor bars are fitted to back of the rear seats (see lower illustration), to secure child restraint anchor straps.

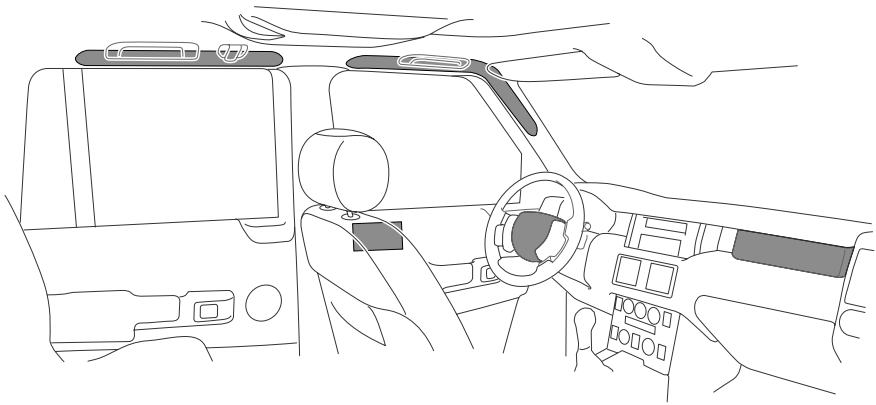
Always ensure that, if an upper tether is provided, it is secured and tightened properly as this provides the maximum protection for your child.

When fitting ISOFIX child restraints, always follow the instructions supplied by the manufacturer of the restraint.

Once the ISOFIX restraint is installed, you are recommended to test the security of the installation before seating the child. Attempt to twist the restraint from side to side and to pull the restraint away from the vehicle seat; then check that the anchors are still securely in place.

WARNING

If the restraint is not correctly anchored, there is a significant risk of injury to the child in the event of a collision or emergency braking.



H3931

AIRBAG SRS

The airbag supplementary restraint system (SRS) incorporates front, side thorax and side head airbags for the driver and front passenger and side head* airbags for the outer rear passengers (see illustration for airbag locations).

WARNING

The airbag is a supplementary restraint system that provides ADDITIONAL protection in a severe impact only - it does NOT replace the need to wear a seat belt.

Provided the occupants of the vehicle are correctly seated, with seat belts properly worn, the airbags will provide additional protection to the chest and facial areas of the front seat occupants in the event of the vehicle receiving a severe frontal impact, and to the side of the body facing the impact of front seat occupants, if a severe side collision occurs.

Side head impact protection* will afford additional protection to the side of the head facing the impact for the front seat and outer rear seat occupants, in the event of a side collision.

NOTE: *Inflation and deflation of the side thorax and front airbags takes place very quickly and will not protect against the effects of secondary impacts that may occur. Side head airbags deflate at a slower rate and therefore do offer some additional protection in the event of a secondary impact.*

WARNING

Do not allow passengers to obstruct the operation of the airbags by placing feet, knees or any other part of the person, or any other objects in contact with, or in close proximity to, an airbag module.

DO NOT attach or position items on, or close to the roof lining, front pillar and 'B' post finishers, front door trim (above the arm rest) or to an airbag cover, which could interfere with the inflation of the airbag or, if the airbag inflates, be propelled inside the vehicle causing injury to the occupants.

To ensure correct deployment of the airbags, it is essential that obstructions are not allowed to intervene between an airbag and the occupant. The following are examples of the type of obstructions that could either, impede correct operation of the airbags, or jeopardise personal safety in the event of an airbag deployment:

- Accessories attached to or obscuring an airbag cover, including; the roof lining, front pillar and 'B' post finishers and the inside of the front doors.
- Items of hand luggage, or other objects placed on an airbag cover.
- Feet, knees or any other part of the anatomy in contact with, or in close proximity to, an airbag cover.
- Head, arms or any part of the anatomy in contact with, or in close proximity to, a side thorax airbag.
- Items of clothing hanging from the grab handle attached to the roof.

Seating positions

WARNING

To minimise the risk of accidental injury from inflating airbags, seat belts should be correctly worn at all times. In addition, both driver and front seat passenger should adjust their seat to provide the maximum practical distance from the front airbags. Front seat and outer rear seat occupants should also ensure that a gap is maintained between the upper torso and head, and the side of the vehicle, to enable unobstructed inflation of the side thorax for the front seat occupants and side head airbags for both front and rear passengers.

In order to provide optimum protection in the event of a severe impact, it is necessary for the airbags to deploy with considerable speed.

An inflating airbag can cause facial abrasions and other injuries if the occupant is too close to the airbag at the time of its deployment.

Occupant detection

A sensor in the front passenger seat detects whether or not the seat is occupied. If, in the event of an accident, the sensor has detected that there is no front passenger present, the front passenger airbag systems (front, side thorax and side head protection airbags) will not activate.

HOW THE AIRBAG SRS WORKS

In the event of a collision, the airbag control unit monitors the rate of deceleration or acceleration induced by the collision, to determine whether the airbags should be deployed.

Operation of the airbag SRS is dependent entirely on the rate at which the vehicle's passenger compartment changes speed as a result of a collision. The circumstances affecting different collisions (vehicle speed, angle of impact, type and size of object hit, for example), vary considerably and will affect the rate of acceleration or deceleration accordingly.

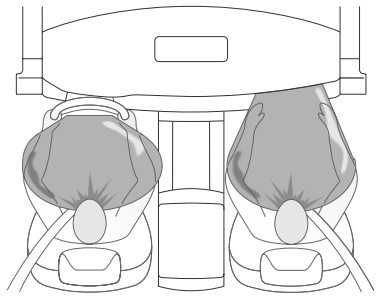
NOTE: *The airbag SRS is not designed to operate as a result of rear collisions, minor frontal or side Impacts, roll over accidents; nor will it operate as a result of heavy braking or driving over bumps and potholes.*

It follows, therefore, that significant superficial damage can occur without the airbags deploying or, conversely, that a relatively small amount of structural damage may cause the airbags to be deployed.

Dual stage deployment

The front airbags deploy in two stages, depending on the severity of the frontal collision. The unit monitors the rate of deceleration or acceleration during the impact and, if a relatively minor frontal impact in which airbag deployment is warranted occurs, the airbags only inflate sufficiently to protect the front seat occupants from the forward movement caused by the impact. If, however the system detects a relatively severe frontal impact, the airbags will fully inflate, thereby providing maximum protection to the front seat occupants.

Airbag deployment



H4222

IMPORTANT INFORMATION

Airbags will only deploy when they are required to supplement the restraining force of the seat belts.

In the case of a severe frontal collision, both front airbags will be deployed. In the case of a severe side collision, only the side thorax airbags and side head impact protection airbag on the impacted side of the vehicle will inflate. However, there may also be impact conditions whereby one set of side and both front airbags deploy at the same time, or where front and side airbags respond separately as a result of a secondary impact occurring after the initial collision has taken place.

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.

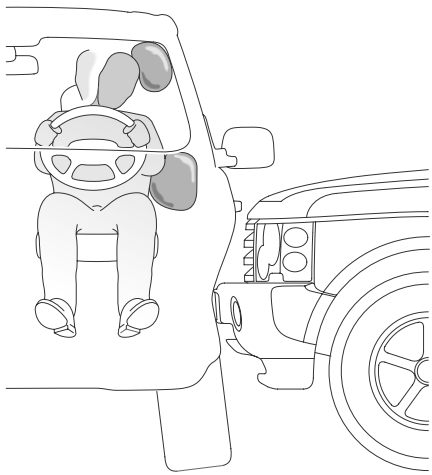
Airbag inflation is virtually instantaneous and occurs with considerable force, accompanied by a loud noise. The inflated bag, together with the seat belt restraint system, limit the movement of an occupant, thereby reducing the risk of injury to the head and upper torso.

When an airbag inflates, a fine powder is released. This is not an indication of a malfunction. However, the powder may cause irritation to the skin and should be thoroughly flushed from the eyes and any cuts or abrasions of the skin. After inflation, front and side thorax airbags deflate immediately (side head protection airbags deflate slowly). This provides a gradual cushioning effect for the occupant and also ensures that the driver's forward vision is not obscured.

WARNING

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

Side airbags



H4221

WARNING

Ensure that a gap is maintained between the upper torso and the side of the vehicle, to enable unobstructed inflation of the side thorax airbags.

Side thorax airbags are designed to protect the thorax region of the torso and will only deploy in the event of a severe side impact. They will NOT inflate as a result of frontal or rear impacts only.

In the event of a severe side collision, the airbags on the impacted side of the vehicle deploy from the door, rapidly inflating to form a cushion between the front seat occupants and the side of the vehicle. The airbags on the non-impacted side of the vehicle will not be deployed.

Side head impact protection*

NOTE: *For the side head impact airbags to deploy correctly, the roof lining and front pillar trim must be undamaged and fitted correctly. Any damage or suspect fitting should be referred to a Land Rover dealer for examination.*

Side head impact airbags are designed to protect the head in the event of a severe side impact only. They will NOT inflate as a result of frontal or rear impacts alone.

The side head impact protection modules are located behind the roof lining and front pillar finisher, above the doors. In the event of a severe side collision, the airbag pushes out from behind the roof lining and front pillar finisher as it inflates. The side head impact airbag remains inflated for longer than the other airbags, to provide additional head protection in the event of a secondary impact.

Airbag SRS warning light

A warning light mounted on the instrument panel will alert you to any malfunction of the airbag SRS. The airbag SRS should always be checked by a dealer if any of the following symptoms occur:

- The warning light fails to illuminate when the starter switch is turned to position 'II'.
- The warning light fails to extinguish within approximately four seconds after the starter switch is turned to position 'II'.
- The warning light illuminates after the engine is started, or while the vehicle is being driven.

SERVICE INFORMATION

WARNING

DO NOT attempt to 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.

After fifteen years from the original date of registration (or the installation date of a replacement airbag SRS), some components will need to be replaced by a Land Rover dealer (note the airbag module replacement dates shown on page 2 of the Service Portfolio book).

In addition, ALWAYS contact your dealer if:

- an airbag inflates.
- the front or side of the vehicle is damaged, even if the airbag has not inflated.
- any part of an airbag module cover shows signs of cracking or damage.

IMPORTANT INFORMATION

The components that make up the airbag SRS are sensitive to electrical or physical interference, either of which could easily damage the system and cause inadvertent operation or a malfunction of the airbag.

For your safety it is recommended that you 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 any of the SRS components, including the steering wheel, steering column, door trim, roof lining, instrument and fascia panels.
- Installation of electronic equipment such as a mobile phone, two-way radio or in-car entertainment system.
- Modification to the front or side of the vehicle, including the bumper and chassis.
- Attachment of accessories to the front or side of the vehicle.

Disposing of vehicles

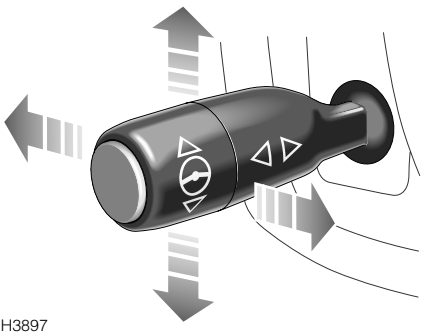
If you sell your vehicle, be sure to inform the new owner that the vehicle has an airbag SRS. In addition, make sure the new owner is aware of the airbag module replacement date shown on page 2 of the Service Portfolio book.

If your 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.

STEERING WHEEL ADJUSTMENT

WARNING

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



H3897

The steering wheel position can be adjusted in four directions, corresponding with the movement of the adjustment lever, to suit your driving position.

With the vehicle stationary, move the lever up or down to adjust the height of the steering wheel.

Move the lever forwards or rearwards, to move the steering wheel further away from, or closer to, the body.

STEERING WHEEL POSITION MEMORY*

The finalised steering wheel position is stored in memory and referenced to the starter key in use when the position was set.

When that key is next used, the stored settings associated with it will be actioned.

This enables different steering wheel settings to be stored on different keys, helping driving position to be easily optimised for more than one driver.

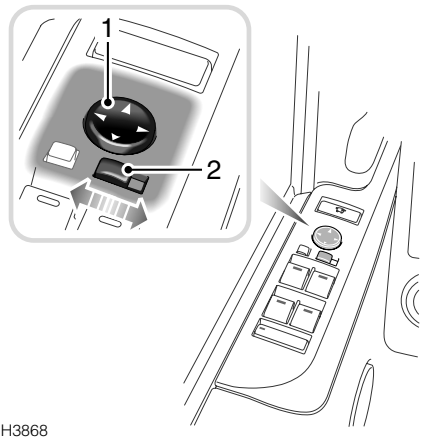
On vehicles fitted with memory seats, when the starter key is removed, the steering wheel will retract, improving vehicle access.

NOTE: *On vehicles fitted with the driver's seat memory facility, up to three different steering column positions can be stored in the seat memory, this enables the driver to recall the optimum steering wheel position at the touch of a button - for further information, please refer to 'DRIVER'S SEAT MEMORY FACILITY*', page 32.*

EXTERIOR MIRRORS

NOTE: *Objects viewed in exterior mirrors may appear further away than they actually are.*

Mirror adjustment



H3868

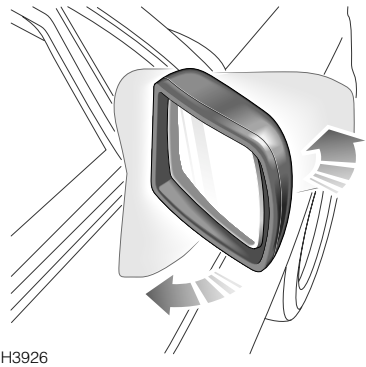
- Move the lower control (2) to the left or right-hand position to select either the left or right hand mirror.
- With the starter switch turned to position 'II', push the appropriate arrow on the mirror adjust control (1) to tilt the mirror glass up/down/left or right.

The door mirrors have integral heating elements which disperse ice or mist from the glass. These will operate automatically with the starter switch in position 'II', depending on external temperature.

NOTE: *On vehicles fitted with the driver's seat memory facility, up to three different exterior mirror positions can be stored in the seat memory, this enables the driver to recall the optimum mirror position at the touch of a button - for further information, please refer to 'DRIVER'S SEAT MEMORY FACILITY*', page 32.*

Folding the mirror body

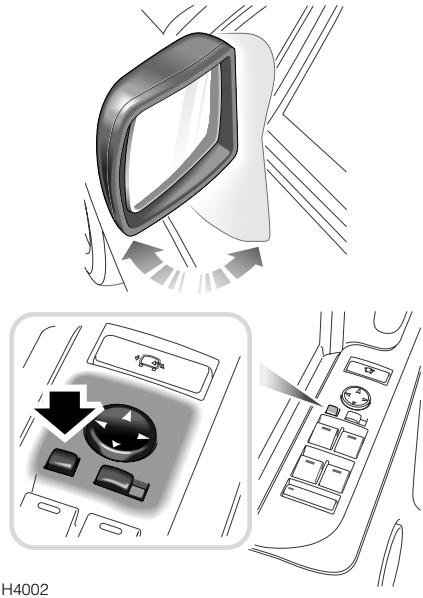
The door mirrors are designed to fold forwards or rearwards on impact. They can also be folded back towards the side windows into a 'park' position to enable the vehicle to negotiate narrower openings.



H3926

Manual operation: On some vehicles this operation can be carried out manually, by physically pushing the mirror bodies back towards the side windows, and then pulling them back into the normal (extended) positions.

Door Mirrors



H4002

***Electric operation**:** Press the mirror-fold button (arrowed in inset) once to fold the mirrors into the side windows. Press again to return the mirrors to the driving position.

NOTE: *Electric mirror folding is disabled if vehicle speed exceeds 10 km/h.*

If the mirrors are accidentally knocked out of position (i.e. with one mirror extended and the other in the 'parked' position), an additional operation of the switch will re-synchronise them.

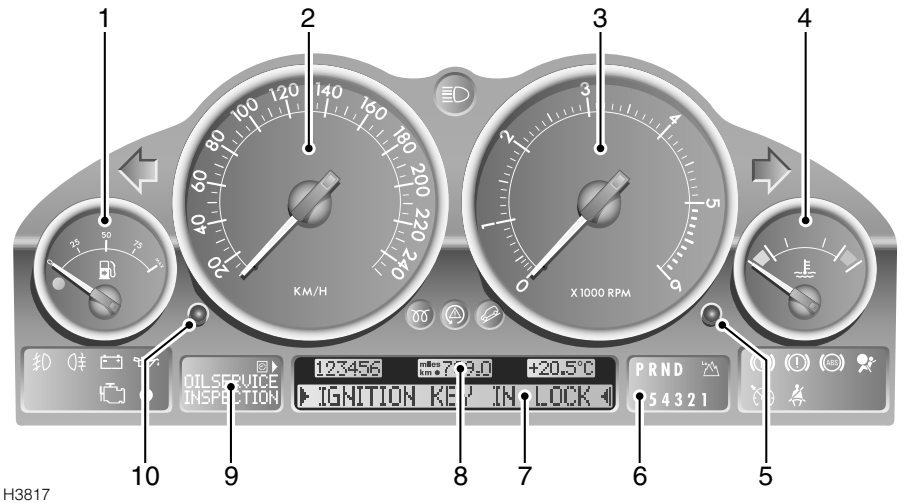
Automatic dimming*

On some models, the mirrors are equipped with an electrochromatic dimming function that 'dims' the mirror to reduce glare from the headlights of following vehicles at night.

Automatic 'kerb-view' dipping*

Vehicle's fitted with driver's seat memory have a pre-stored function, which causes the nearside mirror to dip automatically whenever reverse gear is selected. This facility is only available if the mirror select button ('1' on previous page), is set to the driver's side.

INSTRUMENT PANEL



1. Fuel gauge
The pointer drops to zero when the starter switch is turned off, but quickly rises to show the level of fuel in the tank when the switch is turned to position 'II'. After refuelling, the gauge rapidly rises to reflect the increase of fuel in the tank.

When the fuel remaining in the tank is a minimum of 12 litres on petrol vehicles, or 10 litres on diesel vehicles, the AMBER low fuel warning light in the fuel gauge illuminates. If the light illuminates, refuel at the first opportunity.

The small arrow visible in the fuel pump symbol on the gauge indicates the side of the vehicle on which the fuel filler is located - a useful reminder to help you position the vehicle on the correct side of the forecourt pumps before refuelling.

WARNING

NEVER allow vehicles to run out of fuel (the resultant misfire may destroy the catalytic converter).

2. Speedometer
Indicates road speed in kilometres per hour.

3. Tachometer
Indicates engine speed in revolutions per minute (x 1000). In normal driving conditions the engine is most fuel efficient between 2000 and 3000 rev/min.

4. Temperature gauge
Once the engine coolant has reached its normal operating temperature, the pointer will rise to a position midway between the RED and BLUE segments of the gauge (the precise position will vary according to climatic conditions).

If the pointer moves towards the RED segment, this indicates that the engine coolant is becoming too hot. Should the pointer move INTO the RED segment and the RED warning light within the gauge illuminates, severe engine damage could occur (under these circumstances, the air conditioning may switch off and engine performance may reduce in order to minimise engine load).

Stop the vehicle as soon as safety permits and switch off the engine and allow to cool down. If the problem persists, seek qualified assistance before continuing.

5. System check control
With the starter key NOT inserted, press and hold the control to check whether any system malfunctions have occurred. If faults exist, they will be listed in turn in the main message centre until the control is released. If no malfunctions have occurred, 'CHECK CONTROL OK' is displayed. See *'MAIN MESSAGE CENTRE', page 55*, for further information. Any messages will also be displayed during driving and when the starter switch is turned off.

6. Gear selector position display
This shows the current gear lever position and indicates when low range has been selected. See *'GEAR SELECTOR DISPLAY', page 61*, for further information.

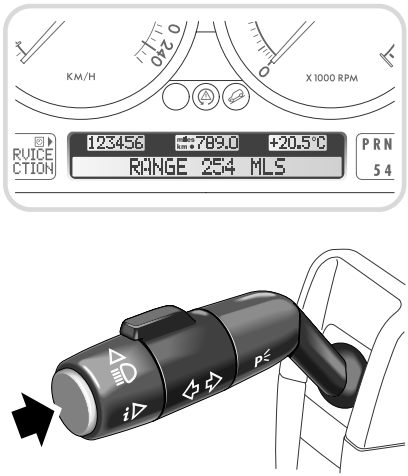
7. Main message centre
Displays all warning and information messages submitted by the vehicle systems. For further information concerning messages and their meanings, refer to *'MAIN MESSAGE CENTRE', page 55*.

8. Total distance (odometer) and trip recorder
With the starter switch turned to position 'II', the display indicates the total distance travelled by the vehicle, and also shows the most recent individual journey distance. In some markets, the display can be set to show either miles or kilometres. To convert from one to another, press and hold the trip recorder reset button for more than two seconds.

9. Service interval indicator
This shows the distance remaining before the next oil service or inspection is due. See *'SERVICE INTERVAL INDICATOR', page 61*, for further information.

10. Trip recorder reset button
Press briefly to return the trip recorder display to zero.

TRIP COMPUTER - FUNCTION SELECTION



H4076

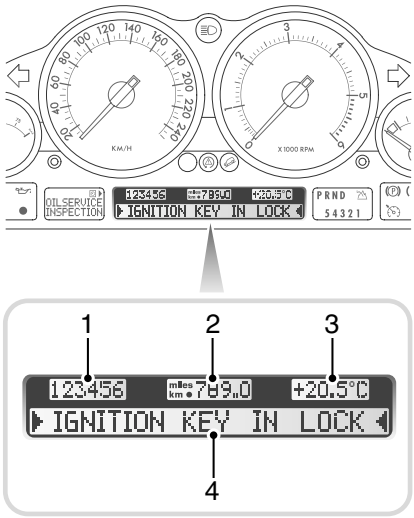
The trip computer utilises the message centre in the instrument pack and provides useful information to assist the driver to calculate fuel stops, journey times and distances.

When the starter switch is in position 'II', the different trip computer statistics can be viewed in turn by pressing the button on the end of the direction indicator stalk repeatedly until the relevant statistic is displayed. The statistics are displayed in the following order:

- The current time.
- Fuel consumption 1.
- Fuel consumption 2.
- Range.
- Speed limit.
- Distance (from destination).
- Estimated time of arrival.
- Average speed.
- Time 1* (park heating only).
- Time 2* (park heating only).
- Stopwatch.

The driver has the option to select which of the above functions are displayed and also in which order. For further information, consult your *'In-Car Entertainment'* or *'Audio, TV & Navigation System'* book.

MAIN MESSAGE CENTRE



H3820

1. Digital odometer. Displays the total distance travelled by the vehicle.
2. Trip recorder. Displays the distance travelled in kilometres for individual journeys.
3. External temperature display.
4. Warning message and information display.

Driver warning and information messages are displayed in the message centre. Messages have different priority levels and are grouped into the following categories.

Messages are displayed when a fault is detected and also when the starter switch is turned off. It is also possible to view messages for up to 3 minutes after the key has been removed from the starter switch, by pressing the system check control switch.

Critical warning messages

Critical warning messages are accompanied by an audible warning and the warning is flanked by two flashing arrows. Critical warning messages are displayed continuously while the starter switch is turned on, and remain displayed while the fault persists.

DO NOT ignore these messages - TAKE CORRECTIVE ACTION IMMEDIATELY!

Warnings and information messages

Warning messages are non-critical, but must be treated with some urgency. They will also be accompanied by an audible warning each time the message is displayed.

DO NOT ignore these messages - TAKE CORRECTIVE ACTION IMMEDIATELY.

Warning messages are displayed for approximately 20 seconds. If other warning messages are pending, the display time will be reduced to approximately 2 seconds.

Information messages will be displayed as and when applicable, and also when the starter switch is turned on or off. Where the message requires action by the driver - TAKE CORRECTIVE ACTION AS SOON AS POSSIBLE.

WARNING & INFORMATION MESSAGES

Warnings and information messages appear in order of importance, with critical warnings taking priority. Critical warnings are indicated by flashing arrows appearing on either side of the message. Action should be taken immediately if a critical warning is displayed.

Message	Meaning	What to do?
ACCESS MAX 40KM/H	Crawl mode is selected.	Do not drive at speeds exceeding 40 km/h whilst in crawl mode or the vehicle will return to standard height.
AIR SUSP.INACTIVE + MAX 60 km/h (alternating message)	The air suspension system has overheated and has temporarily shut down.	Drive with caution and be aware that the air suspension system will have reduced functionality. If message persists for more than 25 minutes, have the vehicle checked by a dealer as soon as possible.
APPLY HANDBRAKE	The vehicle is in 'P' (Park) and transfer neutral has been selected and the starter switch has been turned off, but the handbrake has not been applied.	Apply the handbrake, or if the vehicle is to be towed on all four wheels, turn the starter switch to position 'I' or 'II'.
CHECK BRAKE FLUID	Fluid level is too low.	Stop the vehicle as soon as safety permits and top-up the brake fluid. Have the source of a possible leak checked by your dealer.
CHECK BRAKE PADS	The brake pads are reaching their wear limit.	Drive cautiously and consult your dealer at the earliest opportunity.
CHECK CONTROL OK	No system faults have been detected by the vehicle diagnostics system.	No action required.
CHECK COOLANT LEVEL	Coolant level is too low.	Top-up with the correct mixture of antifreeze and water at the earliest opportunity. If the problem persists, consult your dealer.
CHECK DIP BEAM LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK ENGINE OIL LEV	The oil level is at the absolute minimum.	Stop the vehicle as soon as safety permits and top-up the engine oil to the correct level.
CHECK FRONT FOGLIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.

Message Centres

Message	Meaning	What to do?
CHECK FRONT LIGHT	More than one front light is defective.	Check which lights are defective, replace any failed bulb. If a light is still defective, have the fault rectified by a dealer.
CHECK FUEL TANK CAP* (only in some markets)	The fuel filler cap is not fitted correctly.	Check the cap and tighten/fit correctly.
CHECK MAINBEAM LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK NUMPLATE LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK REAR FOGLIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK REAR LIGHT	More than one rear light is defective.	Check which lights are defective and replace any failed bulb. If the light is still defective, have the fault rectified by a dealer.
CHECK SIDE LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK TAIL LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK TRAILER LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your dealer.
CHECK TYRE PRESSURE*	Tyre pressures have dropped.	Check the tyre pressures at the earliest opportunity and inflate to the specified pressures.
COOLANT TEMPERATURE	Coolant temperature is too high.	Stop the vehicle as soon as safety permits and switch off the engine and allow to cool down. Consult your dealer at the earliest opportunity.
DOOR OPEN	A door is open (displayed as the vehicle moves off from stationary).	Stop the vehicle as soon as safety permits and close the door.
DSC INACTIVE	A fault has been detected in the DSC system.	The vehicle is driveable, but proceed with caution. Consult your dealer at the earliest opportunity.
EEPROM LCMC	The main lighting switch has a fault.	Consult your dealer at the earliest opportunity.

Message Centres

Message	Meaning	What to do?
ENGINE FAILSAFE PROG	A fault has been detected in the engine electronics.	The vehicle is driveable, but with reduced engine speed and power. Drive with caution, and consult your dealer at the earliest opportunity. Note that the engine will be more prone to stalling and difficulties starting.
EXTERNAL TEMP X°C/F	The exterior temperature is equal to or less than 3°C.	This indicates freezing conditions, appropriate defrosting precautions should be taken before driving and ice may be present on the roads.
FASTEN SEAT BELTS	The driver's or front passenger's seat belt is not correctly fastened.	Ascertain which seat belt is undone and correctly fasten the belt.
FUEL INJECT.SYSTEM	A fault has been detected in the fuel injection system.	Seek qualified assistance.
HDC INACTIVE	A fault in the Hill Descent Control system has occurred.	Do not attempt the planned descent/ascent and consult your dealer at the earliest opportunity.
HDC TEMP.NOT AVAIL.	The Hill Descent Control system has been over-used and temporarily shut down.	Do not attempt the planned descent/ascent until the system has cooled (the message is no longer displayed).
HEADLIGHT DELAY	You have selected headlight delay - headlights will switch off automatically.	No action required.
HIGH RANGE	HIGH range has been selected in the transfer gearbox.	Select LOW range if HIGH range is not required.
KEY BATTERY LOW	The battery in the handset key is low on charge.	Replace the handset key battery.
KEY IN IGNITION LOCK* (only in some markets)	The key has been left in the starter switch and the driver's door has been opened.	Remove the key from the starter switch.
LIGHTS ON	The key has been removed from the starter switch and the lights have been left on.	Turn the light switch to the off position, if the lights are no longer required.
LOW RANGE	LOW range has been selected in the transfer gearbox.	Select HIGH range if LOW range is not required.
LOW SCREENWASH	Fluid level is too low.	Top-up the washer reservoir at the earliest opportunity.
MANUAL MODE	The transmission is in manual mode.	Select automatic mode if manual mode is no longer required.

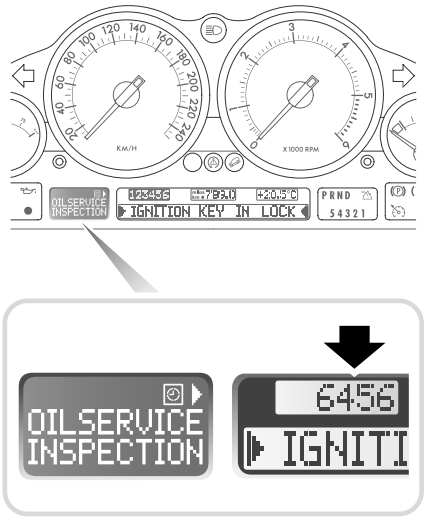
Message Centres

Message	Meaning	What to do?
NO HDC, SLOW DOWN	The Hill Descent Control operating speed range of 0 - 35 km/h has been exceeded, or an attempt to select HDC has been made whilst the vehicle is exceeding the operating speed range.	Slow down to below 35 km/h to use or select HDC.
OFFROAD MAX 50KM/H	Vehicle speed is exceeding 45 km/h, while at off-road height.	Do not drive at speeds exceeding 50 km/h whilst at off-road height. Otherwise the vehicle will return to standard height.
PRE-HEATING	The vehicle's preheating system has been activated.	Deactivate the system if not required.
RELEASE HANDBRAKE	The handbrake is applied and a drive gear is selected.	Release the handbrake.
SELECT NEUTRAL	You have attempted to change gear ranges without the gearbox being in NEUTRAL.	Select neutral in the main gearbox.
SET TYRE PRESSURE*	The TPMS (tyre pressure monitoring system) has accepted the current tyre pressures as the set value.	If the tyre pressures are correct, take no action. If the tyre pressures are incorrect, inflate the tyres to their correct pressure and reset the TPMS.
SLOW DOWN	Your current road speed is too high to perform a transfer box range change.	Slow the vehicle to the required speed before changing range.
SPEED LIMIT*	You are exceeding the set maximum speed limit.	Slow down to conform with the speed limit.
SPORT MODE	The transmission is in sport mode.	Select automatic mode if sport mode is no longer required.
STOP!ENGINE OILPRESS	Engine oil pressure is too low.	Stop the vehicle as soon as safety permits and switch off the engine. Check the oil level, top-up if necessary - if okay, consult your dealer before driving.
TAILGATE OPEN	The tailgate is open as the vehicle moves off from stationary for the first time.	Stop the vehicle as soon as safety permits and close the tailgate.
TRAILER MODE	A suspension height change request has been made whilst the vehicle is being used for towing. No change occurs.	Do not attempt to change suspension height when towing - the vehicle must remain at standard height.

Message	Meaning	What to do?
TRANS FAILSAFE PROG	A malfunction has occurred in the transmission.	Drive carefully avoiding excessive 'revs' and consult your dealer at the earliest opportunity.
TRANSFERBOX NEUTRAL	Confirmation that neutral has been selected in the transfer box.	Remove fuse 37 if transfer neutral is no longer required.
TRANSMISS'N OVERHEAT	The transmission oil temperature is too high.	If the message persists, stop the vehicle as soon as safety permits and allow the gearbox to cool. Seek qualified assistance if the message resumes.
TYRECONTROL INACTIVE*	A fault in the TPMS (tyre pressure monitoring system) has been detected, or; A non-TPMS compatible wheel is fitted to the vehicle.	Consult your dealer at the earliest opportunity. Fit a compatible wheel, or be aware that TPMS will not function correctly.
TYRE DEFECT*	Tyre pressure has dropped significantly.	Reduce speed immediately, avoid harsh braking and steering manoeuvres. Stop as soon as safety permits and replace the relevant wheel.

Message Centres

SERVICE INTERVAL INDICATOR



H3821

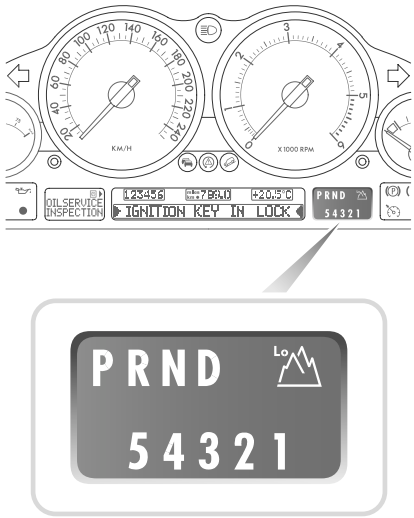
When the starter switch is turned to position 'I', a 'countdown' to when the next service is due appears in the total distance travelled display (arrowed in inset). After approximately 4 seconds, the display reverts to show the total distance travelled.

The countdown is controlled by the engine management system and is adjusted to allow for driving style and conditions, to gauge when the appropriate service becomes necessary.

When either an oil service, or an inspection is due, 'OIL SERVICE' or 'INSPECTION' will appear in the display. If either of these messages appear in the display, take your vehicle to your dealer for the necessary service.

NOTE: *After the completion of each service, the dealer will reset the distance display, to commence the countdown to the next service.*

GEAR SELECTOR DISPLAY



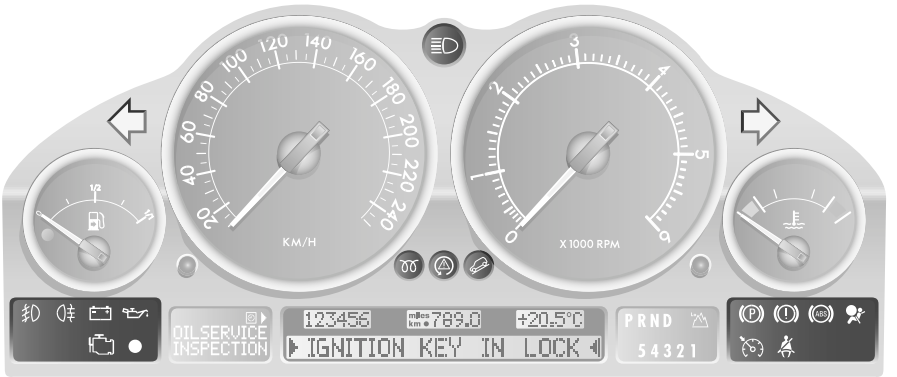
H3822

This shows the current gear lever position ('P', 'R', 'N' or 'D') and indicates when low range has been selected. In addition, the display indicates which gear has been selected when the gearbox is in manual mode ('5', '4', '3', '2' or '1').

The LOW range indicator (in the top right corner of the display) flashes whilst the transfer gearbox changes ranges and then illuminates constantly when low range has engaged. The range change will also be confirmed in the main message centre.

Warning Lights

INSTRUMENT PANEL



H4223

The location and specification of the warning lights may vary according to model and market requirements.

Rear fog guard light - YELLOW

Illuminates when the rear fog guard lights are switched on.

Front fog lights - GREEN

Illuminates when the front fog lights are switched on.

Battery charging - RED

The light illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes once the engine is running. If it remains on, or illuminates whilst driving, a fault is indicated. Seek qualified assistance urgently.

Low oil pressure - RED

The light 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 whilst driving, stop the vehicle as soon as safety permits and SWITCH OFF THE ENGINE IMMEDIATELY. Seek qualified assistance before driving. Always check the oil level when this light illuminates.

Check engine - AMBER*

The light illuminates as a bulb and system check when the starter switch is turned on, and extinguishes as soon as the engine is started. Illumination at any other time indicates an engine fault - if the light illuminates or flashes while driving, avoid high speeds and seek qualified assistance urgently.

Warning Lights

Handbrake system - RED

The light illuminates for about 3 seconds as a bulb check when the starter switch is turned on. It also illuminates when the handbrake is applied with the starter switch in position 'II'.

The light should extinguish when the handbrake is fully released. If the light illuminates whilst driving, a fault with the handbrake system is indicated, seek qualified assistance before continuing.

Brake system - RED

This light shares its position and symbol with the emergency brake assist warning light and illuminates briefly as a bulb check when the starter switch is turned on (the light follows a amber-red-amber sequence).

The light should extinguish shortly after the starter switch is turned to position 'II'. If the light does not extinguish, or illuminates whilst driving, a fault with the brake systems is indicated. Stop the vehicle gently, as soon as safety permits and seek qualified assistance before continuing.

The light may be accompanied by the message 'CHECK BRAKE PADS' or 'CHECK BRAKE FLUID'. If the message 'CHECK BRAKE FLUID' is displayed, check the brake fluid level and top-up if necessary. If the light remains illuminated after the fluid is at the correct level, seek qualified assistance before continuing.

Emergency brake assist - AMBER

This light shares its position and symbol with the brake system warning light and illuminates briefly as a bulb check when the starter switch is turned to position 'II' (the light follows a amber-red-amber sequence).

If the light remains amber after starting, or illuminates whilst driving, a fault with the EBA system is indicated. Drive with care, avoiding heavy brake application, and seek qualified assistance urgently

Anti-lock braking system - AMBER

The light illuminates as a bulb check when the starter switch is turned to position 'II'. If the light remains on or illuminates whilst driving, a fault with the ABS system is indicated. Drive with care, avoiding heavy brake application, and seek qualified assistance urgently.

Airbag SRS - RED

The light illuminates when the starter switch is turned to position 'II' and extinguishes after about 4 seconds. If the light illuminates at any other time, the system is faulty - seek qualified assistance urgently.

Cruise control active - GREEN*

Illuminates when cruise control is operating.

Warning Lights

Seat belt - RED*

The light illuminates when the starter switch is turned to position 'II' and extinguishes after approximately 6 seconds, even if the driver's seat belt remains unfastened. In some markets illumination of the light will be accompanied by a warning chime (see *'AUDIBLE WARNINGS', page 65*)

NOTE: *In certain markets, the light will illuminate until the driver's seat belt is fastened correctly.*

Glow plug - AMBER (diesel only)

Illuminates when the starter switch is turned to position 'II'. Wait for the light to extinguish before starting the engine. If the light illuminates while driving, a fault in the diesel injection system has occurred, seek qualified assistance as soon as possible.

Dynamic stability control (DSC) - AMBER

Illuminates briefly as a bulb check when the starter switch is turned to position 'II'. The light also illuminates when the DSC switch is pressed, indicating that DSC has been switched off (but traction control is still active).

The light will flash when the system becomes active and will remain flashing until the system is no longer needed.

If the light illuminates constantly, and does not extinguish when the DSC switch is pressed, a fault has been detected in the system. If there is a fault, DSC will be inactive - drive with care and seek qualified assistance as soon as possible.

Hill descent control (HDC) 'information' - GREEN

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

If HDC is selected and the vehicle is within the operating speed range of up to 35 km/h, the light will illuminate continuously.

If HDC is selected and the vehicle is driven faster than the operating speed range, the light will flash and the message 'NO HDC - SLOW DOWN' is displayed.

The light will also flash during HDC fade-out (see *'HDC fade-out', page 145* for further information).

If a fault with the HDC system occurs, HDC will fade-out and then deselect, or immediately deselect (depending on the type of fault and whether or not HDC is in operation). The green light will extinguish and the message 'HDC INACTIVE' will appear in the message centre.

Headlight main beam - BLUE

Illuminates when the headlights are switched to main beam.

Direction indicators - GREEN

The left or right warning light flashes in time with the corresponding left or right direction indicator lights whenever they are operated. If the warning light fails to flash, or flashes very rapidly, this may indicate a bulb failure in one of the direction indicator lights.

If the hazard switch is pressed, both warning lights will flash in conjunction with the direction indicator lights.

AUDIBLE WARNINGS

The market specification will determine which of the following audible warnings are appropriate to your vehicle.

Lights on reminder

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

Electronic air suspension warnings

- A single warning will chime whenever the off-road switch is operated to raise the vehicle to off-road height, or to return it to standard ride height.
- A warning chime will sound 3 times if changes to or from off-road height are requested but not permitted.
- A warning chime will sound whenever the speed threshold for the current ride height is reached.

Dynamic stability control (DSC) warning

If a fault with the DSC system is detected, a warning chime will sound once and the DSC warning light will illuminate. The vehicle may still be driven with care, but seek qualified assistance at the earliest opportunity.

Starter key reminder*

If the key is left in the starter switch while the driver's door is open, a warning will chime continuously. The chime stops as soon as the door is closed or the key is removed from the starter switch.

The starter key reminder can be enabled or disabled by a Land Rover dealer.

Seat belt reminder

In some markets, if the driver's seat belt has not been fastened when the starter switch is turned on, a warning chime will sound (one second frequency). The chime operates in conjunction with the seat belt warning light and sounds for 6 seconds, or until the seat belt is fastened (whichever occurs first).

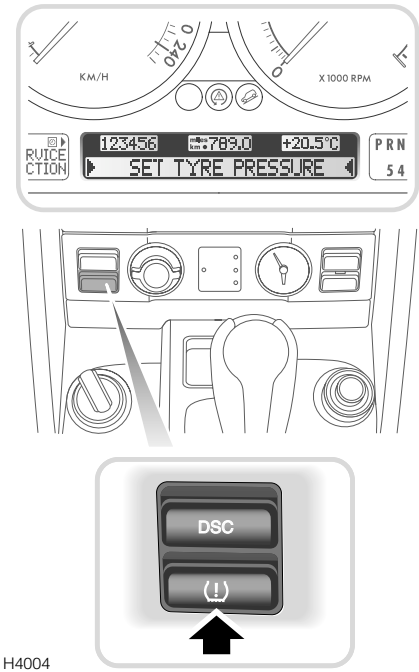
External temperature warning

If the external temperature drops to 3°C or less, a warning chime sounds, accompanied by a warning in the message centre. Take appropriate measures to defrost the vehicle and be aware that there may be ice on the roads.

Tyre 'blow-out' warning*

If there is a rapid loss of pressure in a tyre, 'TYRE DEFECT' appears in the main message centre, indicating which tyre has suffered pressure loss and a warning tone sounds. Slow down and stop as soon as safety permits, avoiding harsh steering or braking manoeuvres and replace the affected wheel.

TYRE PRESSURE MONITORING SYSTEM (TPMS)*



The tyre pressure monitoring system (TPMS) monitors the tyre pressures of the vehicle, displaying a warning in the main message centre if a gradual or sudden loss of pressure occurs in one or more of the tyres.

Setting the tyre pressures

Check the tyre pressures (with the tyres cold), and ensure that they are correct for your vehicle (see *'WHEELS & TYRES', page 242*). Then, carry out the following procedure:

1. Turn the starter switch to position 'II' (but DO NOT start the engine).
2. Press and hold the TPMS button (arrowed in inset). A series of stars is displayed in the main message centre as the system checks the individual tyre pressures, followed by 'SET TYRE PRESSURE'.
3. If the current tyre pressures are outside the TPMS pre-set limits, 'SET TYRE PRESSURE' fails to appear in the main message centre. Re-check the tyre pressures.
4. Start the engine and drive the vehicle for several minutes, the TPMS system then stores these pressures as the nominal values that it will then monitor.

This operation only needs to be repeated if the tyre pressures are subsequently corrected.

TPMS operates automatically as soon as the starter switch is turned to position 'II' and does not need to be selected manually.

If the vehicle loading conditions alter significantly, the TPMS should be reset to accommodate the change in tyre pressure.

If the tyre pressure drops

If the tyre pressure drops (due to normal usage) below the set threshold, the warning light in the instrument pack will illuminate and 'CHECK TYRE PRESSURE' will appear in the main message centre.

Check all tyre pressures and ensure that they are correct.

If a tyre is changed
If the replacement wheel is fitted with TPMS, then the system will take up to 15 minutes to register the new condition (if pressure is lost during this time, 'CHECK TYRE PRESSURE' will appear in the main message centre).

If the space saver spare wheel is used, or if a replacement wheel is NOT equipped with TPMS, 'TYRE CONTROL INACTIVE' will appear in the display once the system check period is completed.

TPMS valves are metal, not rubber and are therefore distinctly different to normal tyre valves. When a tyre is replaced, DO NOT replace the valve.

After a tyre change, check the tyre pressures are correct, then press the TPMS button to reset the system.

If the tyres on your vehicle are rotated (front to back, or vice versa), then the pressures should be checked and the TPMS reset.

If a 'blow-out' occurs
If there is a rapid loss of pressure in a tyre, 'TYRE DEFECT' appears in the main message centre, indicating which tyre and a warning tone sounds.

Slow down and stop as soon as safety permits, avoiding harsh steering or braking manoeuvres and replace the affected wheel.

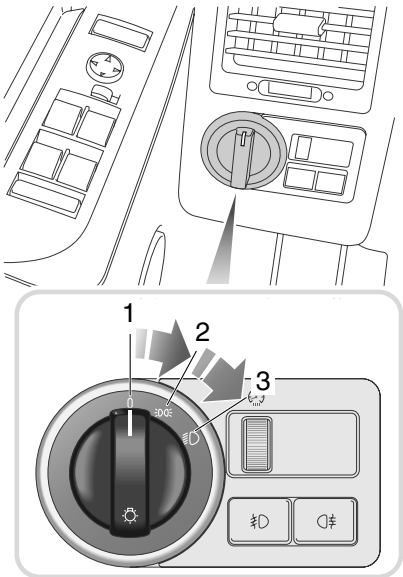
WARNING

TPMS can NOT register damage to the tyre. Regularly check the condition of your tyres, especially if the vehicle is driven off-road.

Other systems which share the same radio frequency as the TPMS, may interfere with the system. If this occurs, 'TYRE CONTROL INACTIVE' is displayed in the message centre.

This message is also displayed when there is a fault with the system or if a wheel NOT equipped with TPMS is fitted to the vehicle.

MAIN LIGHT SWITCH



H3866

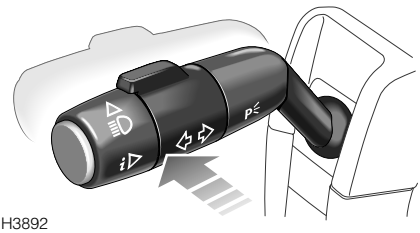
1. Lights off.
2. Side, tail and instrument panels lights on.
3. Headlights on.

Headlight courtesy delay
To illuminate the headlights for a short time after the vehicle is parked, turn the starter switch off with the headlights switched on ('LIGHTS ON' appears in the message centre). Then, turn the headlight switch to the off position - the headlights will remain illuminated for approximately 40 seconds after closing the driver's door, before turning off automatically.

If necessary, the courtesy delay may be cancelled at any time during this period by turning the starter switch or the main light switch on and then off again.

Headlight courtesy delay can be disabled by a Land Rover dealer, if required. The headlight courtesy time delay period can also be adjusted by a Land Rover dealer, to suit your requirements.

Headlight main and dipped beams


H3892

Push the lever away from the steering wheel to change headlights to main beam (BLUE warning light illuminates). Pull the lever back towards the steering wheel to change back to dipped beam headlights.

To flash the headlights, pull the lever part way towards the steering wheel and release.

Daytime running lights*
In certain markets, with the main lighting switch turned off (position 1), the headlight low beams will illuminate as soon as the starter switch is turned to position 'II'. The instrument panel illumination remains off.

Unless they are required or prohibited by law, daytime running lights can be disabled/enabled by a Land Rover dealer.

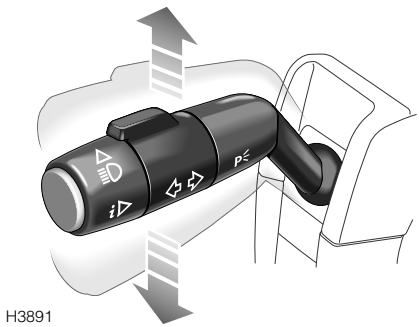
Parking lights

If required, the side and tail lights on the near or off-side can be left illuminated at a reduced output, when the vehicle is parked.

With the starter switch in position '0', move the lights and indicator stalk fully up (to illuminate the right hand sidelight and tail light) or fully down (to illuminate the left). Remove the starter key and lock the vehicle in the normal way - the lights will remain illuminated.

NOTE: *The lights remain on with a reduced power output, to help prevent inadvertently discharging the battery.*

DIRECTION INDICATORS



H3891

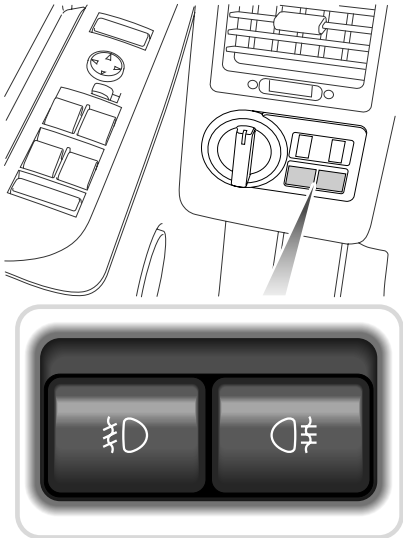
Move the lever DOWN to indicate a LEFT turn, and UP to indicate a RIGHT turn (the appropriate GREEN warning light on the instrument panel will flash in time with the direction indicators).

Hold the lever part-way up or down against spring pressure to indicate a lane change.

FOG LIGHTS

WARNING

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



H3887

Front fog lights

Press to operate, press a second time to switch off (the warning light in the instrument panel illuminates when the fog lights are switched on).

The fog lights can be operated ONLY when the starter switch is at position 'II' and the side or headlights are also switched on. The fog lights extinguish automatically when the side lights or the starter switch is turned off and need to be reselected when the starter switch is turned back on.

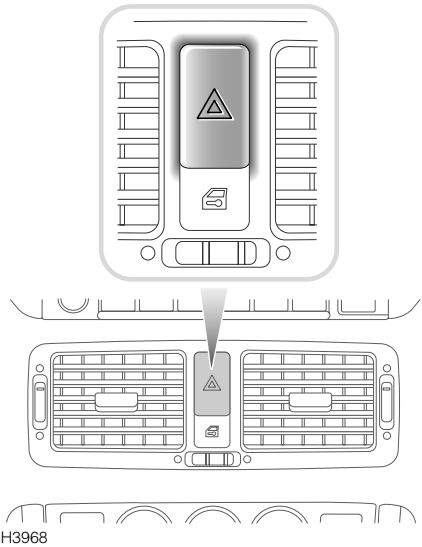
DO remember to switch off as soon as visibility is clear.

Rear fog guard lights

Press to operate, press a second time to switch off (the indicator light in the switch illuminates when the fog guard lights are switched on). The rear fog guard lights illuminate ONLY when the starter switch is in position 'II' and the headlights (or front fog lights) are also switched on. Switching off the headlights, or front fog lights, or turning the starter switch to position '0' will automatically extinguish the rear fog guard lights too (the lights will not illuminate again unless switched on).

ALWAYS remember to switch the fog guard lights off as soon as visibility permits; in clear conditions fog guard lights can dazzle other road users!

HAZARD WARNING LIGHTS



Press to operate; all the direction indicator lights (including those fitted to a trailer) will flash together. Use ONLY in an emergency to warn other road users when your stationary vehicle is causing an obstruction, or is in a hazardous situation. Remember to switch off before moving away.

OPERATING

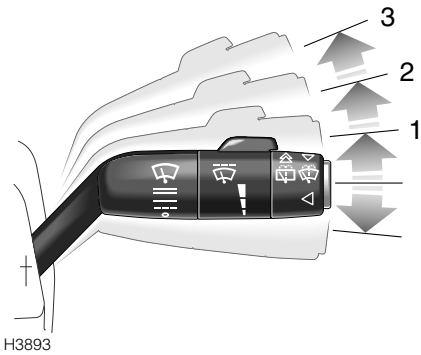
The wipers and washers will only operate when the starter switch is turned to position 'I' or 'II'.

IMPORTANT INFORMATION
• DO NOT operate the wipers on a dry screen. • In freezing or very hot conditions, ensure that the blades are not frozen or stuck to the glass. • In winter, remove any snow or ice from around the arms and blades, including the wiped area of the windscreen and the heater air intakes.

NOTE: *If the wiper blades have stuck to the glass, an electronic cut-out may temporarily prevent the wiper motor from operating. If this is the case, switch the wipers off, wait for 3 minutes (or turn the starter switch off and then on again) free them from the obstruction and then switch on again.*

Semi-automatic operation of the wiper blades is possible by setting the wiper control to the rain sensor variable delay* mode. In this mode, the wipers operate only when the rain sensor detects moisture on windscreen and remain inactive whilst the screen is dry. For further information, please refer to *'Rain sensor variable delay*', page 72*.

WINDSCREEN WIPERS



Rain sensor variable delay* or intermittent variable delay
Push the lever up to position 1.

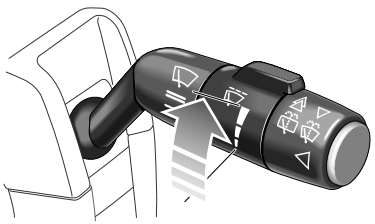
Normal speed wipe
Push the lever up to position 2.

Fast speed wipe
Push the lever up to position 3.

Single wipe
Pull the lever down and release immediately.

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

Intermittent variable delay


H3895

With the lever in position '1', rotate the switch clockwise to increase and anti-clockwise to decrease the frequency of the intermittent wipe.

Road speed sensor

The frequency of wiper operation is also adjusted automatically according to road speed. As the speed of the vehicle increases, the wiper frequency increases accordingly to help maintain optimum visibility. This feature is automatic and cannot be adjusted by the driver.

Speed sensitive wiper operation can be disabled by a Land Rover dealer.

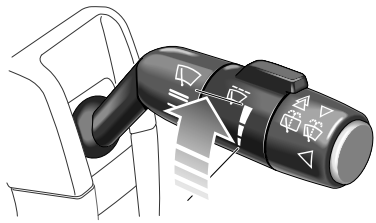
Speed step-down*

On vehicles NOT fitted with a rain sensor, if the vehicle comes to a halt with the wipers operating, the wipe frequency automatically reduces. If the wipers are set to high speed, they will switch to normal speed, if normal speed is selected, the wipers will switch to intermittent wipe. When the vehicle starts moving again, the original speed setting is restored automatically.

Rain sensor variable delay*

WARNING

Ensure that the rain sensor mode is deselected BEFORE entering an automatic car wash - otherwise, the wipers will operate during the car wash program and be damaged.

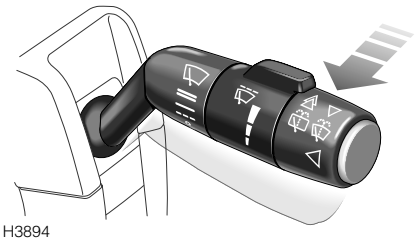

H3895

Your vehicle is equipped with an optical rain sensor fitted to the inside of the windscreen, immediately to the front of the rear view mirror. The sensor is able to detect varying amounts of dirt or water on the outside of the screen. With the wiper switch in the first position, the variable delay adjusts automatically according to the information supplied by the rain sensor, to increase or decrease the frequency of wiper operation. You can increase or decrease the sensitivity of the rain sensor and therefore the frequency of wiper operation, by rotating the control - either clockwise to increase or anti-clockwise to decrease sensitivity.

If the sensor detects constant rain, the wipers automatically operate continuously at normal speed wipe.

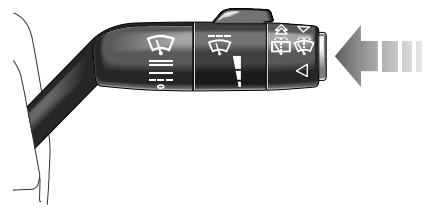
Wipers & Washers

WINDSCREEN WASHER



H3894

Pull the lever towards the steering wheel (for at least 0.5 seconds). The windscreen wipers will operate in conjunction with the washers for as long as the lever is held in this position, the wipers continuing for a further 3 wipes after the lever is released.



H4056

This feature can also be activated by pressing the button on the end of the lever.

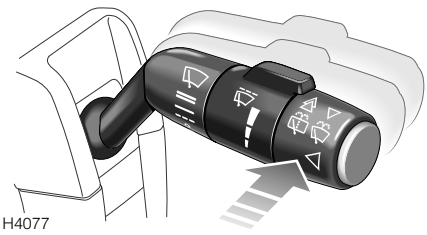
HEADLIGHT WASH/WIPE*

With the starter switch on and the headlights illuminated, the headlight washers operate automatically in conjunction with the windscreen washers as follows:

On the first operation of the windscreen washers, the headlight wipers operate for 4 wipes, with the headlight washers operating for the first two of those wipes. Subsequently, the headlight washers and wipers operate every fifth time the windscreen washers are operated (provided that at least 3 minutes has elapsed since the last headlight wash/wipe).

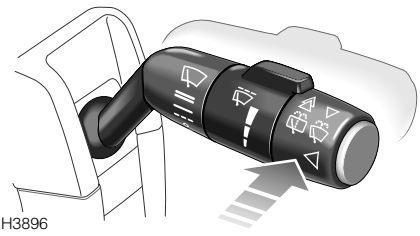
REAR WINDOW WIPER AND WASHER

Rear window wash/wipe



Push the lever forward to the first position, then forward again and hold against spring pressure for the required duration of window washing. The wiper operates automatically during washing and continues for a further 3 wipes after the switch is released.

Rear window wiper

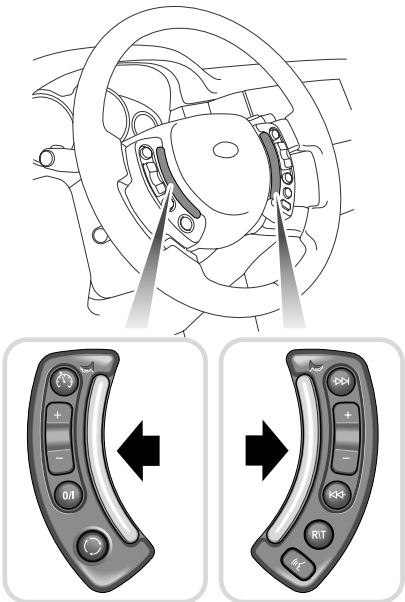


Push the lever forward to the first position to operate, the wiper operates intermittently until switched off.

The delay between wipes can be set by the driver. Turn the wiper on, then off - leave the wiper off for the desired delay period (0 - 30 seconds), then turn the wiper back on. If the switch is turned back on immediately, the wiper will operate continuously. The default delay is 10.5 seconds. If the starter switch is turned off, or the wiper switch is turned off for longer than 10 seconds, the delay returns to the default setting.

NOTE: *If the rear wiper is switched on, it operates continuously (as opposed to intermittently) whenever reverse gear is selected.*

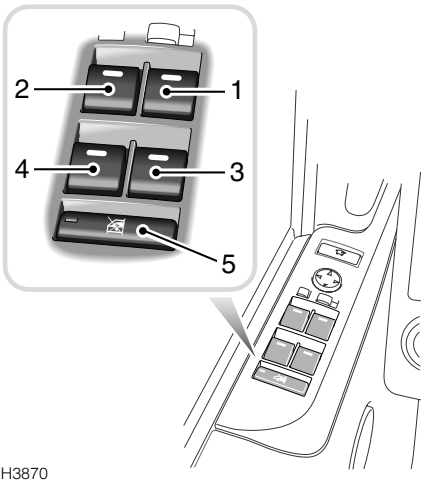
HORN



H4083

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

ELECTRIC WINDOWS



H3870

The switches on the driver's door operate the windows as follows:

1. Right hand front window.
2. Left hand front window.
3. Right hand rear window.
4. Left hand rear window.
5. Isolating switch for rear door window switches.

NOTE: *Rear windows can also be operated by the individual switches mounted on each rear door. The rear window switches will not operate if the isolation switch has been activated.*

Operating the windows

The electric windows can be operated when the starter switch is at position 'I' or 'II' and for up to 16 minutes after the starter switch is turned to position '0' (provided a front door is not opened).

Press lightly and hold the top of a switch to lower and lift lightly and hold the top of a switch to raise. The window will stop moving as soon as the switch is released.

WARNING

Accidental closing of an electrically operated window on fingers, hands or any vulnerable part of the body, can result in serious injury. Always observe the following precautions:

ISOLATE the rear window switches when carrying children.

ENSURE children are kept clear whilst raising or lowering windows.

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

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

It is recommended that the starter key is removed when leaving the vehicle.

'One touch' operation
By pressing firmly (and then releasing) the top of a switch, a window will open fully at a single touch. Window movement can be stopped at any time by BRIEFLY pressing the top of the switch.

To close the window at a single touch, firmly lift and release the top of a switch. Window movement can be stopped at any time by BRIEFLY lifting the top of the switch.

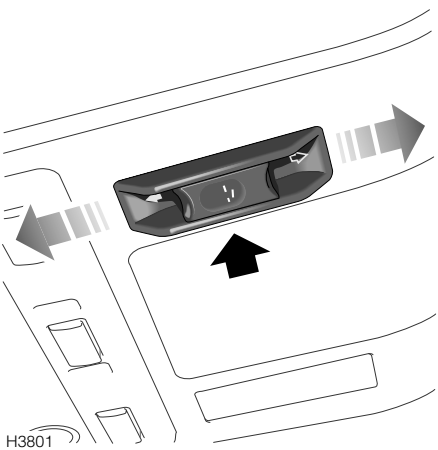
To stop window movement during a 'one-touch' open or close operation, operate the switch in the opposite direction to which the window is travelling.

Rear window isolation switch
Press once to isolate the window switches in the rear doors (the indicator light in the switch illuminates); press a second time to restore independent control.

Anti-trap mechanism
If the anti-trap sensor detects an obstruction during window closing, the closing operation is interrupted and the window backs off. This is a safety feature designed to prevent inadvertent closing of a window on vulnerable parts of the body or other obstructions. Remove any obstruction and then close the window.

If, for any reason, it is required to override the anti-trap mechanism, lift and hold the relevant window switch until the window has closed.

SUNROOF OPERATION*



The electric sunroof can be operated when the starter switch is at position 'I' or 'II', and for up to 16 minutes after the starter switch is turned off (provided a front door is not opened).

- ***To tilt the roof:*** Press the centre part of the switch - the rear edge of the roof automatically rises to the fully tilted position.
- ***To open the roof:*** Push the switch rearwards to the first position, the sunroof slides open until the switch is released - push the switch rearwards to the second position and release, to fully open the roof in one go.
- ***To close the roof:*** With the roof open or tilted, push the switch forwards to the first position - the roof closes until the switch is released.

  To fully close the roof in one go, push the switch forwards to the second position and release.

Anti-trap mechanism

If the roof encounters resistance during closing, the closing operation is interrupted and the roof opens slightly. This is a safety feature designed to prevent inadvertent closing of the roof on vulnerable parts of the body or other obstructions. Remove any obstruction and then close the roof.

WARNING

Accidental closure of a sunroof on fingers, hands or any vulnerable part of the body, can result in serious personal injury. Always observe the following precautions:

ENSURE that children are kept clear and that the sunroof is not obstructed when opening or closing.

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

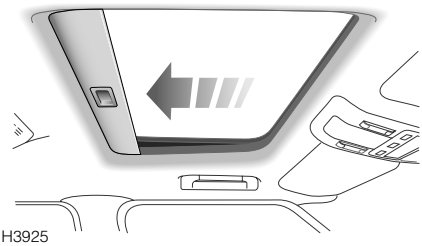
DO NOT allow passengers to extend any part of their bodies through the sunroof aperture while the vehicle is moving - injury from flying debris, branches of trees or other obstructions could occur.

ALWAYS close the roof when the vehicle is unattended.

Driving with the sunroof open

If, when driving with the sunroof open, unwanted drafts are experienced, open the front fascia air vents, and increase the blower speed if necessary. DO NOT operate the air conditioning.

Sunroof blind


H3925

Pull the sunroof blind across the sunroof aperture to open and close.

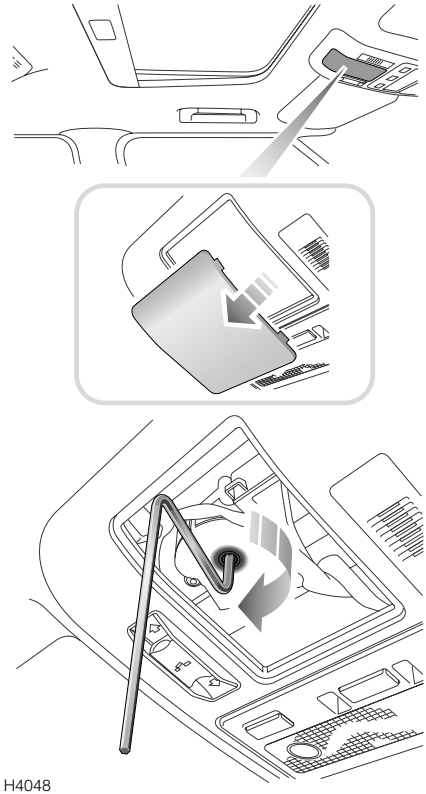
NOTE: *The sunroof blind can be opened and closed manually, but will retract automatically when the sunroof is opened, and will open slightly if the roof is tilted.*

Operation after power supply interruption
If the vehicle power supply is interrupted, the sunroof will need to be recalibrated as follows:

- WIth the power supply reconnected, fully tilt the sunroof open.
- Continue to push the switch in the tilt position for approximately 20 seconds.

The sunroof can now be operated as normal.

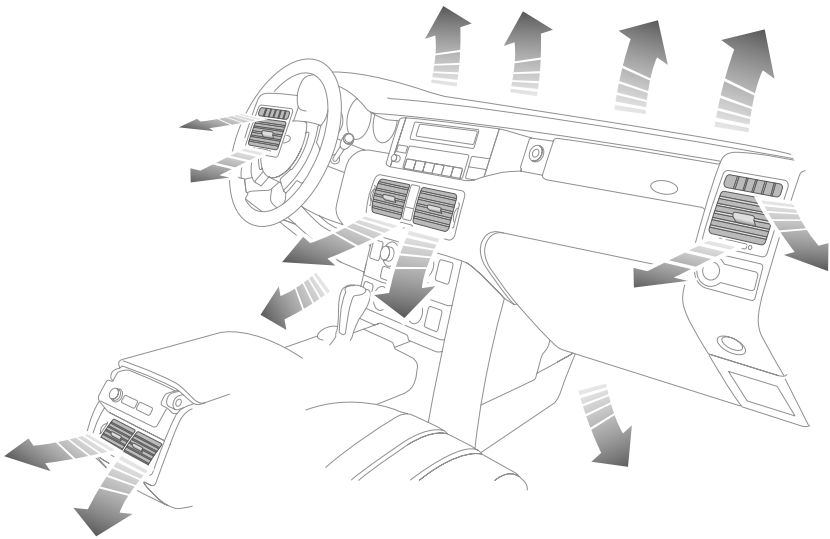
Emergency manual operation


H4048

If there is an electrical fault and the sunroof can not be closed in the normal way, the roof can be closed manually as follows:

- Using a suitable implement, lever off the cover (forward of the sunroof) to access the drive mechanism.
- Insert the Allen key, provided in the vehicle tool kit, into the aperture in the drive mechanism.
- Turn the Allen key to close the roof.

VENTILATION



H3974

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

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

Air outlets are provided to the windscreen, face and feet - the location of those vents is shown in the illustration above. The temperature of the air supplied to the vents is controlled by the heater.

Information concerning the operation of the heating and ventilation system, appears on the following pages.

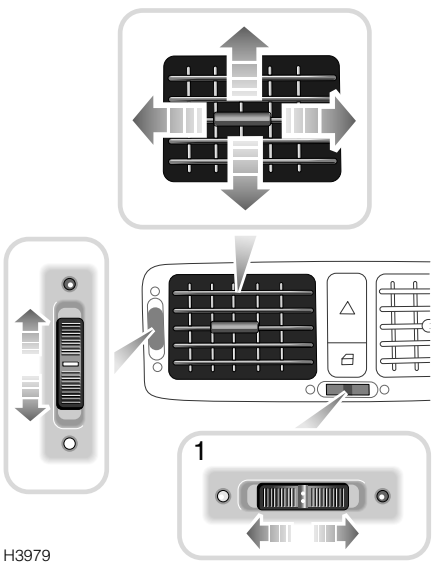
Air Vents

The temperature of the air from all vents is controlled by the temperature settings of the heater.

Rotate the thumbwheel towards the green indicator to open, or the white indicator to close the vents. Direct the air flow by moving the control in the centre of the louvres.

To ensure best ventilation and minimum noise, the vents should be fully open when the air conditioning air distribution control is set to face level.

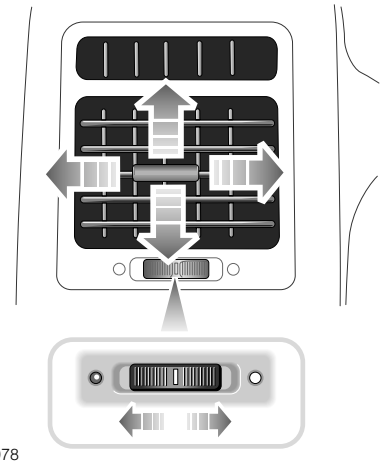
Centre foot/face level vents



H3979

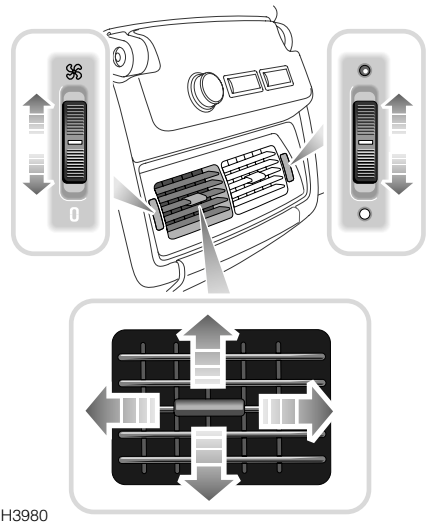
When the air conditioning air distribution control is set to either ‘Auto’ or ‘Face and Foot’ outlet, the temperature of the air emitted through the foot/face level vents can be finely adjusted to differentiate between foot and face temperature. Rotate the thumbwheel (1), towards the left (red indicator) for warm air and to the right (blue indicator) for cooler air.

Side face level vents



H3978

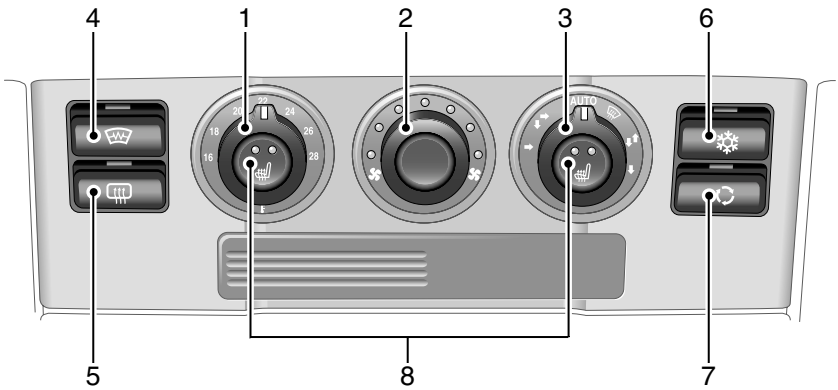
Rear vent controls



The left hand control operates the blower; rotate the thumbwheel upwards to increase the blower speed. The right hand control adjusts the temperature; rotate the thumbwheel upwards (red indicator) for warmer air, downwards (blue indicator) for cooler air.

NOTE: *The temperature set by the front occupants restricts the maximum level of warm air the rear passenger can select.*

CONTROLS (non-Comfort air conditioning models)



H3946

1. Temperature control
Rotate the control clockwise to increase the air temperature, or anti-clockwise to reduce the temperature.

NOTE: *The temperature settings around the outside of the control are given in degrees centigrade (ºC).*

2. Air blower control
Rotate the control to the clockwise to progressively increase the fan speed.

With the control at **'0'** the blower and air conditioning are switched off and the fresh air supply from outside the vehicle is shut off.

3. Air distribution control
Rotate to select the appropriate setting to direct air as required.

Air to face vents.

Air to face vents and foot outlets (to ensure best performance, the face vents must be fully open).

AUTO - This setting selects the most efficient heater settings to maintain an optimum level of comfort within the vehicle.

All air to windscreen (recommended for clearing heavy windscreen misting).

Air to foot outlets and windscreen (recommended for clearing mild windscreen misting).

- Air to foot outlets.

4. Heated front screen
Press to operate, the indicator light in the switch will illuminate whenever the screen heater is on.

5. Heated rear screen
Press to operate; the indicator light in the switch illuminates whenever the screen heater is on.

WARNING

DO NOT stick labels over the heating elements on the rear screen, and DO NOT scrape or use abrasive materials to clean the inside of the rear screen.

6. Air conditioning switch
With the engine running and the blower switched on, press to activate the air conditioning. The indicator light in the switch illuminates when the air conditioning is switched on.

7. Air recirculation switch
Press to recirculate air inside the vehicle (indicator light illuminates).

The air recirculation mode prevents the heating system from taking in fresh air from outside the vehicle. Instead, the air already inside the vehicle is recirculated, thus preventing the entry of traffic fumes. In cold weather air recirculation also enables warmer air to be used to defrost the windscreen when the engine is still cold.

WARNING

The air recirculation mode can cause the windscreen to mist. If this happens, switch off air recirculation immediately.

NOTE: *The air blower switch, air conditioning and air recirculation control will only operate with the starter switch at position 'II'.*

8. Seat heaters*
For further information on front and rear seat heaters, please refer to *'SEAT HEATERS*', page 91*'.

USING YOUR HEATER

Fresh air enters the heater unit through the grille in front of the windscreen and stale air is drawn out through vents in the rear of the vehicle.

The following examples of basic heater settings are intended as a general guide; the air distribution, temperature and blower controls can then be further adjusted to suit your comfort requirements. Always remember that full heating is not available until the engine has reached its normal operating temperature.

Maximum heating

Set the temperature control to maximum and the air conditioning air distribution control to 'AUTO', with the blower at the slowest speed (position 1) until the temperature gauge indicates that the engine is warming up - the blower speed can then be increased. Set the centre face ventilation temperature control fully towards the red indicator.

Demisting/defrosting

Switch on the air conditioning and the screen heaters, then set the temperature and blower controls to maximum. Set the air conditioning air distribution control to 'all air to windscreen', to obtain the maximum flow of heated air from the windscreen and side window vents. When defrosting, switching on air recirculation will help, but remember to switch off air recirculation as soon as defrosting has completed, to avoid windscreen misting.

Maximum ventilation

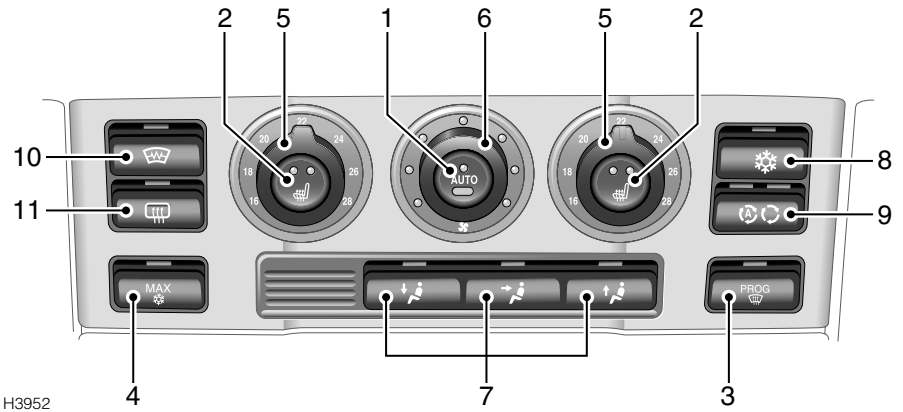
Set the temperature control to your preferred interior temperature. Switch on the air conditioning and select air recirculation. Set the air distribution control set to 'Air to face vents'. Ensure the face level vents are open and set the centre face vent temperature control fully towards the blue indicator. Adjust the blower speed to maximum.

Opening a window or the sunroof may improve ventilation. Remember; do not open a window or the sunroof, if the air conditioning is operating.

Auto cold start

In winter conditions, the Auto cold start function can be used to automatically maximise interior comfort levels.
To enable the function, turn the air conditioning air distribution control to 'AUTO'.

COMFORT AIR CONDITIONING



The air conditioning system features automatic temperature and air distribution control, which is programmed to maintain optimum levels of comfort within the vehicle in all but the most severe climatic conditions.

While the controls can be adjusted manually to satisfy individual requirements, allowing the system to function automatically (in Auto mode) is by far the simplest method of operation for the owner and is preferable in most operating conditions.

1. Auto mode

- Press 'AUTO' (1) for fully automatic operation (both indicator lights in the switch illuminate).
- Rotate the temperature controls (5) to select the required temperature.
- Let the automatic temperature control system do the rest.

In Auto mode, air conditioning, air distribution, blower speeds and air recirculation are adjusted automatically to achieve and then maintain the desired driving environment.

Both the air distribution and blower controls can be operated independently to override the automatic setting. In this case, the appropriate indicator light in the 'AUTO' switch extinguishes (the circular light represents the blower, the rectangular light represents air distribution). Press 'AUTO' again to re-establish automatic operation.

NOTE: *If the air distribution and blower controls are operated independently, the system may not be able to achieve or maintain the required temperature settings.*

2. Front seat heaters*

Press once to operate at a high level, press twice to heat the seats at a lower level. For further information concerning the operation of both front and rear seat heaters, please refer to *'SEAT HEATERS*', page 91*.

3. Defrost mode

If the windscreen is misting or covered in ice, press to activate the automatic defrost programme; the system will immediately direct its output to achieve maximum screen clearing by:

- setting the blower speed and temperature to maximum.
- distributing air flow to the screen only.
- deactivating the rear blower.
- deactivating air recirculation.

In addition, the rear and front screen heaters will be switched on (or their timed operating cycle will recommence if they are already switched on).

Press the button a second time (or select 'AUTO' or any air distribution control) to leave the Defrost mode.

4. Maximum air conditioning

This mode automatically activates the air conditioning and air recirculation, and sets the blower speed at maximum and the air distribution to the face level vents. This mode overrides the current temperature settings.

4. Engine off / heater function

During winter conditions, when the engine is turned off, press the button to provide heat to the cabin for a limited period of time (Max. 30 Mins.).

5. Temperature controls

Rotate the controls to set the required temperature for the corresponding side of the passenger compartment (left hand switch for the left side of the vehicle, and right hand switch for the right side).

Temperatures above 28°C and below 16°C cannot be set.

The temperatures on the control surrounds are relative, target, temperatures only and are not reflective of any specific temperature measured within the vehicle interior.

NOTE: *The system will not achieve temperatures on the passenger side of the vehicle that are more than 5°C greater or less than the temperature set for the driver's side.*

6. Blower control

Rotate clockwise to increase and anti-clockwise to decrease airflow from the vents.

7. Air distribution control

Press the appropriate button to select the desired distribution setting:


Foot level vents


Face level vents


Windscreen and side window vents

More than one setting can be selected at once, to get the desired distribution.

8. Air conditioning control

With the engine running, press the button to manually activate the air conditioning, or to switch off the air conditioning if it has been previously selected (manually or automatically).

9. Air recirculation

Air recirculation prohibits the entry of air from outside the vehicle, alternatively recirculating the air inside the vehicle instead. This is useful to prevent the entry of traffic fumes.

NOTE: *On some vehicles, there is also a remote air recirculation button on the steering wheel. This button is a simple on/off button and does not incorporate the automatic recirculation feature (see 'REMOTE AIR RECIRCULATION*', page 92).*

Press the button once to activate automatic recirculation. This feature automatically activates air recirculation when sensors fitted to the vehicle detect high levels of air pollution, therefore preventing the ingress of fumes into the vehicle (in a traffic queue, for example).

Press the button a second time to activate air recirculation.

Press the button a third time to deactivate air recirculation.

Air recirculation also significantly influences the dehumidifying and cooling performance of the air-conditioning system. Therefore, in Auto mode, air recirculation is regulated automatically to enable the air-conditioning system to achieve its optimum performance.

NOTE: *Prolonged recirculation may cause the windows to mist.*

10. Heated front screen

Press to operate, the indicator light in the switch will illuminate whenever the screen heater is on.

11. Heated rear screen

Press to operate; the indicator light in the switch illuminates whenever the screen heater is on.

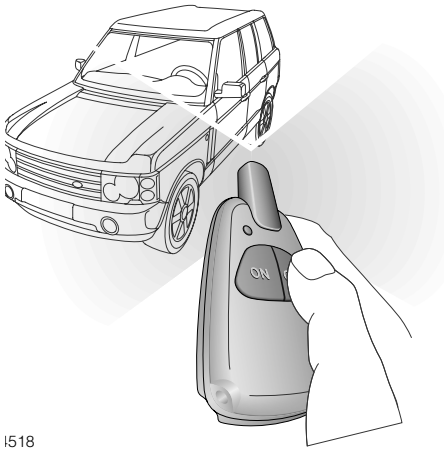
WARNING

DO NOT stick labels over the heating elements on the rear screen, and DO NOT scrape or use abrasive materials to clean the inside of the rear screen.

GENERAL NOTES

- For optimum operating efficiency, ensure all the air vents (including those in the rear of the vehicle) are open.
- For the automatic temperature control system to function efficiently, all windows (and the sunroof) should be closed, and the air intake vents free from ice, snow, leaves or other debris.
- In very humid conditions, slight screen misting may be experienced when the air conditioning system is turned on. This is a natural occurrence on most automotive air conditioning systems. It is not a fault and misting will clear after a few seconds once the air conditioning system is operating.
- The air conditioning compressor will not function unless the engine is running.
- 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.

REMOTE HEATING*

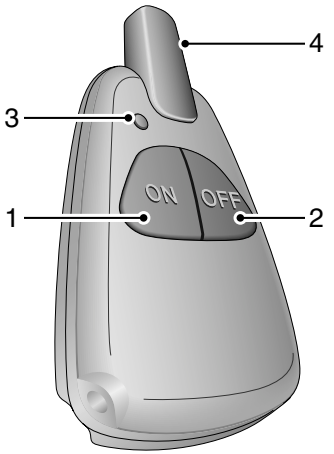


I518

Some vehicles are equipped with a remote heater control, which can be used to pre-heat your vehicle on a cold day, from the comfort of your home or office.

Using the remote handset

The remote handset transmitter control has a range of approximately 330 ft (100 m) and for optimum performance, should be held vertically when operated. There is no need to point the antenna at the vehicle and avoid touching the antenna when operating the ‘on’ or ‘off’ buttons.



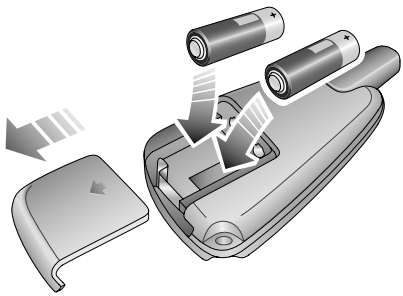
H4520

1. 'On' button.
2. 'Off' button.
3. Operation indicator light.
4. Aerial.

Press the 'on' button (1) for 1 to 2 econds: The indicator light (3) flashes every 2 seconds to confirm that an automatic heating program has been initiated and that the system is opertaing.

The heating program continues to operate until the 'off' button (2) is pressed. After 30 minutes, if the heating program has not been switched off using the remote handset, it will be switched off automatically, to prevent the vehicle battery discharging.

Replacing the handset batteries

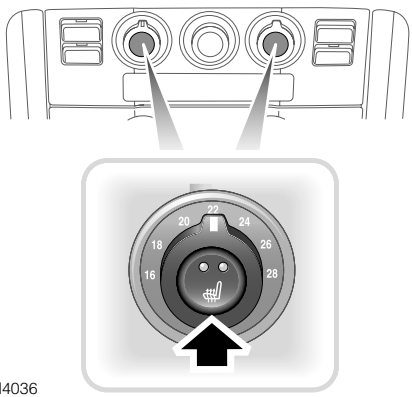


H4519

With the back of the remote handset facing uppermost, slide the battery cover back to reveal the battery compartment. Remove the old batteries and, ensuring that the correct polarity is maintained, insert two replacement 12 volt, size 'MN' batteries.

After battery replacement, ensure that the cover is refitted securely.

SEAT HEATERS*



H4036

Front seat heaters

H4037

Rear seat heaters

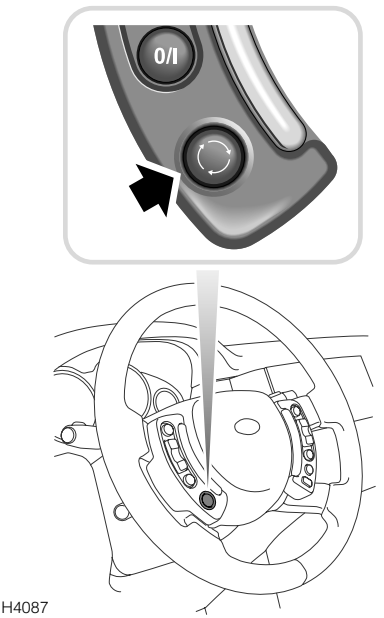
With the starter switch turned on, the seat cushion and seat back can be heated at two different levels.

- Press once to operate at a high level (both indicator lights illuminate).
- Press twice to heat the seats at a lower level (right hand indicator light extinguishes).
- Press the switch a third time to turn off the heater manually (both indicator lights will extinguish).

The seat heaters are thermostatically controlled and will operate intermittently to maintain a predetermined temperature. The indicator lights in the switches will remain illuminated until the heaters are either manually turned off, or if the starter switch is turned off.

IMPORTANT INFORMATION
The seat heaters consume considerable power from the battery. For this reason, they should ONLY be operated while the engine is running.

REMOTE AIR RECIRCULATION*

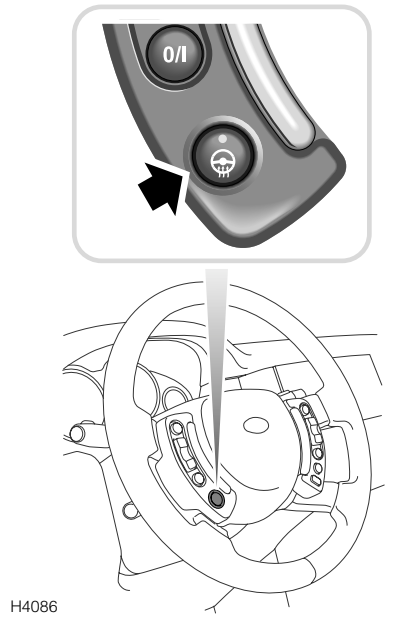


H4087

Press to turn air recirculation on or off. The indicator light in the main recirculation control will illuminate when air recirculation is active.

NOTE: *On vehicles not fitted with remote air recirculation or a heated steering wheel, no button is fitted in this position.*

HEATED STEERING WHEEL*

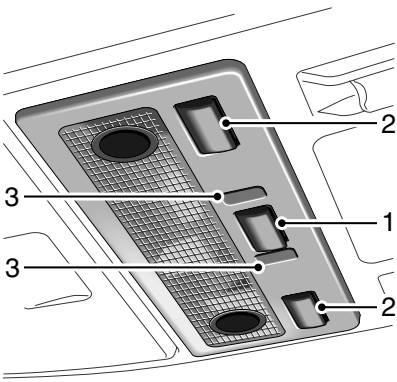


H4086

Press to activate the steering wheel heating elements. The heating elements are thermostatically controlled and operate intermittently (when switched on) to maintain a comfortable temperature. Press the switch again to manually deactivate the heater.

NOTE: *On vehicles not fitted with remote air recirculation or a heated steering wheel, no button is fitted in this position.*

INTERIOR COURTESY LIGHTS & MAP LIGHTS



Front interior light and map lights illustrated

The interior light illuminates automatically whenever the vehicle is unlocked, when the starter switch is turned off (provided the sidelights have been on in the last 30 seconds), or when a door or taildoor is opened. The light remains illuminated for 20 seconds after the doors and taildoor are closed, or until the starter switch is turned on.

After driving, the interior lights will fade and then extinguish as soon as the vehicle is locked or when all the doors and tailgate are closed.

NOTE: *If a door is left open the lights will automatically extinguish after 16 minutes, to prevent battery drain.*

To turn the light on and off manually, briefly press switch 1.

To turn off the automatic illumination feature (i.e. when a door is opened), press and hold switch 1 for 3 seconds. Repeat to restore the automatic illumination feature.

Vehicle finder

When returning to your vehicle, if you press the lock button on the remote handset, the interior lights will come on for 8 seconds to assist you in locating your vehicle in a busy car park.

Map light operation

Press the relevant map light switch (2) to turn on and off. If a map light is left on, it will extinguish after 16 minutes to prevent battery drain.

LOW LEVEL NIGHT TIME ILLUMINATION

With the main lighting switch turned to sidelights or headlights, the interior lights provide very low level illumination using the LEDs (3), in conjunction with the optional door bin and door handle lights. The level of illumination can be adjusted using the instrument illumination dimmer switch.

Low level lighting provides very limited illumination for the interior of the vehicle, whilst the vehicle is being driven, without affecting the driver's night vision.

GLOVEBOX LIGHT

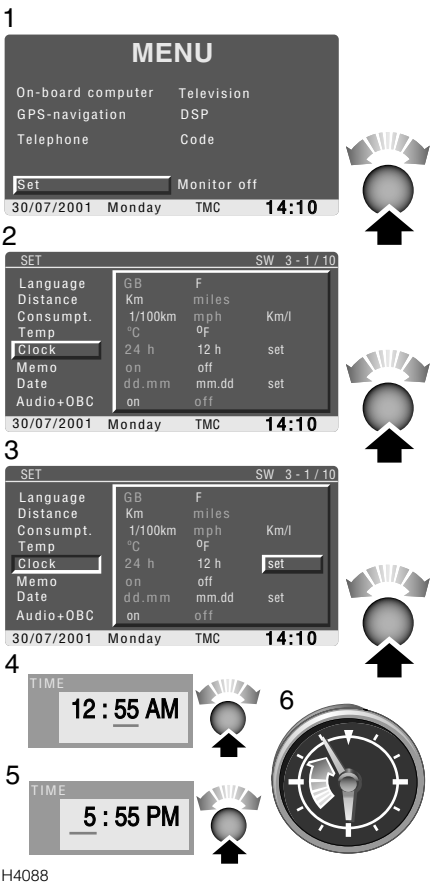
Illuminates automatically whenever the glovebox is opened and extinguishes when the glovebox is closed. If the glovebox is left open, the light will extinguish automatically after 16 minutes, to prevent battery drain.

APPROACH LIGHTS

A light, mounted in the bottom of each of the exterior mirror housings, illuminates for 20 seconds when the vehicle is unlocked. These lights illuminate the approach to the vehicle.

CLOCK

Setting the time - vehicles equipped with Satellite navigation*



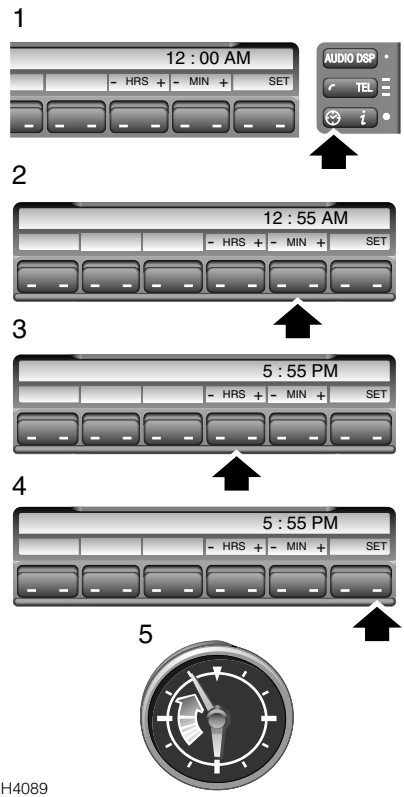
To set the time, firstly access the main menu on the navigation display, and then follow the process below:

1. Using the rotary select control, highlight and then press to select 'Set'.
2. Again using the rotary select control, highlight and select 'Clock' from the 'Set' menu.
3. On the 'Clock' line, highlight and select 'set'.
4. The current time setting appears in the display, with a green line below the minutes. Rotate the select control to adjust the minutes setting, press to confirm.
5. The green line will now appear below the hour. Rotate the select control to adjust the hour to the correct time, the press to confirm.
6. The time will be changed in the navigation system display and the analogue clock in the fascia will automatically adjust to the new time.

Using the clock

The analogue clock display illuminates constantly and dims automatically for night time viewing, when the side lights are illuminated. The dimming level can be adjusted using the instrument panel dimmer switch.

Setting the time - vehicles NOT equipped with Satellite navigation*

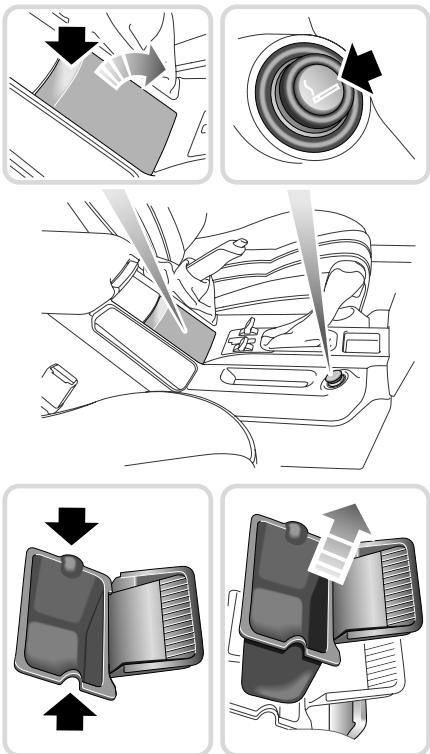


1. Press the 'Clock' button (arrowed) to view the current time setting.
2. Adjust the minute setting by pressing the function key (arrowed). Press the left side of the switch to decrease the minutes, press the right side to increase.
3. Adjust the hour setting by pressing the function key (arrowed). Press the left side of the switch to decrease the hour, press the right side to increase.
4. Press the function key (arrowed) to set the new time.
5. The time will be changed in the audio system display and the analogue clock in the fascia will automatically adjust to the new time.

Using the clock

The analogue clock display illuminates constantly and dims automatically for night time viewing, when the side lights are illuminated. The dimming level can be adjusted using the instrument panel dimmer switch.

CIGAR LIGHTER*



H3981

With the starter switch turned on, press the lighter in to heat up. When it has reached the correct temperature it will partially eject and can then be withdrawn for use.

- ONLY hold the cigar lighter by the handle.
- DO NOT plug accessories into the cigar lighter socket unless they are approved by Land Rover.

ASHTRAYS*

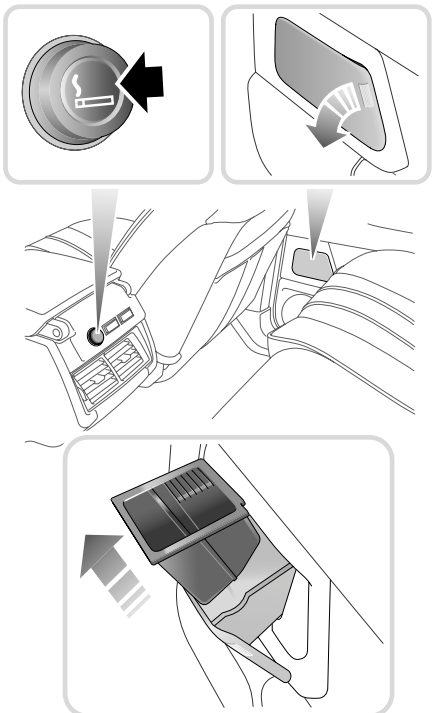
WARNING

DO NOT use the ashtrays for disposing of waste paper or other combustible items.

Front

Push the top edge of the ashtray cover to open (upper left inset). To remove the ashtray, open fully, then pull the ashtray upwards, using the tabs to each side of the ashtray bowl (arrowed in lower left inset). DO NOT pull upwards on the cigar stub plate.

Rear

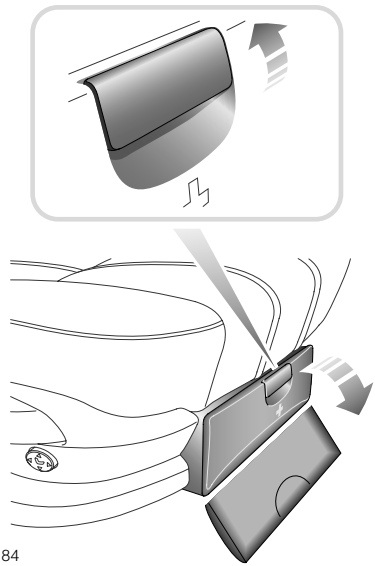


H3982

The rear ashtrays are set into the rear doors - pull where arrowed to open. To remove for emptying, open the ashtray and pull the inner compartment upwards.

The rear cigar lighter is incorporated in the rear of the cubby box, between the front seats. Operation of the rear cigar lighter is the same as that of the front cigar lighter.

UNDER SEAT STOWAGE BOX

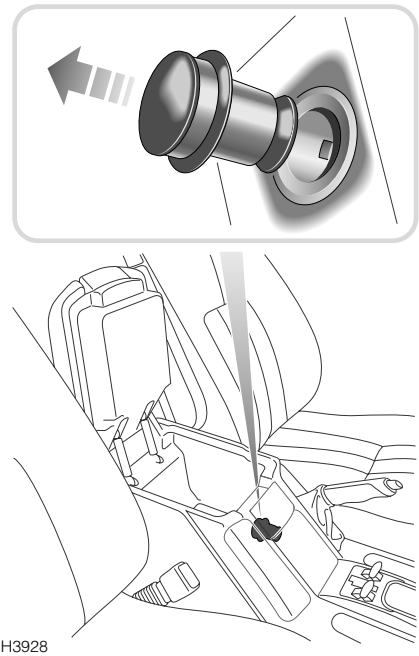


H4184

The under seat stowage box is located beneath the front passenger seat. To gain access, lift the catch (see inset) and open the lid.

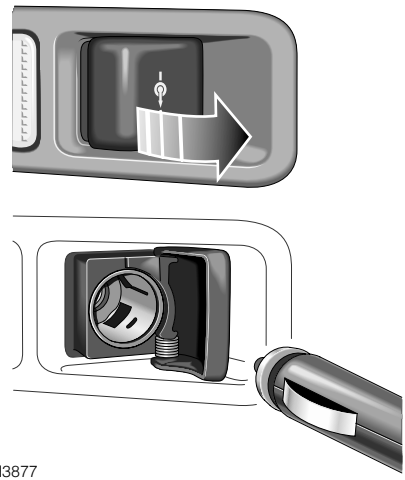
NOTE: *The stowage box provides the location for a first aid kit.*

AUXILIARY POWER SOCKETS



Cubby box power socket

An auxiliary power socket is mounted in the cubby box, between the front seats.



Rear loadspace power socket

A second power socket is located on the right hand side of the rear loadspace area.

Using a power socket

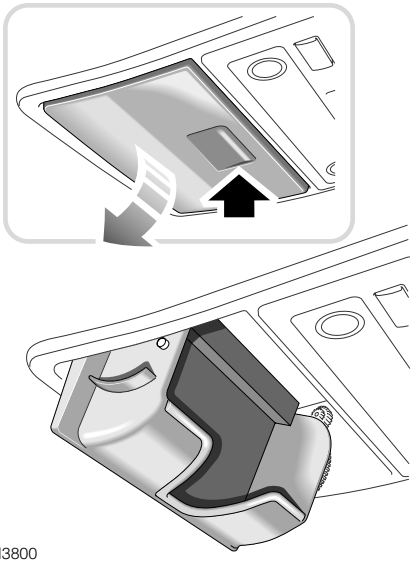
The power sockets can be used to power Land Rover approved accessories that use a maximum of 180 watts.

Always run the engine during prolonged use of electrical accessories, otherwise the battery may become discharged.

WARNING

NEVER plug non-approved accessories into a power socket - damage to the vehicle's electrical systems could occur.

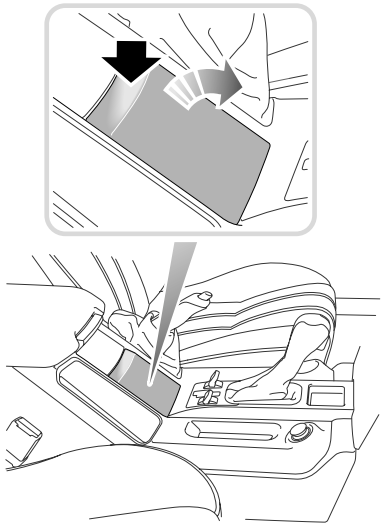
SUNGLASSES HOLDER



H3800

Press where arrowed (in inset) to open.

TRINKET BOX*



H4073

Push the top edge of the box cover to open (see inset). To remove, pull the box upwards ant out of the aperture. When refitting, ensure that the ridges on the sides of the box align correctly with the locating channels on the sides of the aperture.

CUP HOLDERS

WARNING

The driver should not drink and should not use the cup holder while driving.

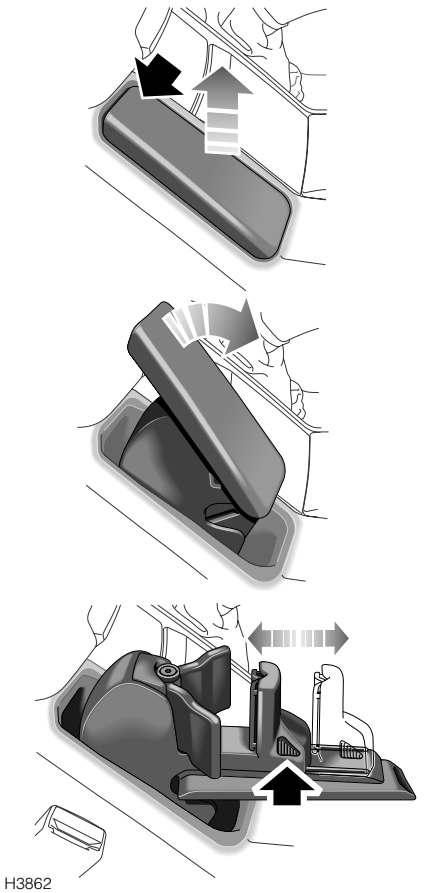
If the cup holder is retractable, it should be kept closed when not in use.

DO NOT place anything other than suitable drinks containers in the cup holder, because such items may be thrown about in the compartment and possibly injure occupants in the event of an accident or emergency manoeuvre.

Do not carry open-top drink containers in the cup holders while the vehicle is in motion; a spilled hot drink could cause personal injury. Spilled drinks can also damage upholstery, carpeting and electrical components.

Use only for soft containers. DO NOT use to hold cups made of glass, china or hard plastic, as these may cause injury in the event of an accident or emergency manoeuvre. Unopened, sealed containers (drinks cans, for example) are hard objects and may also cause injury.

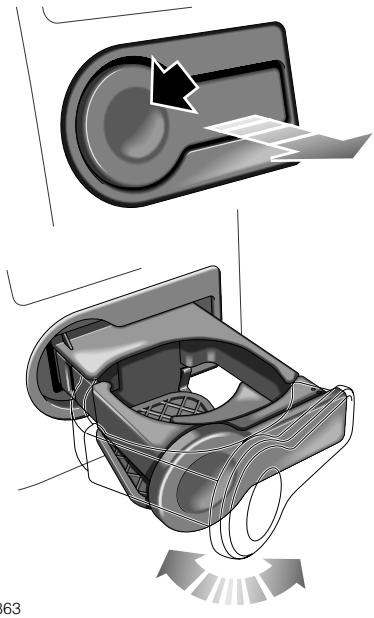
Driver's



Push the top of the cover to open (upper solid arrow). Push the cover forwards to open the cup holder. Press the catch (lower solid arrow) and slide the cup holder clamp to adjust the aperture to suit the size of the cup.

NOTE: *The clamp has to be fully closed before the cup holder can be folded back into the centre console.*

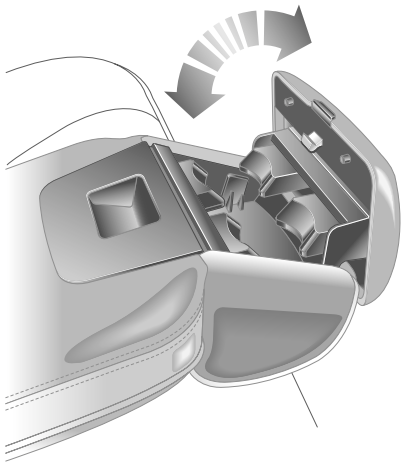
Front passenger's*



H3863

Press to open (solid arrow). When the holder is open, the leading edge can be pivoted out (as lower illustration) to adjust the aperture to suit the size of the cup. Push the cup holder in to close.

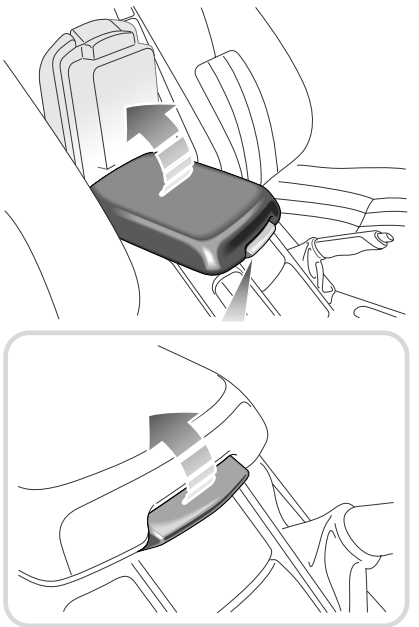
Rear passenger's



H3936

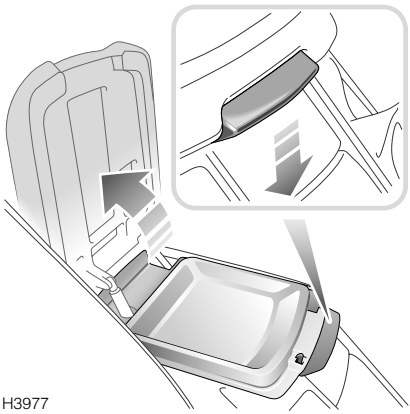
With the armrest folded down, depress the release catch and fold out the double cup holder (mounted in the back of the centre seat headrest).

CUBBY BOX



H3927

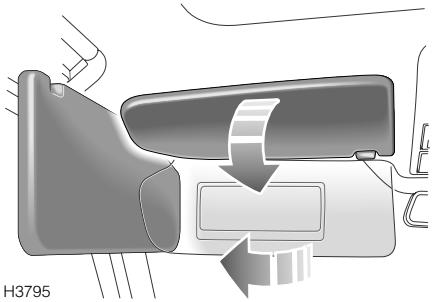
Lift the catch at the front of the cubby box lid to access the main cubby box.



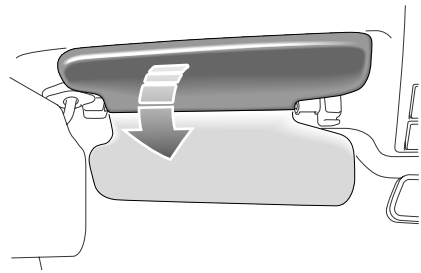
H3977

Press down on the catch and lift up the main lid of the cubby box to access the trinket tray and integral phone* compartment.

SUN VISOR

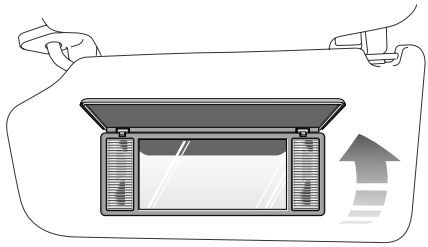

H3795

Pivot the sun visor downward to reduce sun glare through the front windscreen.
If required, the visor can then be pivoted towards the side window to reduce sun glare from that side of the vehicle.


H3796

A secondary visor is located beneath the main visor and can be used as required.

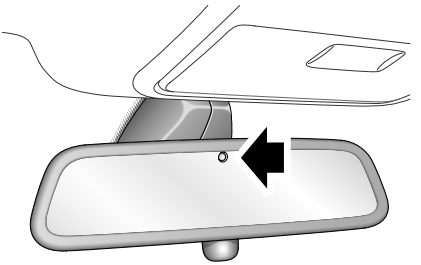
SUN VISOR VANITY MIRROR ILLUMINATION


H3797

Pivot the sun visor downward and raise the cover on the vanity mirror to illuminate the mirror. Close the cover to extinguish the lights. If the cover is left open, the lights will extinguish automatically after 16 minutes to prevent battery drain.

INTERIOR REAR-VIEW MIRROR

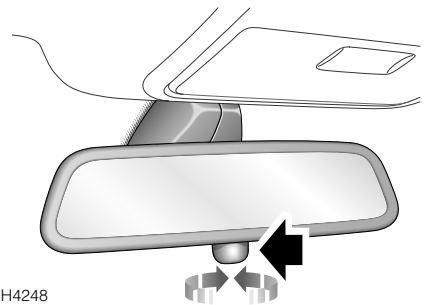
Automatic dipping mirror*



H3921

The automatic rear view mirror is equipped with an automatic dipping function which operates whenever the starter switch is turned to position 'II'. When powered, the light sensor (arrowed) detects excessive light and automatically dips the mirror, to reduce glare from the headlights of following vehicles in dark or low light conditions.

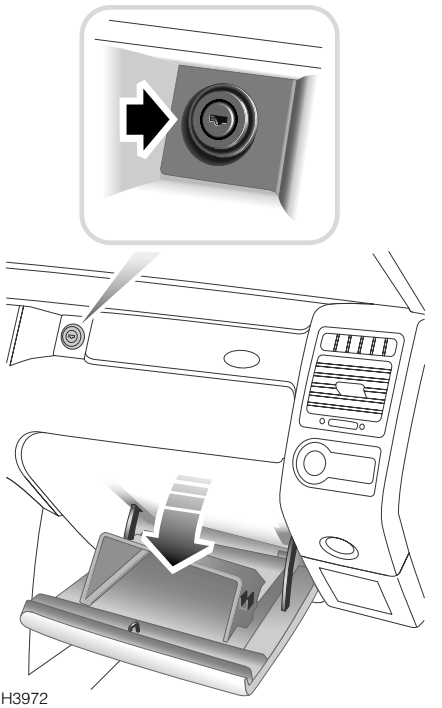
Manual dipping mirror*



H4248

To reduce glare from the headlights of following vehicles in dark or low light conditions, rotate the red anti-theft indicator light lens (arrowed) a quarter turn clockwise. Turn the lens a quarter turn anti-clockwise to return the mirror to normal reflection.

GLOVEBOX



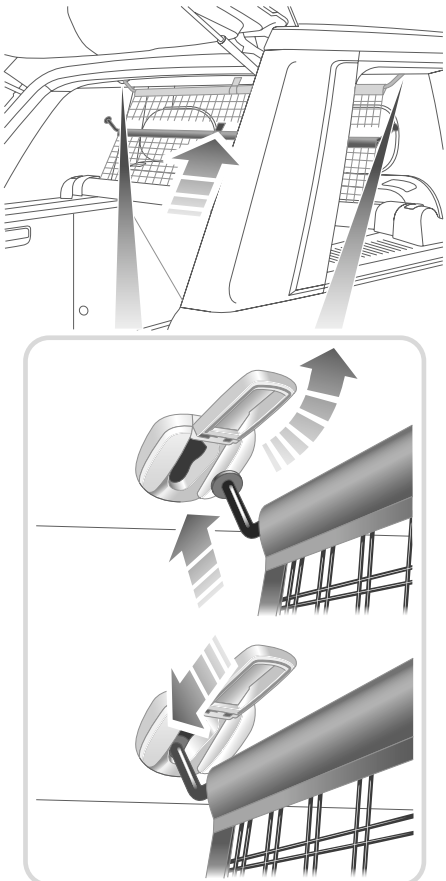
H3972

Press the release button (arrowed in inset) to open.

For added security, the starter key can be used to lock the glovebox.

LOADSPACE STOWAGE SAFETY NET*

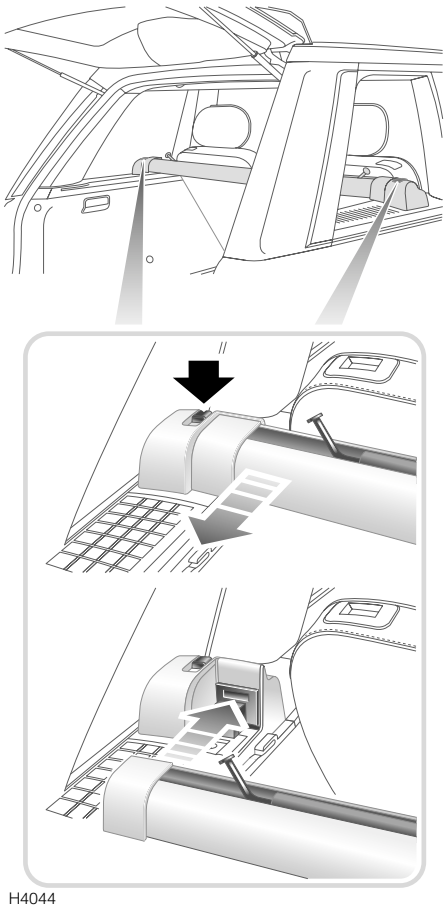
The loadspace stowage safety net is designed to prevent loose loads and items of luggage from entering the passenger compartment in the event of an accident or emergency manoeuvre.



H4045

To use the net, open the mounting covers in the roof lining (see inset) and pull the net towards the roof. Hook the tabs (arrowed) into the mounting slots.

Removing the safety net cartridge



H4044

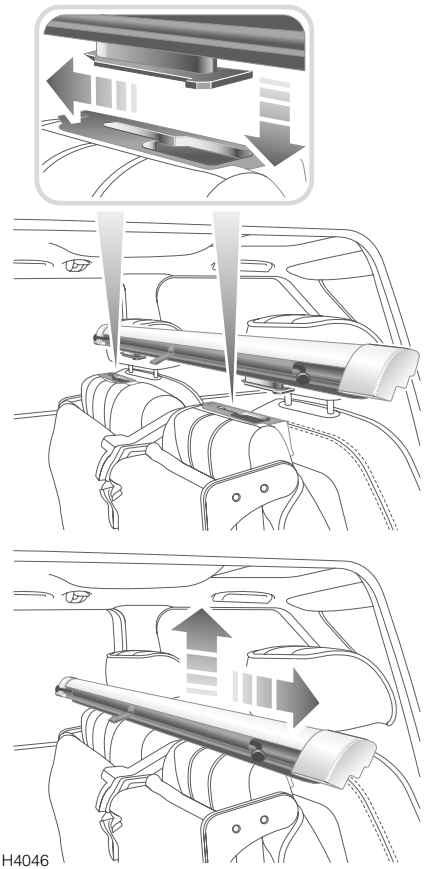
Press the catches down on the safety net cartridge to remove it from its mounting position to the rear of the rear seats.

To refit, push the net cartridge firmly back into the mounting position.

Using the safety net with the rear seats folded

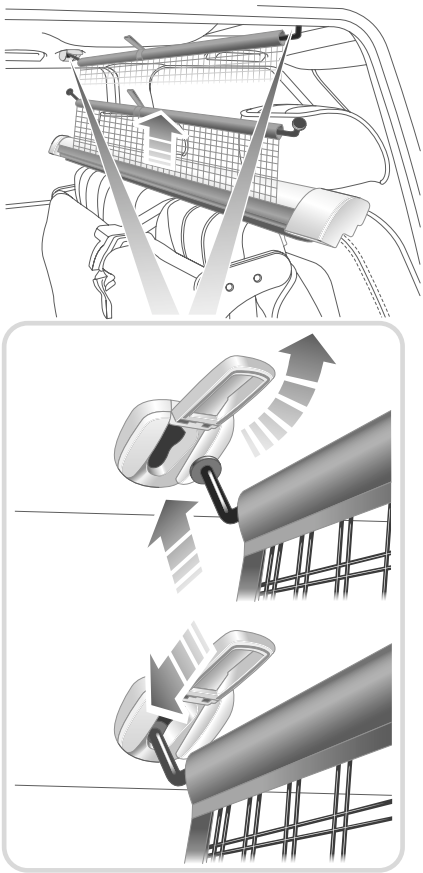
If the rear seats have been folded fully forward, the safety net can still be used to prevent items stored in the loadspace entering the passenger compartment, in the event of an accident or emergency manoeuvre.

Remove the safety net cartridge from its mounting point behind the rear seats, following the procedure described earlier in this section.



H4046

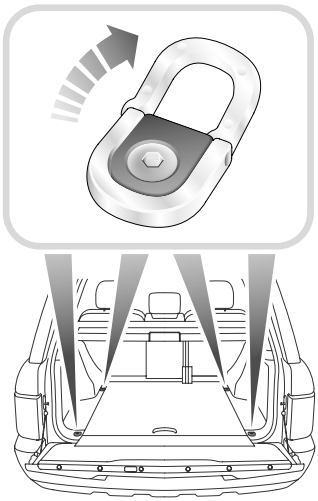
With the rear seats folded fully forward, slot the safety net cartridge into the apertures on the folded rear seat assembly (see illustration).



H4047

Open the forward mounting point covers in the roof lining and pull upwards and hook the tabs as illustrated above.

LUGGAGE ANCHOR POINTS



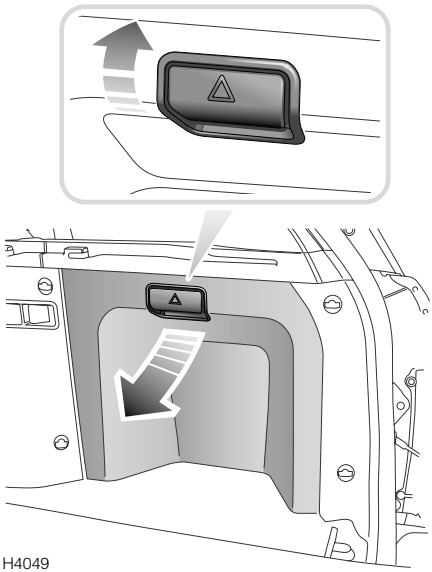
H4185

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

WARNING

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.

REAR LOADSPACE ACCESS HATCH



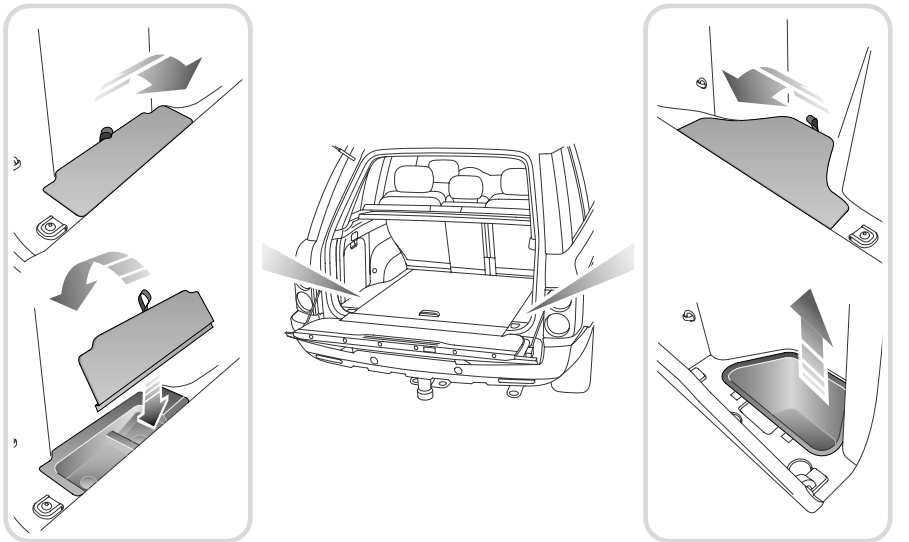
H4049

The access hatch is located on the right hand side of the rear loadspace and provides access to the warning triangle, the rear loadspace fuse box and the emergency fuel filler flap release.

Lift the catch (upper inset) and pull the hatch away from the side of the vehicle.

When refitting the hatch, ensure that it is securely and correctly fitted, before driving.

REAR LOADSPACE STOWAGE AREAS



H4232

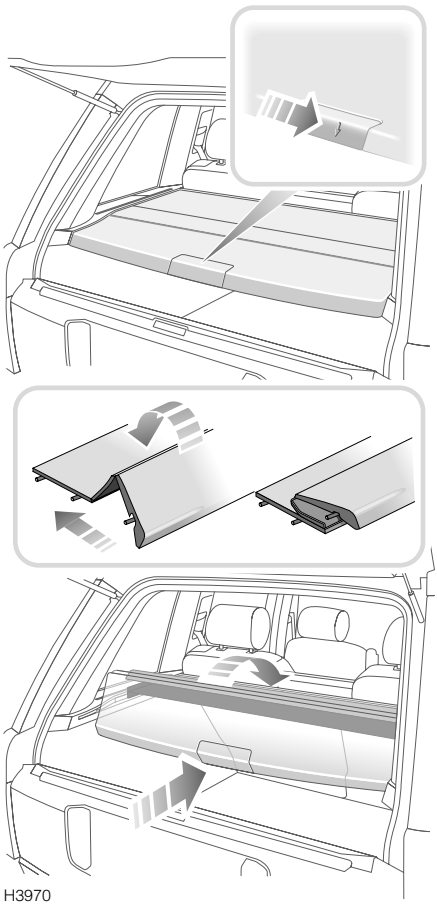
Hidden trinket tray
On the left-hand side of the loadspace, a small covered trinket tray is provided, to store smaller items in a concealed area. Pull up the tab to open the tray cover.

When replacing the cover, fit the right-hand edge first.

Removable stowage box*
On the right-hand side of the loadspace, a removable box is fitted, beneath the loadspace floor. Pull up the tab to open the box cover. Pull the box out to remove.

NOTE: *On vehicles fitted with a detachable tow bar, the removable stowage box is NOT fitted and is replaced by the tow bar stowage area.*

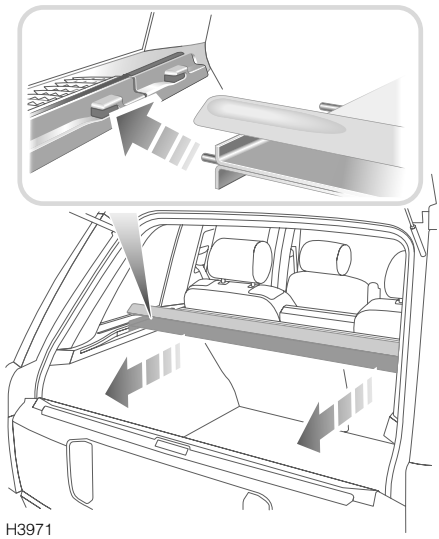
LOADSPACE COVER



H3970

Push firmly downwards and forwards on the centre of the rear edge of the cover (where arrowed in the upper inset), then lift and fold forwards.

Removing the loadspace cover



H3971

With the cover folded, pull the whole assembly rearwards, to disconnect the locating pins and withdraw the loadspace cover carefully from the vehicle.

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

WARNING

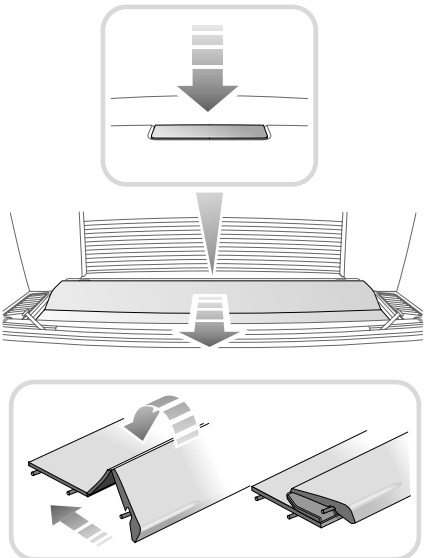
DO NOT carry loose items of luggage on top of the loadspace cover - these may obscure vision and could become dangerous projectiles in the event of a sudden stop or collision.

All equipment, luggage or tools carried in the loadspace should be secured to minimise the risk of injury to the driver and passengers in the event of an accident or emergency manoeuvre.

DO NOT store the loadspace cover loose in the vehicle.

Loadspace Cover

Folding the loadspace cover from inside the vehicle



H4051

If it is necessary to fold the loadspace cover from inside the vehicle (to access the emergency tailgate release lever, for example), remove the rear head restraints to improve access to the loadspace. From the rear seats, push firmly down on the centre rear edge of the cover (see upper inset), while pulling the cover towards the rear seats. The cover folds as shown in the lower inset.

IN-CAR TELEPHONES

A fully approved telephone package, including 'hands-free' operation and remote dialling, is available for your vehicle. Please consult your dealer for further information.

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

- Only use an installation kit incorporating an aerial external to the vehicle.
- Ensure that the installation is carried out by a competent installer.

WARNING

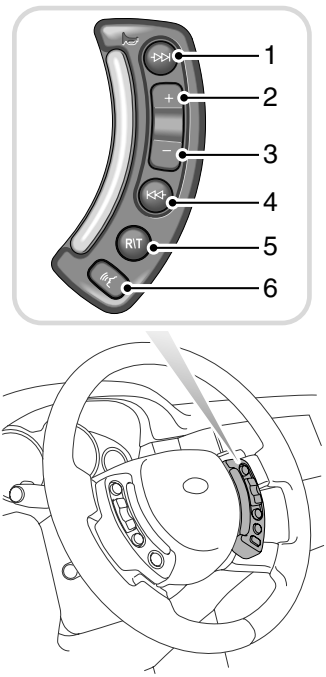
Using any hand-held appliance while driving can be dangerous. Always stop the vehicle before making a call and ensure the telephone is switched off while you are driving.

RADIO AERIAL

The aerial is etched onto the surface of the glass of the left hand rear side window.

No maintenance is possible, however it is important to ensure that the interior surface of the glass is protected from possible damage caused by contact with hard objects or from the injurious effects of abrasive cleaners.

RADIO REMOTE CONTROLS *



1. Search forward/ track select control
Press to change to the next radio station on the waveband.

During tape or CD play, press the control to move forward to the next track on the tape or disc. Operate the control repeatedly to move forward through several tracks at a time.

2. Volume increase control
Press to increase playback volume.

3. Volume decrease control
Press to decrease playback volume.

4. Search backward/track select control
Press to change to the previous radio station on the selected waveband.

During tape or CD play, press the control to move backward to the beginning of the current track on the tape or disc. Operate the control repeatedly to move backwards through several tracks at a time.

5. Radio/telephone change over switch
Press to switch operation from radio to telephone.

6. Telephone/voice recognition control*
Press to receive/terminate a call. Press to start dialling.

Press and hold to activate voice recognition. See the *'In-Car Entertainment'* or *'Audio, TV & Navigation system'* book for further information.

IN-CAR ENTERTAINMENT

Audio system

Full operating instructions for any audio equipment fitted as standard to your vehicle, are contained in the *'In-Car Entertainment' or 'Audio, TV & Navigation system'* book for further information.

CD autochanger*

The CD autochanger is located in the glovebox. Full operating instructions are contained in the *'In-Car Entertainment' or 'Audio, TV & Navigation system'* book.

WARNING

DO NOT insert or eject the magazine while driving.

Driving & Operating

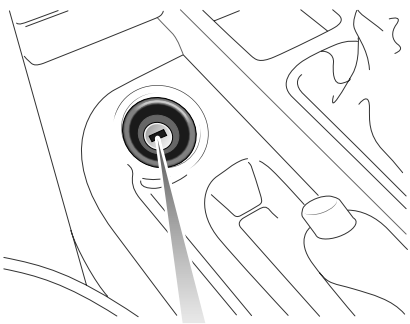
Hill Descent Control

Electronic Air Suspension

Towing

Load Carrying

STEERING COLUMN LOCK



H3923

The starter switch and steering column lock is located on the centre console, forward of the handbrake.

To unlock the steering column
Insert the key into the starter switch.

To lock the steering column
Remove the key from the starter switch.

NOTE: *The gear selector MUST be in the 'P' (park) position, before the starter key can be removed.*

WARNING

Once the steering lock is engaged, it is impossible to steer the vehicle. DO NOT remove the key while the vehicle is in motion.

NOTE: *Once removed, the starter key should not be left in close proximity to the starter switch. This can lead to the steering column lock operating repeatedly, discharging the vehicle battery.*

STARTER SWITCH

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

Position '0'

- Steering locked (if key is removed).
- Most lighting circuits are operational, including: sidelights, headlights and hazard warning lights.
- With the driver's door open, seat switches and seat memory facility operational.

Position 'I'

- Steering unlocked.
- Steering wheel adjusts to set driving position.
- Clock, audio system and cigar lighter can now be operated.

Position 'II'

- All instruments, warning lights and electrical circuits are operational.

Position 'III'

- The starting sequence is initiated - release the key immediately the engine starts cranking (the key returns to position 'II'). The engine will continue to crank automatically until the engine starts. Note that operation of position 'I' electrical functions will be interrupted during engine cranking.

NOTE: *The gear selector position 'P' or 'N' must be selected before the engine will start.*

STARTING - Petrol models

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.

Before starting the engine and driving, ENSURE you are familiar with the precautions shown under *'CATALYTIC CONVERTER*', page 122*.

In particular, you should be aware that if the engine fails to start, continued use of the starter may result in unburnt fuel damaging the catalytic converter.

1. Check that the handbrake is applied and that the gear selector is in the 'P' (Park) or 'N' (Neutral) position.
2. Switch off all unnecessary electrical equipment.
3. Turn the starter switch to position 'II' and then on to position 'III' to operate the starter motor. DO NOT press the accelerator pedal while starting, and RELEASE THE KEY as soon as the engine starts cranking (the engine will automatically continue cranking until the engine starts).

If the engine stalls or fails to start, you MUST return the starter switch to position 'I' before attempting to restart; the engine will not start by turning the starter switch from position 'II'.

NOTE: *The battery charging and oil pressure warning lights should extinguish as soon as the engine is running.*

Cold climates

In very cold climates the oil pressure warning light may take several seconds to extinguish. Similarly, engine cranking times will also increase; at -30°C the starter motor may operate continuously for as long as 30 seconds before the engine will start. For this reason, ensure that all non-essential electrical equipment is switched off.

After starting

Ensure that the handbrake and foot brake are firmly applied and the accelerator pedal is not depressed while moving the gear selector lever from 'N' or 'P', otherwise, the vehicle may move immediately the selector lever is moved to one of the drive positions ('D' or 'R'). This is particularly important when the engine is cold, because the engine will be idling at a faster speed than normal.

NOTE: *The foot brake MUST be applied, before the gear selection lever can be moved out of 'P' or 'N' into a drive position.*

STARTING - Diesel models

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.

Before starting the engine and driving, ENSURE you are familiar with the precautions shown under *'CATALYTIC CONVERTER*', page 122*.

1. Check that the handbrake is applied and that the gear selector is in the 'P' (Park) or 'N' (Neutral) position.
2. Switch off all unnecessary electrical equipment.
3. Insert the starter key and turn the switch to position 'II'. Wait until the glow plug warning light extinguishes.

   NOTE: *The waiting time will vary according to the engine coolant temperature (when the engine is hot, the glow plug warning light will extinguish almost immediately, or may not illuminate at all).*
4. Turn the key to position 'III' to operate the starter motor. DO NOT press the accelerator pedal while starting. RELEASE THE KEY as soon as the engine is running.

If the engine stalls or fails to start, you MUST return the starter switch to position 'I' 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 10 seconds before re-using the starter.

NOTE: *Continued use of the starter will not only discharge the battery, but may cause damage to the starter motor.*

NOTE: *The battery charging and oil pressure warning lights should extinguish as soon as the engine is running.*

Precautions

- **The diesel engine must not be run above idle speed until the oil pressure warning light extinguishes. This will ensure that the engine and turbo-charger bearings are properly lubricated before being run at speed.**
- **Similarly, ALWAYS allow the engine to idle for 10 seconds before switching off.**

Cold climates

In very cold climates the oil pressure warning light may take several seconds to extinguish. Similarly, engine cranking times will also increase; at -30°C the starter motor may need to be operated continuously for as long as 30 seconds before the engine will start. For this reason, ensure that all non-essential electrical equipment is switched off.

After starting

Ensure that the handbrake and foot brake are firmly applied and the accelerator pedal is not depressed while moving the gear selector lever from 'N' or 'P', otherwise, the vehicle may move immediately the selector lever is moved to one of the drive positions (D or R). This is particularly important when the engine is cold, because the engine will be idling at a faster speed than normal.

NOTE: *The foot brake MUST be applied, before the gear selection lever can be moved out of 'P' or 'N' into a drive position.*

DRIVING

IMPORTANT INFORMATION

Vehicle stability

Your vehicle has a higher ground clearance and, hence, a higher centre of gravity than ordinary passenger cars to enable the vehicle to perform in a wide variety of different off-road applications. An advantage of the higher ground clearance is a better view of the road, allowing the driver to more easily anticipate problems. Inexperienced drivers should take additional care, remembering that your vehicle is not designed for cornering at the same speeds as conventional passenger cars, any more than a low slung sports car is designed to perform satisfactorily in off-road conditions. As with other vehicles of this type, failure to operate your vehicle correctly may result in loss of control or even vehicle rollover.

Vehicle height

The overall height of your vehicle exceeds that of ordinary passenger cars. Always be aware of the height of your vehicle and check the available headroom before driving through low entrances. This is particularly important if the vehicle is fitted with a roof rack or if the sunroof is tilted open.

Instruments and warning lights

Before driving it is important to fully understand the function of the instruments and warning lights (see *'INSTRUMENT PANEL', page 52*).

NOTE: *Red warning lights are of particular importance, illumination indicating that a fault exists. If a red light illuminates, always stop the vehicle and seek qualified assistance before continuing.*

Warming-up

DO NOT warm-up the engine by allowing it to idle at a slow speed.

In the interests of fuel economy, it is advisable to drive the vehicle straight away, remembering that harsh acceleration and labouring the engine before the normal operating temperature has been reached can damage the engine.

Running-in

Proper running-in will have a direct bearing on the reliability and smooth running of your vehicle throughout its life.

In particular, the engine, gearbox, brakes and tyres need time to 'bed-in' and adjust to the demands of everyday motoring. During the first 800 km, it is essential to drive with consideration for the running-in process and heed the following advice:

- LIMIT maximum road speed to 110 km/h or 3,000 rev/min. Initially, drive the vehicle on a light throttle and only increase engine speeds gradually once the running-in distance has been completed.
- DO NOT operate at full throttle or allow the engine to labour in any gear. It is advisable NOT to use Sport Mode when running in.
- AVOID fast acceleration and heavy braking except in emergencies.

FUEL ECONOMY

Fuel consumption is influenced by two major factors:

- How your vehicle is maintained.
- How you drive your vehicle.

To obtain optimum fuel economy, it is essential that your vehicle is maintained in accordance with the manufacturer's service schedule.

Items such as the condition of the air cleaner element, tyre pressures and wheel alignment will have a significant effect on fuel consumption. But, above all, the way in which you drive is most important. The following hints may help you to obtain better value from your motoring:

- Avoid unnecessary, short, start-stop journeys.
- Avoid fast starts by accelerating gently and smoothly from rest.
- Do not drive in the lower gears for longer than necessary (in Manual mode).
- Decelerate gently and avoid sudden and heavy braking.
- Anticipate obstructions and adjust your speed accordingly well in advance.
- When stationary in traffic, select neutral ('N') to improve fuel economy and air conditioning performance.

AUXILIARY EQUIPMENT

WARNING

DO NOT use auxiliary equipment, such as roller generators, that are driven by one wheel of the vehicle, as they could cause failure of the gearbox differential.

EMISSION CONTROL SYSTEM

WARNING

Exhaust fumes contain poisonous substances which can cause unconsciousness and may even be fatal.

- ***DO NOT inhale exhaust gases.***
- ***DO NOT start or leave the engine running in an enclosed unventilated area, or drive with the taildoor open.***
- ***DO NOT modify the exhaust system from the original design.***
- ***ALWAYS repair exhaust system leaks immediately.***
- ***If you think exhaust fumes are entering the vehicle have the cause determined and corrected immediately.***

Land Rover vehicles are fitted with emission and evaporative control equipment necessary to meet a number of territorial requirements.

In many countries it is against the law for vehicle owners to modify or tamper with emission control equipment, or to sanction the unauthorised replacement or modification of this equipment.In such cases the vehicle owner and the repairer may both be liable for legal penalties.

It is important to remember that all Land Rover dealers are properly equipped to perform repairs and to maintain the emission control system on your vehicle.

CATALYTIC CONVERTER*

The exhaust system incorporates a catalytic converter, which converts poisonous exhaust emissions from the engine into environmentally less harmful gases.

WARNING

Catalytic converters can be easily damaged through improper use, particularly if the wrong fuel is used, or if an engine misfire occurs. For this reason it is VERY IMPORTANT that you heed the precautions which follow.

Fuel

ONLY use fuel recommended for your vehicle.

Starting the engine

- DO NOT continue to operate the starter after a few failed attempts (unburnt fuel may be drawn into the exhaust system, thereby poisoning the catalyst), and do not attempt to clear a misfire by pressing the accelerator pedal - seek qualified assistance.
- When starting a COLD engine, DO NOT drive if a misfire is suspected and do not attempt to clear a misfire by pressing the accelerator - seek qualified assistance.
- Do not attempt to push or tow-start the vehicle.

Driving

- 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.
- NEVER allow the vehicle to run out of fuel (the resultant misfire could damage the catalyst).
- Consult your dealer if your vehicle is burning excessive oil (blue smoke from the exhaust), as this will progressively reduce catalyst efficiency.
- On rough terrain do not allow the underside of the vehicle to be subjected to heavy impacts which could damage the catalytic converter.
- 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.

WARNING

Exhaust system 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.

Vehicle maintenance

- 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 systematic maintenance is carried out by a Land Rover dealer.
- DO NOT run the engine with a spark plug or HT lead removed, or use any device that requires an insert into a spark plug.

Fuel Filling

SAFETY ON THE FORECOURT

WARNING

Petroleum gases are highly inflammable and, in confined spaces, are also extremely explosive.

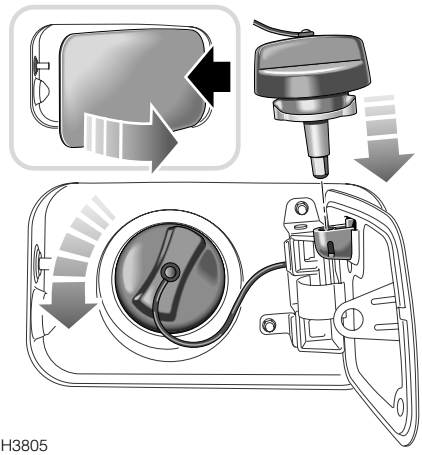
Always take sensible precautions when refuelling:

- Switch off the engine.
- Switch off mobile phones.
- Do not smoke or use a naked flame or light.
- Take care not to spill fuel.
- Do not overfill the tank.

FUEL FILLER

WARNING

DO NOT fully remove the filler cap until any captive tank pressure has been released.



H3805

The fuel filler is located in the rear right-hand wing. With the vehicle fully unlocked (all doors and tailgate), press the right side of the fuel filler flap to open (shown in inset).

Carefully turn the cap anti-clockwise and allow any fuel tank pressure to be released. Once the pressure is released, it is safe to fully remove the filler cap. When refuelling, insert the filler cap in the socket on the back of the filler flap (see illustration).

When replacing, tighten the cap clockwise until you hear the fuel cap ratchet click once.

TYPE OF FUEL

WARNING

On petrol engine vehicles fitted with a catalytic converter, serious damage to the catalyst will occur if LEADED fuel is used!

Petrol engine vehicles

- Use 95 RON UNLEADED petrol wherever possible. If 95 RON unleaded is unavailable, it is acceptable to run the vehicle on fuel with a RON rating down to 91 RON unleaded. In territories where only LEADED fuel is available, USE 95 RON LEADED

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. The RON values quoted above are MINIMUM requirements and can be safely exceeded.

During manufacture, engines are tuned to suit the fuel supplies commonly available in the country 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, seek advice from the territory concerned.

Using petrol with a lower octane rating, however, can cause persistent, heavy 'engine knock' (a metallic rapping noise). If severe, this can lead to engine damage.

If heavy engine knock is detected when using the recommended octane rated fuel, or if steady engine knocking is present while maintaining a steady speed on level roads, contact your dealer for advice.

NOTE: *An occasional, light, engine knock while accelerating or climbing hills is acceptable.*

Diesel engine vehicles

Use diesel or automotive gas oil (AGO) to EN 590.

The quality of diesel fuel (Derv) 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.

In markets where the sulphur content exceeds 0.3%, more frequent engine oil and filter changes will be required.

WARNING

If the fuel tank is accidentally filled with petrol it is ESSENTIAL that you contact your dealer BEFORE attempting to start the engine!

FUEL FILLING

WARNING

DO NOT attempt to fill the tank to its maximum capacity. If the vehicle is to be parked on a slope, in direct sunlight, or high ambient temperature, expansion of the fuel could cause spillage.

Filling station pumps are equipped with automatic cut-off sensing to avoid fuel spillage. Fill the tank SLOWLY until the filler nozzle automatically cuts-off the supply. DO NOT attempt to fill the tank beyond this point or spillage could result due to expansion of the fuel.

Petrol engine vehicles

In markets where unleaded petrol is available, the fuel filler neck will accept ONLY a narrow filler nozzle of the type found on pumps that deliver UNLEADED fuel.

In markets where only leaded petrol is available, the filler neck is designed to accept a leaded filler nozzle.

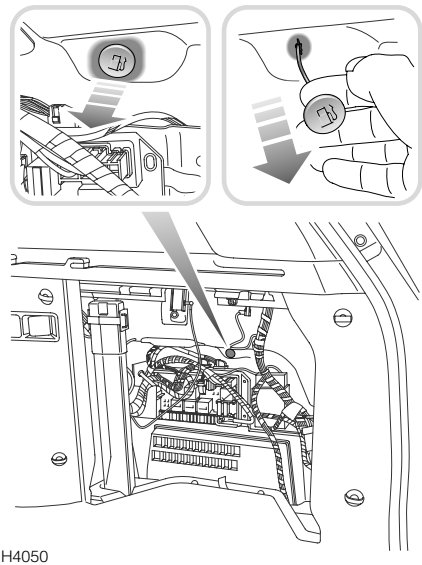
Diesel engine vehicles

The diesel pumps on garage forecourts 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.

EMPTY FUEL TANK

Running the fuel tank dry could create an engine misfire capable of damaging the catalytic converter. DO NOT RUN THE FUEL TANK DRY!

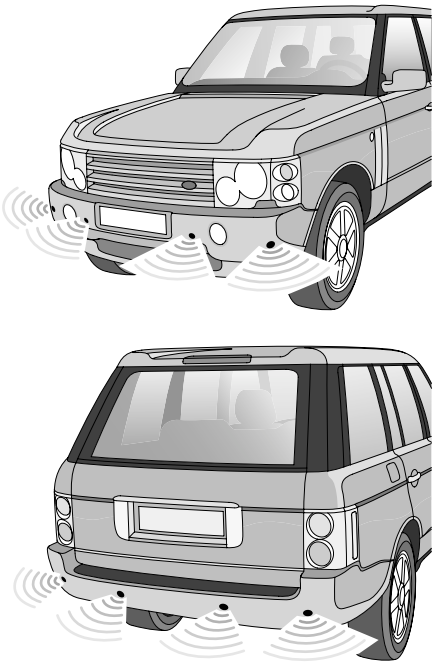
FUEL FILLER FLAP EMERGENCY RELEASE



H4050

If the vehicle battery has been disconnected or has discharged, the fuel filler flap can be opened manually. Open the rear loadspace access hatch (see *'REAR LOADSPACE ACCESS HATCH', page 107*). Pull the green release handle (as illustrated in the insets) to open the filler flap.

USING PARK DISTANCE CONTROL (PDC)*



H3934

WARNING

The parking aid is not infallible, it is for guidance only! The sensors may not be able to detect certain types of obstruction (narrow posts or small narrow objects, small objects close to the ground and some objects with dark, non-reflective surfaces, for example).

Park Distance Control (PDC) is a system that assists the driver when manoeuvring the vehicle into a parking space, or anywhere there are obstacles that need to be avoided, warning the driver accordingly.

The vehicle is fitted with four ultrasonic sensors on each of the bumpers.

The range of the front sensors, and the two sensors on the corners of the rear bumper is approximately 0.6 metre. The two centre rear sensors have a range of approximately 1.5 metres.

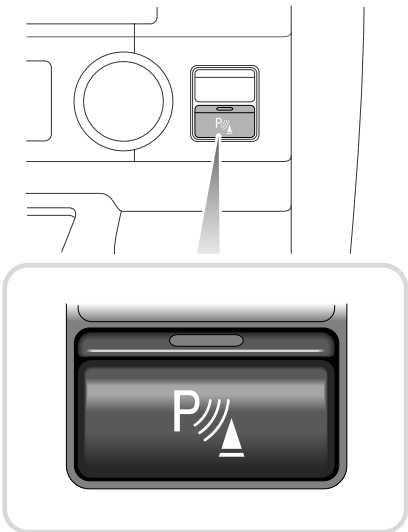
WARNING

Keep the sensors free from dirt, ice and snow. If deposits build up on the surface of the sensors, their performance may be impaired. When washing the vehicle, avoid aiming high pressure jets directly at the sensors at close range.

Park Distance Control

Activating PDC

PDC is automatically activated whenever the reverse gear ('R') is engaged. When the starter switch is turned on, the indicator light in the switch illuminates and a short tone sounds after 1 second as confirmation.



H3933

PDC can also be manually selected by pressing the switch (illustrated) on the centre front fascia (the indicator light in the switch illuminates and a short tone sounds as confirmation). A second press of the switch deactivates the PDC system. If PDC has been manually switched off by pressing the switch, it will not activate automatically until either the switch has been pressed again, or the starter switch has been turned off and on again.

NOTE: *The confirmation tone only sounds the first time that PDC is selected (either by selecting reverse, or by pressing the switch), unless the starter switch has been turned off between uses.*

If a long, high pitched tone sounds and the switch indicator light flashes when PDC is activated, then a fault in the system has been detected - contact your dealer for assistance.

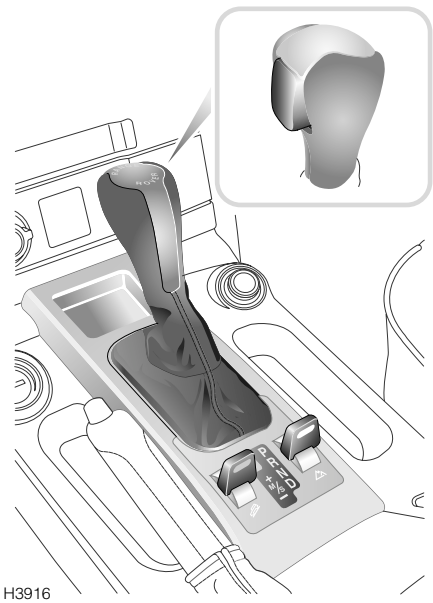
PDC in operation

The distance from an obstruction is identified by an intermittent tone sounding (higher pitch for the front sensors and a lower pitch for the rear). As the vehicle moves closer to an obstruction, the frequency of the tone increases proportionally.

When the distance between the sensor and the obstruction is less than approximately 0.30 metre, the tone becomes continuous.

PDC will remain active until the vehicle speed exceeds approximately 30 km/h or until the vehicle has travelled approximately 50 m, when it will automatically deactivate.

GEAR SELECTOR



The steptronic transmission provides both automatic and manual operation of the gears.

Automatic operation
The transmission is naturally in automatic mode. With the engine started, gear selection can be made by moving the selector backward or forward to the appropriate position in a similar manner to other automatic gearboxes.

GEAR SELECTOR LEVER

Selector release button
The gearbox is fitted with a locking mechanism, designed to minimise the risk of accidental selection of the 'P' (Park) and 'R' (Reverse) positions.

The selector release button (see inset) must be pressed while selecting 'P' and 'R', and also to enable the lever to be moved between the 'P' and 'R' positions.

NOTE: *With the engine running, or the starter switch in position 'II', the selector lever cannot be moved into a drive position unless the foot brake is applied.*

WARNING

DO NOT select 'P' or 'R' if the vehicle is moving.

DO NOT select a forward drive gear when the vehicle is moving backwards.

Keep engine speed as low as possible when moving the selector between 'R' and a forward gear.

NOTE: *The gear selector lever MUST be in the 'P' position before the starter key can be removed.*

Selector lever positions
An indicator light on the selector panel and a number or letter on the gear selector display in the instrument panel, identify the selected gear position.

'P' - Park:
This position mechanically locks the transmission and should be selected before switching the engine off. To avoid transmission damage, ensure the vehicle is completely stationary, with the handbrake applied, before selecting 'P'.

The selector release button MUST be pressed, in order to move the selector lever into, or out of, the Park position.

'R' - Reverse:
Before selecting reverse, ensure the vehicle is stationary, with the brakes applied. Press the selector release button in order to move the selector lever into Reverse.

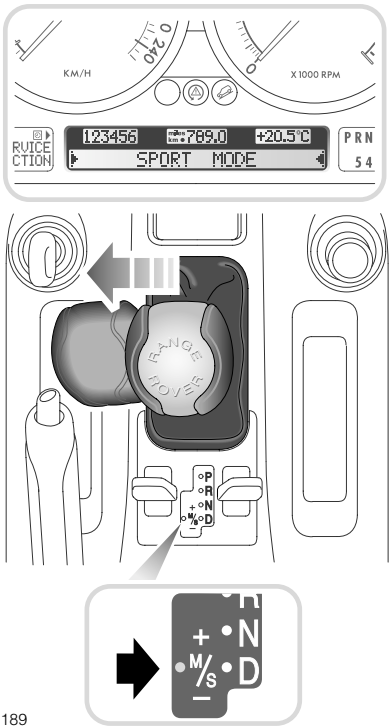
With the selector lever in the 'R' position, Hill Descent Control can be selected (see *'HILL DESCENT CONTROL', page 144*).

'N' - Neutral:
Select neutral when the vehicle is stationary and the engine is required to idle for a brief period (at traffic lights, for example). In neutral, the transmission is not locked, so the handbrake must be applied whenever 'N' is selected.

Press the selector release button to move from neutral to reverse.

'D' - Drive:
Select for all normal driving; full automatic gear changing occurs on all five forward gears, according to road speed and accelerator position.

Sport mode



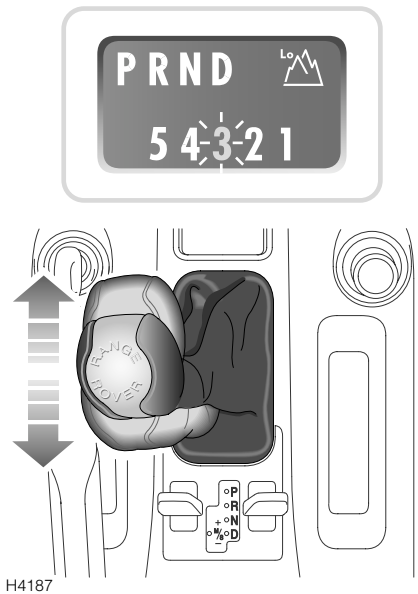
H4189

In sport mode, full automatic progression through the gear ratios is retained. By selecting Sport mode however, the power transmitted to the road wheels is increased by making lower gears more available. This results in improved mid-range performance, as the vehicle stays in the lower gears for longer. Sport mode also makes the lower gears more available for 'kick-down' operation.

To select Sport mode, move the gear lever sideways across the gate from the 'D' - Drive position towards the left hand side of the vehicle (see illustration). The word SPORT will appear in the transmission message centre (for approximately 6 seconds), the LED in the selector display to the rear of the selector lever (arrowed in inset) illuminates and 'SPORT MODE' is displayed in the main message centre for 6 seconds.

Sport mode can be deselected at any time, by returning the lever to the 'D' position.

MANUAL 'STEPTRONIC' GEAR SELECTION



Steptronic gear selection can be used as an alternative to fully automatic transmission and is particularly effective when rapid acceleration or engine braking into corner and descents are required.

There are five 'gears', all of which are selected sequentially by a single forward or rearward movement of the gear selector lever, as follows:

1. With 'D' (Drive) selected, move the gear selector lever sideways from the 'D' position towards the left hand side of the vehicle (this is exactly the same as selecting Sport mode).
2. The transmission then automatically selects the ratio most appropriate to the vehicle's road speed and accelerator depression.
3. A single forward ('+') movement of the selector lever will change the transmission to a higher gear, while rearward ('-') movement of the lever will change down to a lower gear. Repeated forward or rearward movements of the lever can be made until the desired gear ratio has been selected. The selected gear will be indicated in the digital display in the instrument panel (see inset).
4. To deselect manual mode, simply move the selector lever sideways, back to the 'D' position. Automatic gear changing will then resume.

NOTE: *In manual mode, 'kick-down' is still available for increased acceleration. See "Kick-down", page 132, for more information.*

Using 'Steptronic' in HIGH range

If manual mode is selected in HIGH range, 1st gear must be selected to move off from stationary, normal sequential gear changing can be utilised once the vehicle is moving.

Using 'Steptronic' in LOW range

If manual mode is selected in LOW range, the vehicle can move off from stationary in 1st, 2nd or 3rd gear - this is particularly useful to improve traction when driving off-road. See the *'Off-road Driving'* section of this handbook, for further details.

USING AN AUTOMATIC GEARBOX

The following information is particularly important for drivers who are unfamiliar with the techniques required to drive vehicles with automatic transmission.

Starting

The engine can only be started with the selector lever in the 'P' (Park) or 'N' (Neutral) positions.

- ALWAYS apply the handbrake and foot brake before starting the engine.
- KEEP THE BRAKES APPLIED while moving the selector lever into a drive position (the selector lever cannot be moved from the 'P' position unless the foot brake is applied).
- DO NOT 'rev' the engine or allow it to run above normal idle speed while selecting 'D' or 'R', or while the vehicle is stationary with any gear selected.
- ALWAYS keep the brakes applied until you are ready to move off - remember, once a drive gear has been selected, an 'automatic' will tend to creep forward (or backward if reverse is selected).
- DO NOT allow the vehicle to remain stationary for any length of time with a drive gear selected and the engine running (always select 'N' if the engine is to idle for a prolonged period).

WARNING

Vehicles fitted with automatic transmission can NOT be 'push' or 'tow' started.

Driving in 'D' or Sport mode

When driving, the transmission will automatically adjust to the most appropriate gear ratio, according to accelerator position, vehicle speed and terrain (whether the vehicle is driving uphill, downhill or on the flat).

Gear change speeds

With 'D' selected, the road speeds at which gear changes take place will vary according to the position of the accelerator pedal: minimum acceleration will result in gear changes at low road speeds, while larger throttle openings will cause the gearbox to delay gear changes until faster road speeds have been reached (thereby increasing the rate of acceleration). Depending on vehicle speed, moderate pressure of the accelerator pedal may result in a downshift in gear, further increasing the rate of acceleration.

With practice, gear changes can be made to occur at a wide range of road speeds depending on the accelerator position.

'Kick-down'

To provide rapid acceleration for overtaking, push the accelerator pedal to the full extent of its travel (this is known as 'kick-down'), a 'click' will be felt through the accelerator pedal. Up to a certain speed, this will cause an immediate downshift to the lowest appropriate gear, followed by rapid acceleration. Once the pedal is relaxed, normal gear change speeds will resume (dependent upon road speed and accelerator pedal position).

NOTE: *Moderate accelerator pressure may also result in a downshift in the transmission, depending on vehicle speed.*

'Kick-down' in manual 'Steptronic' mode:

When in manual steptronic mode, kick-down overrides the manual gear selection, to provide increased acceleration. The characteristics of kick-down operation differs according to the gear range selected (HIGH or LOW).

In HIGH range, with manual mode selected, kick-down will cause a downshift of at least two gears ('5' to '3', for example). When in LOW range, the downshift will only be one gear ('5' to '4', for example).

Parking
After bringing the vehicle to a stop, ALWAYS apply the handbrake and select 'P', before releasing the foot brake and switching off the engine. The starter key can only be removed if 'P' is selected.

ELECTRONICALLY SELECTED AUTOMATIC MODES

The transmission control system electronically selects different gear change modes, listed below, designed to suit a variety of driving conditions.

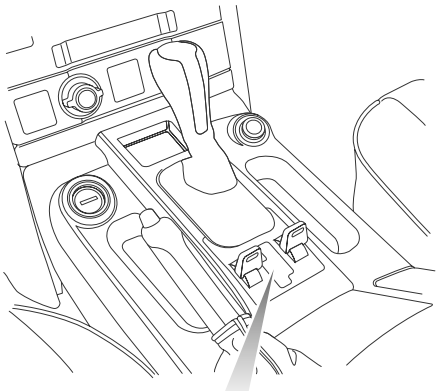
NOTE: *The electronic modes described below cannot be selected by the driver and will not operate if 'Sport' mode is selected.*

Hill ascent, trailer and high altitude mode
A suitable gear change pattern is selected which retains lower gears for longer, to counter momentum loss caused by more frequent gear changing, which can occur when climbing hills or when towing a trailer or caravan. This gear change pattern is also selected at high altitudes to combat reduced engine torque.

Hill descent mode
When in manual Steptronic mode, with the optimum gear for engine braking selected, the selector lever can then be moved across to the 'D' position. The transmission will retain the previously selected 'manual' gear until the descent is completed, then the transmission will automatically change to 'D'.

High coolant temperature mode
In high ambient temperatures during extreme load conditions, it is possible for the engine and the gearbox to overheat. At a certain temperature the transmission will select a gear change pattern designed to aid the cooling process, whilst enabling the gearbox to continue performing normally in high temperatures.

TRANSFER GEAR SWITCH



H3938

The second gearbox (known as the transfer box) is used to select either the high or low range of gears.

High range ('H')
The high range ratio should be used for all normal road driving and also for off-road driving across dry, level terrain.

Low range ('L')
Use the low range ratio ONLY in situations where low speed manoeuvring is necessary, such as reversing a trailer or negotiating a boulder strewn river bed; also use low range for more extreme off-road conditions where progress in high range cannot be maintained. DO NOT attempt to use the LOW range ratio for normal road driving.

USING THE TRANSFER GEARBOX

Your vehicle is equipped with an electronically controlled transfer gearbox. There are two ways of operating the transfer gear switch; the stationary method - recommended for inexperienced drivers - and the 'on the move' method for experienced drivers.

Stationary method
With the vehicle stationary and the engine running, apply the foot brake and then move the automatic gearbox selector to the 'N' (neutral) position before moving the transfer gear switch (arrowed) fully rearwards. When the switch is released, it returns to the default position.

Changing from high to low on the move
With the vehicle slowing down and travelling NO FASTER THAN 10 mph (16 km/h), select 'N' (neutral) in the main gearbox, then move the transfer gear switch fully rearwards (the switch returns to the 'forward' position when released). The low range indicator light in the gear selector display flashes while the range change is occurring. When the range change is complete, the light illuminates constantly, a warning chime will sound and 'LOW RANGE' is displayed in the message centre for a few seconds. Now select 'D' (drive) or manual 'Steptronic' mode. The transmission interlock prevents the engagement of a drive gear until the range change is complete.

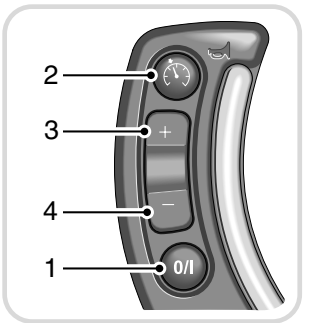
NOTE: *If the vehicle speed is too great when a range change is requested, a warning chime sounds and 'SLOW DOWN' appears in the message centre.*

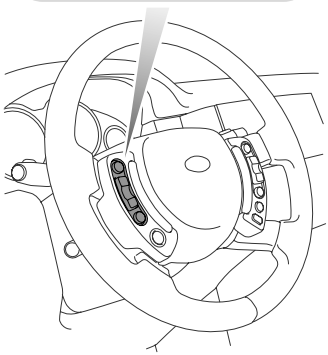
Changing from low to high on the move
With the vehicle travelling NO FASTER THAN 48 km/h, select 'N' (neutral) in the main gearbox, then move the transfer gear switch fully rearwards (the switch returns to the 'forward' position when released). The low range indicator light in the gear selector display flashes while the range change is occurring. When the range change is complete, the light extinguishes, a warning chime will sound, and 'HIGH RANGE' is displayed in the message centre for a few seconds. Now select 'D' (drive). The transmission interlock prevents the engagement of a drive gear until the range change is complete.

NOTE: *If the vehicle speed is too great when a range change is requested, a warning chime sounds and 'SLOW DOWN' appears in the message centre.*

NOTE: *If the vehicle is travelling at 3 km/h or less, then any change of ratio is to be carried out as if the vehicle is stationary (i.e. apply the foot brake and select 'N', before moving the transfer gear switch). This is necessary to prevent the interlock feature locking the selector lever in 'N'.*

CRUISE CONTROL*





H4084

Cruise control enables the driver to maintain a constant road speed without using the accelerator pedal. This is particularly useful for motorway cruising or for any journey where a constant speed can be maintained for a lengthy period.

The cruise control system has four switches:

1. Master switch (On/Suspend/Off).
2. Resume switch.
3. Accelerate set switch.
4. Decelerate switch.

IMPORTANT INFORMATION

Always observe the following precautions:

- DO NOT use cruise control when using reverse gear.
- DO NOT use cruise control in traffic conditions where a constant speed cannot easily be maintained.
- DO NOT use cruise control on winding or slippery road surfaces, or in off-road conditions such as rough tracks or on sand.
- Use of 'sport' mode is not recommended when cruise control is selected.
- ALWAYS switch off the master switch when you no longer intend to use cruise control.

NOTE: *Cruise control is NOT available when the vehicle is being driven in LOW range gears.*

To operate

1. Press the master switch (warning light in the instrument panel illuminates).
2. Accelerate until the desired cruising speed is reached. This must be above the system's operational minimum speed of 30 km/h.
3. Press the '+' switch (3) to set the vehicle speed in the system's memory. Cruise control will now maintain that road speed without the need for operation of the accelerator pedal.

With cruise control operating, speed can be increased by normal use of the accelerator e.g. for overtaking. When the accelerator is released, road speed will return to the selected cruising speed.

To reduce the cruising speed:
Press and hold the '-' switch (4); the vehicle will decelerate . Release the switch as soon as the desired speed is reached. The vehicle speed at the point of switch release becomes the new set speed.

Alternatively, the set speed can be decreased incrementally by 'tapping' the '-' switch. Each press of the switch will decrease the speed by 1 km/h.

NOTE: *Cruise control will not operate at speeds below 20 mph (30 km/h).*

To increase the set cruising speed:
Press and hold the '+' switch (3); the vehicle will accelerate . Release the switch as soon as the desired speed is reached.

The vehicle speed at the point of switch release becomes the new set speed.

Alternatively, the set speed can be increased incrementally by 'tapping' the '+' switch. Each press of the switch will increase the speed by 1 km/h.

A further alternative is to increase speed by normal use of the accelerator. When the desired speed is reached, press the '+' switch (3) to set the cruise control.

Suspending cruise control
Cruise control will suspend when the gear selector is moved into neutral, or when the brake pedal is pressed or if HDC or DSC becomes active. Cruise control can also be suspended by a single press of the master switch (1).

To resume cruise control at the previously set speed, press the resume switch (2).

Switching off cruise control
To switch off cruise control, press the master switch (1) once to suspend cruise control and then press and hold the switch again until the warning light in the instrument panel extinguishes.

NOTE:

Petrol Engine Models

The set speed held in the cruise control memory will be erased when either the master switch (1) or the starter switch is turned off.

Diesel Engine Models

The set speed will NOT be erased by pressing the master switch (1). The set speed will ONLY be erased when the starter switch is turned to position 'O' (off).

FOOT BRAKE

For your safety, the hydraulic braking system operates through dual circuits. If one circuit should fail, the other will continue to function. However, in the event of brake failure where only one circuit is operational, the vehicle should only be driven at slow speed to the nearest qualified dealer. In these circumstances, exercise extreme caution and be aware that increased brake pedal travel, greater pedal pressure, and longer stopping distances will be experienced.

Servo assistance

The braking system is servo assisted, but ONLY when the engine is running. Without this assistance greater braking effort is necessary to safely control the vehicle, resulting in longer stopping distances. Always observe the following precautions:

- NEVER allow the vehicle to freewheel with the engine turned off.
- ALWAYS take particular care when being towed with the engine turned off.
- If the engine should stop for any reason while the vehicle is in motion, bring the vehicle to a halt as quickly as traffic conditions safely allow, and DO NOT pump the brake pedal as the braking system may lose any remaining assistance available.

Brake pads

Brake pads require a period of bedding in. For the first 800 km, you should avoid situations where heavy braking is required.

Remember! Regular servicing is vital to ensure that the brake pads are examined for wear and changed periodically to ensure long term safety and optimum performance.

WARNING

DO NOT rest your foot on the brake pedal while travelling as this may overheat the brakes, reduce their efficiency and cause excessive wear.

NEVER move a vehicle without the engine running because braking assistance will not be available. The pedal brakes will still function, but more pressure will be required to operate them.

If the brake warning light should illuminate while the vehicle is in motion, bring the vehicle to a halt as quickly as traffic conditions and safety permit and seek qualified assistance before continuing. DO NOT pump the brake pedal - the braking system may lose any remaining servo assistance available.

Wet conditions

Driving through water or even very heavy rain may adversely affect braking efficiency. Always dry the braking surfaces by intermittent light application of the brakes, first ensuring that you are at a safe distance from other road users.

ANTI-LOCK BRAKES

WARNING

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

The fact that a vehicle is fitted with ABS must never tempt the driver into taking risks that could affect his/her safety or that of other road users. In all cases, it remains the driver's responsibility to drive within normal safety margins, having due consideration for prevailing weather and traffic conditions.

The driver should always take account of the surface to be travelled over and the fact that brake pedal reactions will be different to those experienced on a non-ABS vehicle.

The purpose of the anti-lock braking system (ABS) is to allow efficient braking without wheel locking - thereby allowing the driver to retain steering control of the vehicle.

Under normal braking conditions, (where sufficient road surface friction exists to slow the vehicle without the wheels locking), ABS will not be activated. However, should the braking force exceed the available adhesion between the tyres and the road surface, then ABS will automatically come into operation. This will be recognisable by a rapid pulsation felt through the brake pedal.

In normal road use, in an emergency situation, ABS functions most effectively when full braking effort is be applied even when the road surface is slippery. The ABS system constantly monitors the speed of each wheel and varies the brake pressure to each, according to the grip.

No matter how hard you brake, you should be able to continue steering the vehicle as normal.

- DO NOT pump the brake pedal at any time; this will interrupt operation of the system and may increase the stopping distance.
- NEVER place additional floor matting or any other obstruction under the brake pedal. This restricts pedal travel and may impair brake efficiency.

NOTE: *If the vehicle power supply has been interrupted, ABS will be de-activated. ABS can be reactivated by driving a short distance, or by turning the steering wheel from one limit position to the other while the vehicle is stationary and with the engine running. The ABS warning light will extinguish when the system is reactivated.*

Warning light

A fault with the ABS system is indicated by illumination of the amber ABS warning light. If the light illuminates, drive with care, avoiding heavy brake applications and seek qualified assistance urgently. For further information on the functionality of the ABS warning light, see *'Anti-lock braking system - AMBER', page 63*.

Off-road driving
While anti-lock braking is designed to operate equally effectively in 'off-road' driving conditions, on certain surfaces total reliance on the system may be unwise - remember, in normal circumstances, anti-lock braking operates only AFTER the wheels have started to slip. It cannot reliably compensate for driver error or inexperience on difficult off-road surfaces.

Note the following:

- On soft or deep surfaces such as powdery snow, sand or gravel, and on extremely rough ground, the braking distance required by the anti-lock braking system may be greater than for normal braking, even though improved steering would be experienced. This is because the natural action of locked wheels on soft surfaces is to build up a wedge of surface material in front which assists the wheels to stop.
- If the vehicle is stopped on a very steep slope where little traction is available, it may slide with the wheels locked because there is no wheel rotation to signal movement to the ABS. To counteract this, briefly release the brakes to permit some wheel movement, then re-apply the brakes to allow ABS to gain control.
- Before driving off-road read and thoroughly understand the *'Off-road driving'* section of this handbook.

Cornering brake control (CBC)
Cornering brake control (CBC) is an advanced form of ABS, which maintains vehicle stability and steerability when braking whilst cornering or changing lanes at speed.

Emergency brake assist (EBA)
If the brake pedal is depressed rapidly, EBA automatically boosts the braking force to a maximum and thus helps to stop the vehicle in the shortest possible distance, when a full brake application is made. Also, if the driver brakes more slowly, but with sufficient brake pressure to activate ABS on both front wheels, the system automatically increases the braking force so that all four wheels are in ABS control, optimising the performance of the ABS system.

Pressure should be maintained on the brake pedal during the entire brake application. If the brake pedal is released, EBA will cease operation.

A fault with the EBA system is indicated by illumination of the amber brake warning light. In the event of a fault, the system should be checked by a Land Rover dealer at the earliest opportunity.

Electronic brake force distribution (EBD)
Your vehicle is equipped with Electronic Brake Force Distribution (EBD), which balances the distribution of braking forces between front and rear axles, in order to maintain maximum braking efficiency under all vehicle loading conditions.

For example; under light loads EBD applies less effort to the rear brakes to maintain vehicle stability, conversely allowing full braking effort to the rear wheels when the vehicle is towing or is heavily laden.

A fault with the EBD system is indicated by illumination of the red brake warning light. If this illuminates while the vehicle is being driven, gently stop the vehicle as soon as safety permit and seek qualified assistance.

HANDBRAKE

To engage the handbrake, pull the lever up (the handbrake warning light illuminates).

To release, pull the lever up slightly, depress the button and lower the lever (the handbrake warning light extinguishes).

Always apply the handbrake fully whenever you park.

When parking on a slope, do not rely on the handbrake alone to hold the vehicle, always select 'P' (park) for extra security.

Ensure the parking pawl of the gearbox has fully engaged by carefully releasing the foot brake and allowing the vehicle to 'rock' into 'P' (park). This is particularly important when LOW range is selected.

WARNING

In exceptional cases, if the handbrake has to be used to slow or stop the vehicle, do not pull the lever up too hard. Keep the button on the lever depressed the whole time.

Too violent an application of the handbrake could over-brake the rear wheels and cause the rear of the vehicle to skid.

DO NOT rely on the handbrake to operate effectively if the vehicle has been subjected to immersion in mud and water (see 'Off-road driving' section).

NOTE: *The brake lights do not illuminate when the handbrake is applied.*

DYNAMIC STABILITY CONTROL (DSC)

WARNING

Dynamic Stability Control (DSC) is unable to compensate for driver misjudgement. It remains the driver's responsibility to adopt a suitable driving style in every driving situation. Risks should never be taken on account of the additional security afforded by the DSC system.

DSC optimises dynamic stability, even in critical driving situations. The system controls dynamic stability when accelerating and when starting from a standstill. Additionally, it identifies unstable driving behaviour, such as understeering and oversteering and helps to keep the vehicle under control by manipulating the engine output and applying the brakes at individual wheels. Some noise may be generated when the brakes are applied. The system is ready to operate each time the engine is started.

Warning light

The warning light illuminates as a bulb and system check when the starter switch is turned to position 'II' and should extinguish when the engine is running.

If the warning light flashes, the system is active, regulating engine output and brake forces.

If the light fails to extinguish when the engine is started, or illuminates when driving, a fault in the system has been detected or DSC has been manually deselected. The vehicle can still be driven with care, but be aware that driving characteristics of the vehicle may change in adverse conditions.

Suspending DSC operation

Land Rover recommend that DSC is operational in all normal driving conditions.

In some driving conditions, where forward traction should be maximised, it may be beneficial to deactivate DSC. Such conditions include:

- To 'rock' the vehicle out of a hollow or out of a soft surface.
- Starting in deep snow or on a loose surface.
- Driving in deep sand.
- Driving on tracks with deep longitudinal ruts.
- Driving through deep mud.

To deactivate DSC, press the DSC switch on the fascia (the DSC warning light will illuminate continuously). Deactivating DSC has no affect on traction control operation.

NOTE: *Driving with DSC deactivated, may add additional loads on the brakes - always drive with DSC switched on if possible*

Reactivating DSC

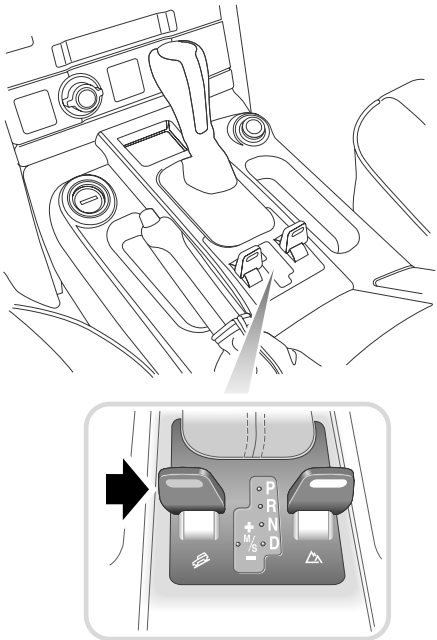
To reactivate DSC, press the DSC switch on the fascia. DSC will automatically reactivate when the engine is started.

NOTE: *If the battery is discharged or has been disconnected, the DSC and ABS warning lights will illuminate constantly as a reminder that the system is not active. To reactivate the DSC system, either turn the steering wheel from lock to lock (with the engine running and the vehicle stationary), or drive the vehicle for a short distance around a curve. When the system is reactivated, the warning lights will extinguish and the system will be fully active.*

ELECTRONIC TRACTION CONTROL (ETC)

ETC is continuously available to boost vehicle traction when one or more wheels has a tendency to spin, while the others have more grip. It operates in conjunction with the DSC system. If a wheel is spinning, ETC automatically brakes that wheel until it regains grip. This braking activity causes the engine power to be transferred to the remaining wheels. Some noise may be generated when the brakes are applied.

HILL DESCENT CONTROL



H4095

Hill Descent Control (HDC) operates in conjunction with the anti-lock braking system to provide greater control in off-road situations particularly when descending severe gradients.

To select HDC
HDC can be selected at any speed if LOW range is selected in the transfer gearbox, and can be selected at up to 35 km/h if the vehicle is in HIGH range. The HDC 'Information' warning light in the instrument pack will illuminate when HDC has been successfully selected.

Move the switch (arrowed) fully rearwards to select HDC.

If the vehicle speed is too high when an attempt to select HDC is made, 'NO HDC - SLOWDOWN' appears in the message centre and the HDC warning light will extinguish when the switch is released.

To deselect HDC, move the switch rearwards (the warning light will extinguish). If HDC is deselected when HDC is operating, the warning light will flash as the system 'fades out' - allowing the vehicle to gradually increase in speed.

When used in LOW range, HDC controls the vehicle speed more aggressively. Use LOW range gears when steep descents are to be attempted.

NOTE: *If the vehicle speed exceeds 37 mph (60 km/h) when in HIGH range, HDC will be automatically deselected (warning light extinguishes). HDC is also automatically deselected if the vehicle ignition is switched off for more than 6 hours.*

Hill Descent Control in action
HDC can be used with the transmission in 'Steptronic' mode, in 'R' (reverse) and 'D' (drive). When in 'D', the vehicle will automatically select the most appropriate gear.

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 selected gear range and the accelerator pedal position.

When driving off-road, HDC can be permanently selected, to ensure that control is maintained. 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 will recommence operating at a reduced speed.

In extreme circumstances, the HDC system may cause brake temperatures to exceed their pre-set limits. If this occurs, 'HDC TEMP. NOT AVAIL.' will be displayed in the message centre. HDC will then fade out (warning light flashes) and then become temporarily inactive. HDC will not be available until the brakes reach an acceptable temperature, at which time the warning message will disappear from the message centre and HDC will, if required, resume operating.

If a fault is detected in the HDC system, 'HDC INACTIVE' will appear in the display. Do not attempt a steep descent when HDC is unavailable. If a fault has been detected, consult your dealer at the earliest opportunity.

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 the HDC information light will flash for the period that HDC takes to fade. HDC will be disabled completely once the descent is complete.

If required (e.g. the angle of the descent levels out significantly), fade-out may be achieved deliberately by deselecting HDC while the system is operating.

If a fault with the HDC system is detected, or if the braking system exceeds a pre-set temperature due to extreme conditions, HDC will automatically fade out.

Warning light

HDC information light - GREEN

The light illuminates briefly as a bulb and system check when the starter switch is turned to position 'II' and also when HDC is selected.

If HDC is selected and the operating conditions are met, the light will illuminate continuously.

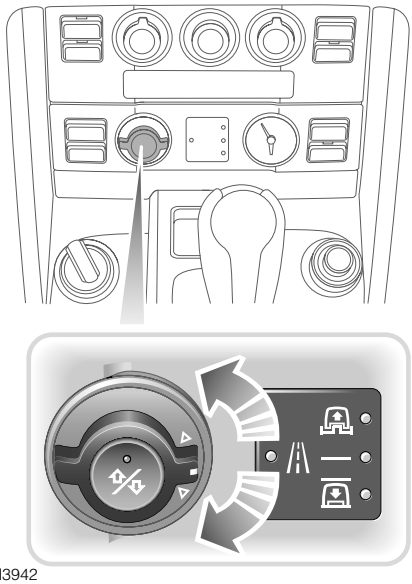
If the light flashes while HDC is active, normal functionality may cease and HDC 'fade out' may be induced.

ELECTRONIC AIR SUSPENSION (EAS)

When the engine is running, the EAS operates automatically on the vehicle to maintain a level or efficient vehicle height regardless of vehicle load.

If the height of the vehicle is reduced by additional loading (attachment of a trailer, for example), the system automatically increases air pressure to the springs to compensate for the additional weight or changed attitude of the vehicle. Similarly, if loads are removed and the vehicle height increases in consequence, the system will reduce air pressure to bring the vehicle back to a level attitude.

MANUAL OPERATION



H3942

Your vehicle is fitted with an electronically controlled air suspension system (EAS) which provides four different ride height settings including an 'Access' mode. These settings increase or decrease the height and ground clearance of your vehicle to cope with different driving conditions. The four height settings are as follows:

- Off-road height.
- Standard height.
- Motorway height (not user selectable).
- Access height.

For a more detailed description of the different height settings, please refer to the relevant passages later in this section.

Before operating EAS
Remember, even if a change of ride height is selected, it will NOT take place if any door is open.

NOTE: *Frequent changes between ride heights could cause the compressor to overheat. If this occurs, EAS will be fully operational again after a few minutes when the compressor has cooled.*

1. Ride height selector
Push the switch up or down to raise or lower the vehicle to the next ride height setting.

2. Ride height indicator panel
When the vehicle is at a particular ride height, the corresponding indicator light illuminates. If a new ride height is selected, the current indicator light remains illuminated and the indicator light for the new setting flashes, until the new height is reached (the original indicator light extinguishes). If the current ride height indicator light flashes when a new height is selected, the new ride height is invalid and the height change will not be performed.

3. Suspension inhibit switch
Press to select inhibit mode (not operational at Off-road height), the indicator light in the switch illuminates. This prevents automatic or manual changes between ride heights. Press again to cancel inhibit mode.

Access height switch
Press to lower the vehicle to access height, for easier loading/unloading. See *'ACCESS HEIGHT', page 148*, for further information.

MOTORWAY HEIGHT

At high speeds, the suspension is automatically lowered to motorway height to improve ride quality and vehicle handling at motorway speeds. The motorway height setting is approximately 20 mm below the standard ride height setting.

The motorway height setting is activated automatically when the electronic air suspension system detects the vehicle being driven at more than 100 km/h, for more than 30 seconds.

When the system detects that the vehicle speed has fallen below 70 km/h for more than one minute, the vehicle automatically rises to the standard height setting. If the vehicle comes to rest while still at motorway height, the vehicle will not rise unnecessarily.

If the inhibit button is pressed while in motorway height, the vehicle will not automatically rise to standard height when the vehicle speed falls. Motorway height will be maintained until the inhibit switch is pressed for a second time, when normal automatic height adjustment is resumed.

Motorway height selection is fully automatic and cannot be selected manually by the driver.

From motorway height, the driver can manually select standard height, by rotating the ride height selector up. If the vehicle is travelling at less than 25 km/h the vehicle can be lowered to access height by rotating the ride height selector down.

OFF-ROAD HEIGHT

At low speeds, the vehicle height can be raised to increase ground clearance for when driving off-road.

WARNING

DO NOT select off-road height while driving on the road, or when the suspension has been lowered below standard ride height - any sudden or unexpected change to the vehicle's height or attitude could cause an inexperienced driver to lose control, or disturb the load/weight distribution within the vehicle.

DO NOT attempt to select off-road height while towing.

To select off-road height, ensure the vehicle is travelling at less than 50 km/h and then rotate the ride height selector clockwise. The vehicle will be raised to 50 mm above the standard ride height and the appropriate light on the ride height indicator panel will illuminate.

NOTE: *The front axle will be raised 10 mm higher than the rear axle.*

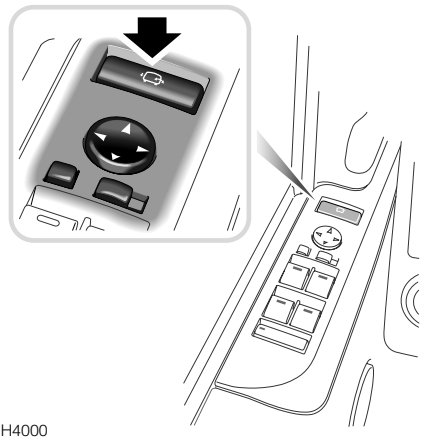
The vehicle will stay at off-road height until either standard ride height is selected using the ride height selector, or the vehicle speed exceeds 50 km/h.

If the vehicle speed is too high when off-road height is selected, the standard ride height indicator will flash to indicate that the request has not been performed. Reduce the vehicle speed to below 50 km/h and then select off-road height.

NOTE: *Off-road height can NOT be selected if the inhibit switch is on and the inhibit function can not be selected while at off-road height.*

ACCESS HEIGHT

Access height lowers the vehicle to 40 mm below standard ride height and improves accessibility (for passengers and luggage).



H4000

Access height can be selected when in any ride height, by either pushing the ride height selector down when in standard or motorway ride height, or by pressing the access height switch on the driver's door switch panel (arrowed above).

Access height can be selected when the vehicle is travelling at less than 80 km/h. The access height indicator light will start flashing, but EAS will not start to lower the vehicle to access height until the vehicle speed drops to below 25 km/h. If the vehicle does not come to a rest within 65 seconds after the access height preselect was requested, or the vehicle speed rises above 80 km/h, the access request is cancelled and the indicator light stops flashing. Access will need to be reselected if required.

NOTE: *If the vehicle speed increases to more than 30 km/h, when the vehicle is at access height, the EAS will automatically reselect standard ride height.*

If the vehicle is travelling at above 80 km/h when access preselect is requested, the standard ride height indicator light flashes to indicate that the request has not been performed.

Access mode should only be selected whilst the vehicle is moving. In extreme circumstances, if it is necessary to select access height whilst the vehicle is stationary, 'N' (neutral) should be selected and the handbrake applied. Note that some noise from the suspension may be heard, accompanied by vibrations.

Crawl mode

If it is necessary to manoeuvre the vehicle in an area where height is restricted, Crawl mode should be selected as follows:

- Select access height and if the vehicle is still moving, stop so that access height is achieved.
- Press the inhibit switch.

NOTE: *If the inhibit switch is pressed before the vehicle starts lowering to access height (i.e before the vehicle speed drops below 25 km/h, the access request is cancelled and the vehicle will return to standard height.*

The vehicle is now in crawl mode and all manual and automatic height changes are inhibited, provided the vehicle does not exceed 40 km/h.

If the vehicle speed exceeds 30 km/h, a message appears in the message centre (accompanied by a warning chime) warning the driver to keep the vehicle speed low.

WARNING

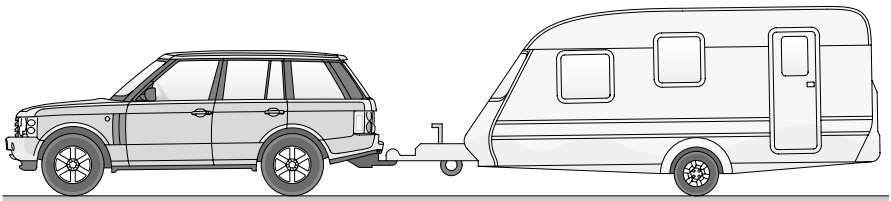
If vehicle speed exceeds 40 km/h when in crawl mode, the mode is cancelled and the vehicle will raise to standard ride height. If the vehicle is still in an area of restricted height, this could seriously damage and trap the vehicle.

TOWING A TRAILER

When the electrical plug for a trailer attachment is connected to the vehicle socket, the EAS controller acts as though the inhibit button is activated. The only height change which is accepted is a return to standard height, if the vehicle is not already at standard height. The standard height indicator light and the inhibit light are illuminated. Once standard height is reached, no other ride height change will be available.

WARNING

If the vehicle is at any ride height other than standard height, when a trailer is fitted, trailer weight distribution and balance may be affected when the vehicle returns to standard height.



H3770

TOWING

The torque ranges of Land Rover engines allow maximum-weight loads to be pulled smoothly from standstill, and reduce gear changing on hills or rough terrain. A smooth start will be achieved with trailers over 2000 kg by moving off in low range then changing to high range while on the move.

The suspension will automatically be set to standard height when the towing electrical socket is utilised and is designed to cope with a heavy trailer load without upsetting the balance or feel of the vehicle.

WARNING

It is recommended that you fit only towing accessories approved by Land Rover.

DO NOT use lashing eyes or vehicle recovery towing eyes to tow a trailer or caravan.

It is the driver's responsibility to ensure that the towing vehicle and trailer/caravan are loaded and balanced so that the combination is stable when in motion. When preparing your vehicle for towing, pay attention to any instructions provided by the trailer/caravan manufacturer as well as to the information that follows.

Balancing the combination

To ensure optimum stability, it is essential that the trailer adopts a level aspect. In other words, the trailer must be level with the ground, with the towing hitch and trailer drawbar set at the same height (note the illustration at the top of the page). This is particularly important when towing twin axle trailers!

- The trailer should be level with the ground when loaded.
- The height of the drawbar hitch point should be set so that the trailer is level when connected to the loaded vehicle.

Points to remember:

- When calculating the laden weight of the trailer, remember to include the weight of the trailer PLUS the load.
- The recommended trailer nose weight plus the combined weight of the vehicle's load carrying area and rear seat passengers must never exceed the specified maximum rear axle load (see *'TOWING WEIGHTS', page 244*).
- Where the load can be divided between trailer and tow vehicle, loading more weight into the vehicle will generally improve the stability of the combination. However, ensure that the gross vehicle and maximum rear axle weights are not exceeded and that the combination remains level.

- Towing regulations vary from country to country. Always ensure national regulations governing towing weights and speed limits are observed (refer to the relevant national motoring organisation for information). The vehicle's maximum permissible towed weight refers to its design limitations and NOT to any specific territorial restriction (see *'TOWING WEIGHTS', page 244*).

NOTE: *The maximum speed when towing is 100 km/h.*

Gear range selection
To avoid overheating the gearbox, it is not advisable to tow heavy trailer loads at speeds of less than 32 km/h using the main gearbox in high range. Select low range instead.

Vehicle weights
When loading a vehicle to its maximum (gross vehicle weight), take account of the unladen vehicle weight and load distribution 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.

WARNING

In the interest of safety, the gross vehicle weight, maximum rear axle weight, maximum trailer weight and tow hitch load (nose weight) must not be exceeded.

Trailer socket
When the engine is running, power output from the trailer socket must NOT exceed 5 amps.

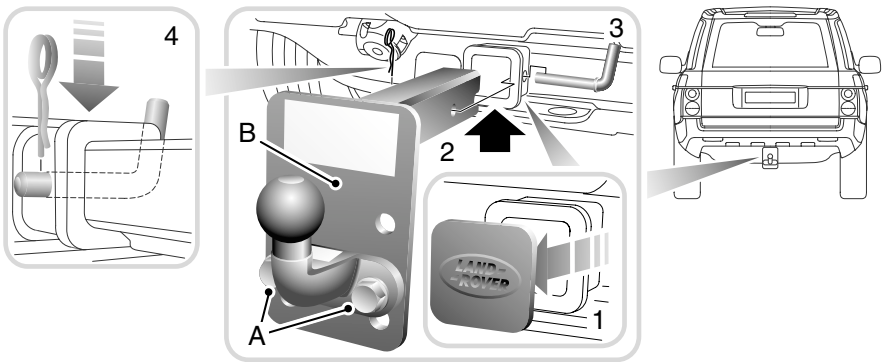
If it is required to exceed 5 amps, a 13 pin accessory kit is available from your Land Rover dealer, increasing the output to 15 amps.

ESSENTIAL TOWING CHECKS	
Tyre pressures:	Increase rear pressures of towing vehicle by at least 0.2 bar up to maximum of 3.0 bar. Ensure trailer/caravan tyres are at recommended pressures.
Loading:	Keep trailer loads securely anchored, evenly distributed and as low as possible with heavy loads over the axle. Towing vehicle maximum axle weights and gross vehicle weight must not be exceeded.
Nose weight:	If the vehicle is loaded to the Gross Vehicle Weight (GVW), the nose weight is limited to 150 kg. If a greater nose weight is necessary (up to 250 kg maximum), vehicle loading should be adjusted to ensure the GVW and rear axle weights are not exceeded - see *'TOWING WEIGHTS', page 244*, for further information.
Hitch height:	Must be set so that caravan/trailer is level when connected to the tow vehicle with engine running.

TOW BAR FITMENT

There are two different types of tow bar that can be fitted to your vehicle. The following pages give you the information to fit and remove both types.

Drop plate tow bar*



H3901

1. Remove the plastic protective cover (marked with the Land Rover logo) from the tow bar mounting aperture.
2. Insert the stock of the tow bar assembly into the mounting aperture.
3. Insert the securing bar, so that it passes through the walls of the aperture and through the tow bar assembly stock.
4. Insert the straight part of the retaining pin through the securing bar.

Removal of the tow bar is the reverse of the fitting procedure. Once the tow bar is removed, ensure that it is returned to its protective case and that it is secured in such a way that it cannot move around inside the vehicle. Remember to refit the plastic protective cover into the tow bar mounting aperture.

Drop plate height adjustment

Remove the two bolts (A) securing the tow bar to the drop plate (B).

Reposition the tow bar on the drop plate so that it aligns with one of the other two height settings and secure the two bolts. Tighten the bolts to a torque of 170 Nm

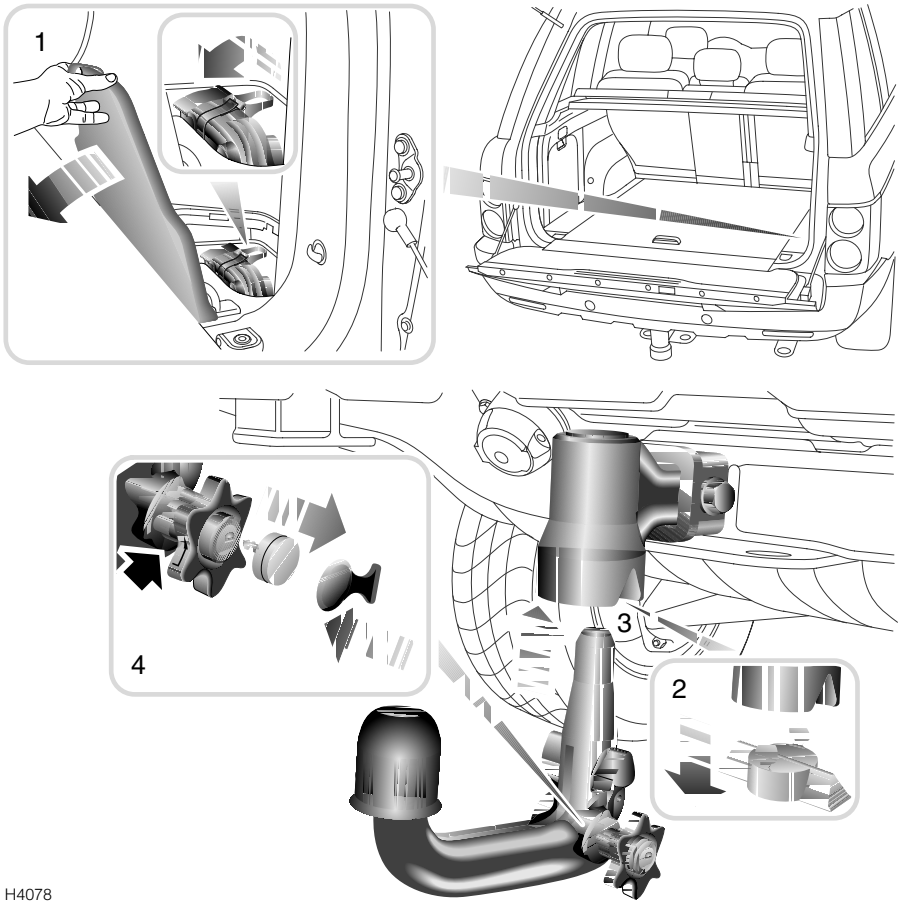
WARNING

Before towing, ALWAYS check that the retaining pin is firmly in place through the securing bar.

NEVER leave the tow bar loose in the vehicle, where it could become a projectile in the event of heavy braking or an accident.

The drop plate tow bar is stowed in a bag and should be strapped to one of the luggage anchorage points in the rear loadspace.

Detachable tow bar*



The detachable tow bar is located under an access hatch on the right hand side of the rear loadspace floor.

1. Lift up the access hatch, release the velcro strap and remove the tow bar.
2. Remove the protective plastic cover from the tow bar mounting.

NOTE: *The protective cover can be stowed in the tow bar stowage area, whilst the tow bar is installed.*

The tow bar should be in the unlocked position, this can be determined by a red marker on the handwheel lining up with a green bar on the body of the tow bar (arrowed in inset '4'). If this is not the case (a green marker lines up with the green bar), refer to the procedure for unlocking the tow bar, detailed in *'Removing the tow bar'* later on this page. The tow bar can only be installed when in the unlocked position.

3. Insert the tow bar bolt into the tow bar mounting and push firmly upwards until the tow bar 'locks' in position. When the towbar locks, the green marker on the handwheel will line up with the green bar on the tow bar.
4. Turn the key anti-clockwise to lock the handwheel, then remove the key and fit the protective cover onto the handwheel lock.

NOTE: *Store the key in the tow bar stowage area for safe keeping.*

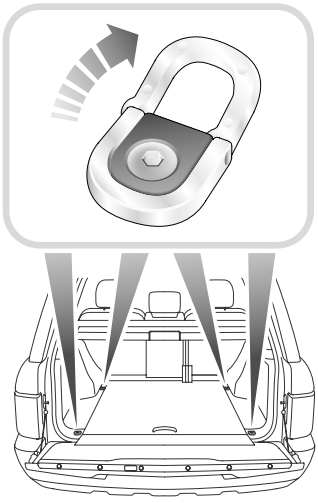
Removing the tow bar mounting for off-roading

Remove the cover from the handwheel lock, insert the key and turn it clockwise.

To remove the tow bar, it is necessary to unlock it using the handwheel. Pull the handwheel out, then rotate it clockwise, until a 'click' sounds - the red marker on the handwheel should now line up with the green bar. The tow bar is now unlocked.

Carefully lower the tow bar and place the cover over the handwheel key. Ensure that the tow bar is securely strapped into its stowage area under the loadspace floor and remember to refit the red protective plastic cover into the tow bar mounting.

LUGGAGE ANCHOR POINTS



H4185

Four fixing points are provided in the rear luggage compartment floor, to assist in safely securing large items of luggage. Land Rover provide a range of approved luggage retention accessories.

WARNING

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.

ROOF RACKS

A range of roof rack systems are available as Land Rover approved accessories. For further information about roof rack systems approved for use with your vehicle and advice as to which system would suit your requirements best, please consult your Land Rover dealer.

IMPORTANT INFORMATION

Always observe the following precautions:

- The **MAXIMUM** load for approved roof rack systems is 100 kg for normal road use and 50 kg off-road. The above weights include the mass of the roof rack system.
- Only fit roof racks that have been designed for your vehicle. If in doubt, consult your dealer.
- A loaded roof rack can reduce the stability of the vehicle, particularly when cornering and encountering cross winds.
- All loads should be evenly distributed, side to side, with any weight bias towards the front of the roof rack. system.
- Ensure all loads are secured within the periphery of the roof rack system.
- Check to ensure the roof rack and load are secure after 50 km of any journey.
- 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.

Off-road Driving

Off-road Driving

Driving Techniques

BEFORE YOU DRIVE

Before venturing off-road, it is **absolutely essential** that inexperienced driver's become fully familiar with the vehicle's controls, in particular the transfer gear switch and Hill Descent Control (HDC), and also study the off-road driving techniques described on this and the following pages.

WARNING

Off-road driving can be hazardous!

- ***DO NOT take unnecessary risks and be prepared for emergencies at all times.***
- ***Familiarise yourself with the recommended driving techniques in order to minimise risks to yourself, your vehicle AND your passengers.***

IMPORTANT INFORMATION

- Always wear a seat belt for personal protection in all off-road driving situations.
- 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.
- As a precaution against accidental loss, remove the towing eye cover and the front spoiler before driving off-road (see *'TOWING EYES', page 214*).
- To prevent damage, and improve departure angles, remove and stow any towing equipment fitted to the vehicle. See *'TOW BAR FITMENT', page 152*.

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 single off-road situation, including off-road recovery techniques.

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

With the main selector lever set at 'D', the gearbox automatically provides the correct gear for the appropriate gear range selected (HIGH or LOW). For greater vehicle control through gear selection, manual 'Steptronic' mode is recommended.

HIGH range gears should be used whenever possible - only change to LOW range when ground conditions become very difficult.

Braking

As far as possible, vehicle speed should be controlled through correct gear selection and the use of Hill Descent Control (HDC). Application of the brake pedal should be kept to a minimum. In fact, if the correct gear and HDC have been selected, braking will be largely unnecessary.

If the brake pedal is depressed when HDC is active, HDC is overridden and the brakes will perform as normal. If the brake pedal is then released, HDC will recommence operating, at reduced speed.

Use of engine for braking

Before descending steep slopes, stop the vehicle at least its length before the descent, engage LOW range and then select HDC. Use of manual Steptronic gear selection to limit the transmission to lower gears will also increase engine braking. Select '1' or '2' LOW range, depending on the severity of the descent.

While descending a slope (either forwards or in 'R' - reverse) it should be remembered that HDC and the engine will provide sufficient braking effort to control the rate of descent, and that the brakes should not be applied.

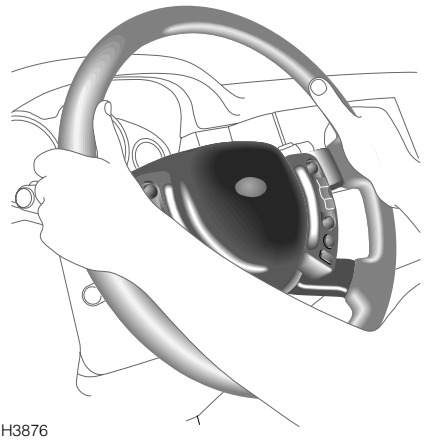
Accelerating

Use the accelerator with care - any sudden surge of power may induce wheel spin and, therefore, invoke unnecessary operation of traction control, or in extreme conditions could lead to loss of control of the vehicle.

Survey the ground before driving

Before negotiating difficult terrain, it is wise to carry out a preliminary survey on foot. This will minimise the risk of your vehicle getting into difficulty through a previously unnoticed hazard.

Steering



H3876

WARNING

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) when traversing uneven ground.

Ground clearance
Don't forget to allow for ground clearance beneath the vehicle suspension components and under the front and rear bumpers. 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 wheel ruts are unusually deep and where sudden changes in the slope of the ground are experienced.

ALWAYS attempt to avoid obstacles that may foul the vehicle.

Electronic air suspension
Select 'Off-road height', to increase approach/departure angles and ground clearance (see *'ELECTRONIC AIR SUSPENSION (EAS)', page 146*).

Loss of traction
If the vehicle is immobilised due to loss of wheel grip, the following hints could be of value:

- 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 may improve tyre grip.

CD Autochanger
Playing CDs while negotiating arduous off-road terrain is not recommended. Severe jolting of the vehicle may disturb the operation of the autochanger, causing the disc to 'jump' or 'skip'.

AFTER DRIVING OFF-ROAD

IMPORTANT INFORMATION

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 callipers should be examined and any stones or grit that may affect braking efficiency removed.
- The underside of the vehicle should be checked for damage, especially the suspension air springs and dampers.
- Any damage to paint or protective coatings, should be rectified by a land Rover dealer as soon as possible.

If you have any doubt whether the vehicle has been damaged, have the vehicle inspected by a Land Rover dealer.

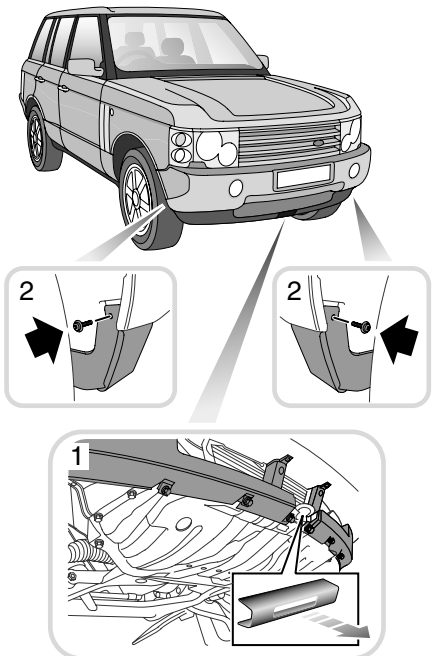
SERVICING REQUIREMENTS

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 *'OWNER MAINTENANCE', page 171* and contact a Land Rover dealer for advice.

After wading in salt water or driving on sandy beaches, use a hose to wash the underbody components and any exposed body panels with fresh water. This will help to protect the vehicle's cosmetic appearance.

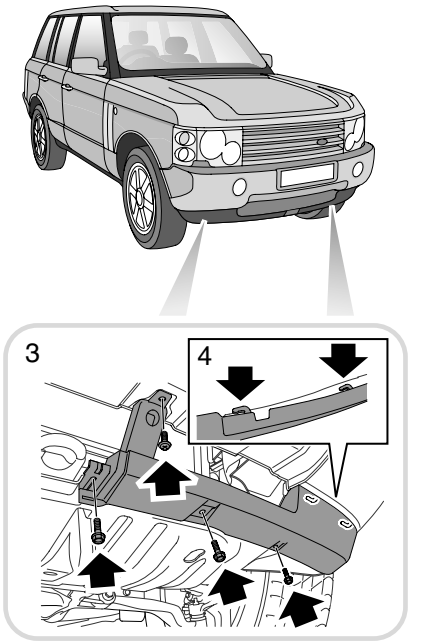
REMOVING THE FRONT BIB SPOILER

To improve off-road performance, it is possible to remove the front bib spoiler from the vehicle - this will also prevent the spoiler from being damaged.



H4218

1. Remove the towing eye cover (see *'TOWING EYES', page 214*).
2. From inside the wheel arch, remove the bolt/washer securing the spoiler to the wheel arch liner. Repeat for the other side of the vehicle. Keep the bolts and washers in a safe place.



H4219

3. On one half of the spoiler, remove the three bolt/washers and one screw/washer securing the spoiler to the bumper. Keep the bolts, screw and washers in a safe place.
4. Slide the half-spoiler outwards towards the side of the vehicle and remove.

Repeat items 3 and 4 for the other half of the spoiler.

Refitting the spoiler is the reverse of the removal procedure.

WARNING

Ensure that the spoiler halves and the towing eye cover are securely stowed in the vehicle, so they do not become projectiles in the event of an accident or emergency manoeuvre.

DRIVING ON SOFT SURFACES & DRY SAND

The ideal technique for driving on soft surfaces (dry sand for example) requires the vehicle to be kept moving at all times - soft sand causes excessive drag on the wheels resulting in a rapid loss of motion once driving momentum is lost.

Deactivate DSC (see *'DYNAMIC STABILITY CONTROL (DSC)', page 142*), then select 'D' (drive) and REMAIN in that gear until a firm surface is reached. It is generally advisable to use LOW range, as this will enable you to accelerate through worsening conditions without the risk of being unable to restart.

Stopping the vehicle on soft ground, in sand or on an incline

If you do stop the vehicle, remember:

- Starting on an incline or in soft ground or sand may be difficult. Always park on a firm level area, or with the vehicle facing downhill.
- To avoid wheel spin, select 'D' (drive) and use the MINIMUM throttle necessary to get the vehicle moving.
- If forward motion is lost, avoid excessive use of the throttle - this may dig the vehicle into the sand. Clear sand from around the tyres and ensure that the vehicle underside 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 tyres so that the vehicle is again on level ground. If a restart is still not possible, place sand mats or ladders beneath the tyres.

DRIVING ON SLIPPERY SURFACES (ice, snow, mud, wet grass)

- Select 'D' (drive) in LOW range.
- 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.

DRIVING ON ROUGH TRACKS

Although rough tracks can sometimes be negotiated in normal drive, on very rough tracks, engage LOW range to enable a steady, low speed to be maintained without constant use of the brake pedal.

CLIMBING STEEP SLOPES

ALWAYS follow the fall line of the slope - travelling diagonally could encourage the vehicle to slide broadside down the slope.

Steep climbs will usually require the LOW gear range and selecting '3' or '4' using Steptronic selection is recommended. It is advisable to engage HDC, in case there is a need to reverse down the slope to avoid an obstacle. If the surface is loose or slippery, use sufficient speed in the highest practical gear to take advantage of your vehicle's momentum and disable DSC. However, too high a speed over a bumpy surface may result in a wheel lifting, causing the vehicle to lose stability. In this case try a slower approach. Traction can also be improved by easing off the accelerator just before loss of forward motion.

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.

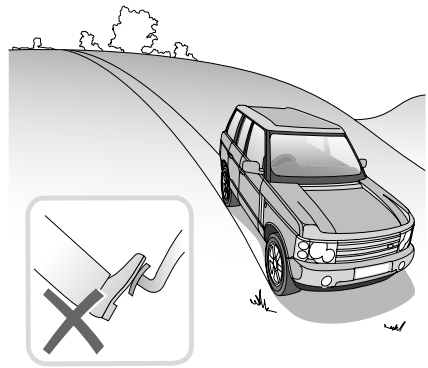
1. Hold the vehicle stationary using both foot and hand brakes.
2. Restart the engine if necessary.
3. Engage 'N' (neutral) and engage LOW range, then select 'R' (reverse).
4. Select Hill Descent Control (HDC).
5. Release the handbrake. Then fully release the foot brake and allow the vehicle to reverse down the slope using engine braking and HDC to control the rate of descent.
6. Unless it is necessary to stop the vehicle to negotiate obstructions, DO NOT apply the brake during the descent - even a light application may cause the front wheels to lock, rendering the steering ineffective.
7. If the vehicle begins to slide, accelerate slightly to allow the tyres to regain grip.

When the vehicle is back on level ground and safety permits, 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 a slope without the engine running and ensure that 'R' (reverse) is selected. Otherwise, HDC and the braking effect of the gearbox will be lost.

DESCENDING STEEP SLOPES



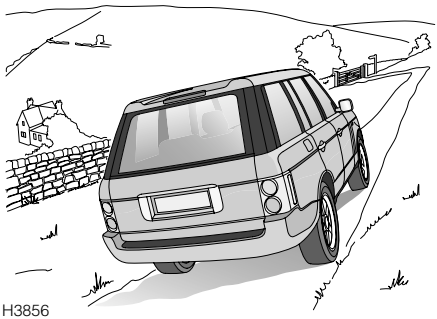
H3855

WARNING

Failure to follow these instructions may cause the vehicle to roll over.

- Slow the vehicle and select LOW range.
- With the transmission in manual Steptronic mode, change down the gears to select either '1' or '2', depending on the severity of the slope, before bringing the vehicle to a stop at least vehicle length before the start of the slope.
- Select Hill Descent Control (HDC).
- Unless it is necessary to stop the vehicle in order to negotiate obstructions, **DO NOT** touch the brake pedal during the descent - the engine and HDC will limit the speed, keeping the vehicle under perfect control provided the front wheels are rotating.
- If the vehicle begins to slide, the limits of adhesion have been reached, and it may be impossible to maintain the minimum speed relative to the gear selected. In this case, HDC may automatically accelerate the vehicle sufficiently to maintain directional stability. DO NOT use the accelerator or the brakes or attempt to change gear. HDC will automatically slow the vehicle down again as soon as possible.
- Once the descent has been started, 'D' can be selected in the main gearbox. HDC will continue to operate and the previously selected manual 'gear' will be retained until the descent is complete.
- Once level ground is reached, the transmission will automatically select 'D' for the next stage of your journey.

TRAVERSING A SLOPE


H3856

WARNING

Failure to follow these instructions may cause the vehicle to roll over.

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

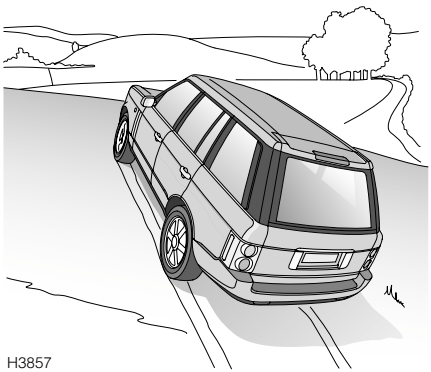
Observe extreme caution! Steering up either of the gully walls could cause the side of the vehicle to be trapped against the opposite gully wall.

DRIVING IN EXISTING WHEEL TRACKS

As far as possible allow the vehicle to steer itself along the bottom of the ruts and always keep a light hold of the steering wheel to prevent it from spinning free. Deactivation of DSC may help in deep ruts.

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 the wet ground) is unknowingly on full right or left 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 left or right.

CROSSING A RIDGE


H3857

Approach at right angles so that both front wheels cross the ridge together - an angled approach could cause stability to be lost through diagonally opposite wheels lifting from the ground at the same time.

CROSSING A DITCH


H3858

Cross ditches at an angle so that three wheels always maintain contact with the ground. If a ditch is approached head on, both front wheels will drop into the ditch together, possibly resulting in the chassis and front bumper being trapped on opposite sides of the ditch. If the severity of terrain makes this inevitable, selecting 'Off-road' height with the EAS to increase clearance between the ground and the bottom of the vehicle may help.

WADING

WARNING

The maximum advisable wading depth is 0,5 m. Wading at a depth greater than the maximum advisable wading depth regularly, is not recommended.

Severe electrical damage may occur if the vehicle remains stationary for any length of time when the water level is above the door sills.

Before wading, ensure the electronic air suspension is set to off-road height.

If the water is likely to exceed 0,5 m, 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 firm enough to support the vehicle's weight and provide sufficient traction.
- Ensure that the engine air intake (located on the front wings) is clear of the water level.
- Drive slowly into the water and accelerate to a speed which causes a bow wave to form; then maintain that speed.

At all times, keep all the doors fully closed.

NOTE: *If deep wading is to be carried out regularly, contact your Land Rover dealer for advice.*

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 have thoroughly dried out; in the meantime, leave the vehicle parked in 'P'.
- 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 condenser and radiator to reduce the risk of overheating.
- If deep water is regularly negotiated, check all oils for signs of water contamination - contaminated oil can be identified through its 'milky' appearance. In addition, check the air filter element for water ingress and replace if wet - consult a Land Rover dealer if necessary.
- If salt water is frequently negotiated, thoroughly wash the underbody components and exposed body panels with fresh water.

NOTE: *Vehicles required to undergo frequent or deep wading conditions will require more frequent servicing. Contact a Land Rover dealer for advice.*

Identification Numbers

Parts & Accessories

ROUTINE MAINTENANCE

Regular systematic maintenance is the key to ensuring the continued reliability and efficiency of your vehicle.

Maintenance is the owner's responsibility and you must ensure that owner maintenance operations, oil services, inspections and brake fluid and coolant changes are carried out when required and according to the manufacturer's recommendations.

The routine maintenance requirements for your vehicle are shown in the Service Portfolio book. Most of this necessary workshop maintenance requires specialised knowledge and equipment, and should preferably be entrusted to a Land Rover dealer.

Service Portfolio

The Service Portfolio book includes a Service Record section, which enables a record to be kept of all the oil services and inspections that are carried out on the vehicle. This section of the book also provides a facility for the dealer to record brake fluid changes, as well as the fitting of replacement airbag modules.

Ensure your dealer signs and stamps the book after each oil service and inspection.

Brake fluid/component replacement

Brake fluid must be completely renewed every 3 years, regardless of distance travelled.

Coolant replacement

The engine coolant (anti-freeze and water solution) needs to be replaced every 4 years, regardless of distance travelled. Your dealer will replace the coolant at the scheduled oil service.

OWNER MAINTENANCE

In addition to the routine services and inspections referred to previously, a number of simple checks must be carried out more frequently. You can carry out these checks yourself and advice is given on the pages that follow.

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

Daily checks

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

Weekly checks

- Engine oil level.

  NOTE: *The engine oil level should be checked more frequently if the vehicle is driven for prolonged periods at high speeds.*
- Brake fluid level.
- Power steering fluid level.
- Screen washer fluid level.
- Tyre pressures and condition.
- Operate air conditioning*.

All fluid specifications and capacities are shown in *'LUBRICANTS AND FLUIDS', page 237*.

Driving in arduous conditions

IMPORTANT INFORMATION

Special operation conditions
When a vehicle is operated in extremely arduous conditions, 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.

Arduous driving conditions include:

- Repeated short distance driving (e.g. up to 10 km), stop-start driving or idling for long periods.
- Driving in dusty and/or sandy conditions.
- Driving on rough and/or muddy roads and/or wading.
- Driving in extremely hot conditions.
- Towing a trailer or driving in mountainous conditions.

Contact a Land Rover dealer for advice.

SAFETY IN THE GARAGE

WARNING

Cooling fans may continue to operate after the engine is switched off. When the engine is hot, the cooling fans may also COMMENCE operating after the engine is switched off and continue operating for up to 10 minutes. Keep clear of all fans while working in the engine compartment.

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

- Keep your hands 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.
- Wear protective clothing, including, where practicable, gloves made from an impervious material.
- Remove metal wrist bands and jewellery before working in the engine compartment.
- DO NOT allow tools or metal parts of the vehicle to make contact with the battery leads or terminals.

WARNING

Under no circumstances should any part of the fuel system be dismantled or replaced by anyone other than a suitably qualified motor vehicle technician. Failure to comply with this instruction may result in fuel spillage with a consequent serious risk of fire.

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.

For your own safety, ALWAYS read and obey all instructions printed on labels and containers.

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


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

EMISSION CONTROL
Your vehicle is fitted with various items of emission and evaporative control equipment designed to meet specific territorial requirements. You should be aware that unauthorised replacement, modification or tampering with this equipment by an owner or repair shop may be unlawful and subject to legal penalties.

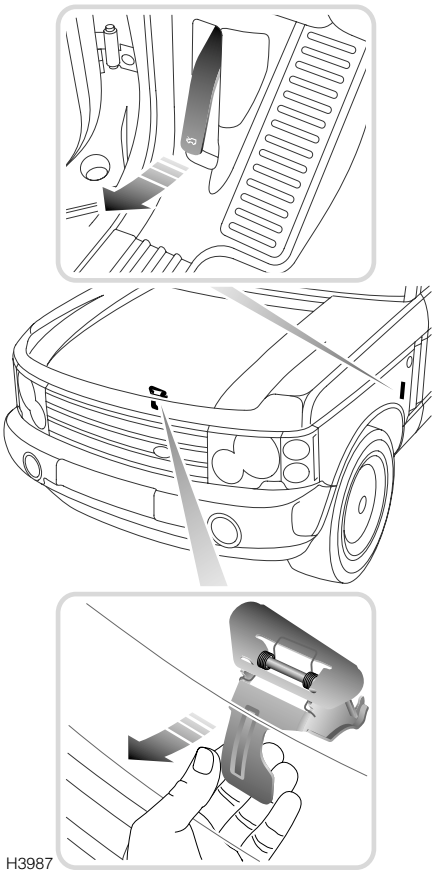
In addition, engine settings must not be tampered with. These have been established to ensure that your vehicle complies with stringent exhaust emission regulations. Incorrect engine settings may adversely affect exhaust emissions, engine performance and fuel consumption, as well as causing high temperatures,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

ROAD TESTING DYNAMOMETERS ('rolling roads')
Because your vehicle is equipped with anti-lock brakes and permanent four-wheel drive, it is essential that any dynamometer testing is carried out ONLY by a qualified person familiar with the dynamometer testing and safety procedures practiced by Land Rover dealers. Contact your Land Rover dealer for further information.

PREPARATION FOR WINTER
Before the onset of winter, to prevent the door seals from freezing closed, apply Land Rover silicone spray to the flocked seals across the tops of the doors.

This action will need to be repeated at the start of each winter to maintain protection.

BONNET OPENING



1. From inside the vehicle on the driver's side, pull the bonnet release handle (see upper inset).
2. Lift the bonnet safety catch lever (lower inset) and raise the bonnet.

Closing the bonnet

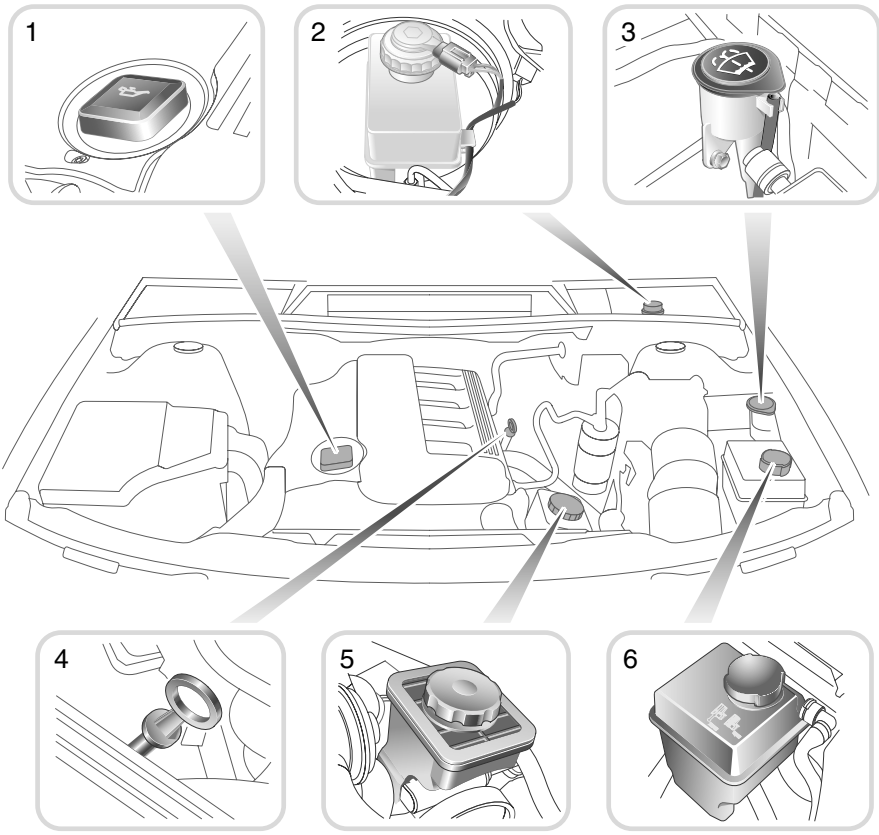
WARNING

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

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

DIESEL ENGINE



H3964

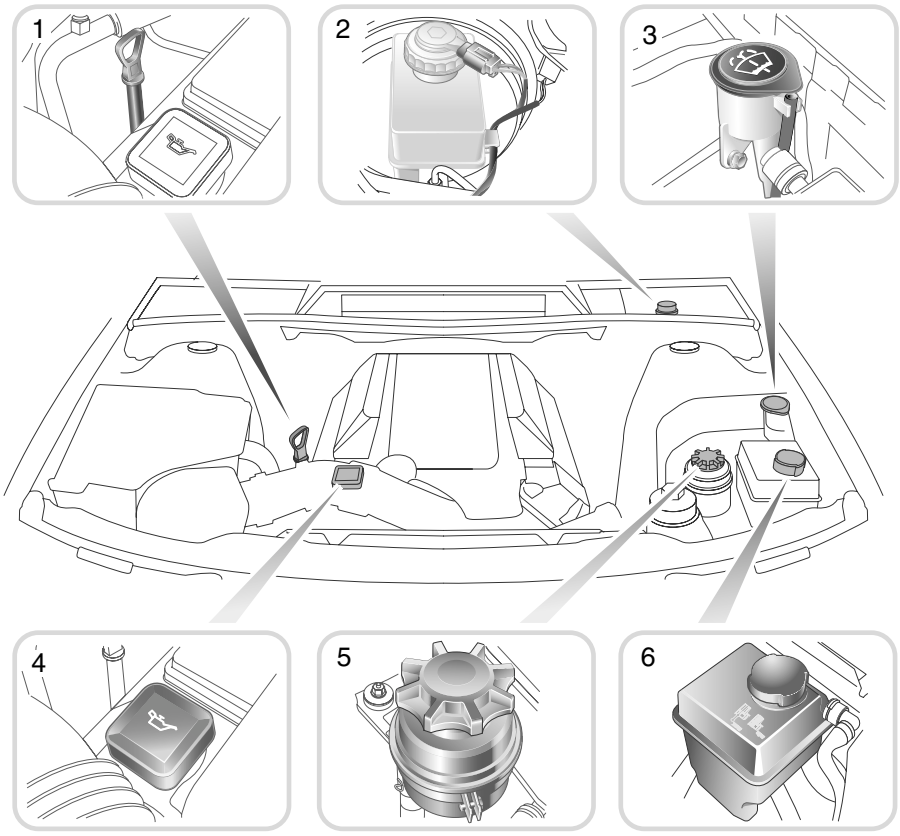
1. Engine oil filler cap.
2. Brake fluid reservoir.
3. Washer reservoir.
4. Engine oil dipstick.
5. Power steering reservoir.
6. Cooling system reservoir.

WARNING

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

Engine Compartment

PETROL ENGINE



H3905

1. Engine oil dipstick.
2. Brake fluid reservoir.
3. Washer reservoir.
4. Engine oil filler cap.
5. Power steering reservoir.
6. Cooling system reservoir.

WARNING

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

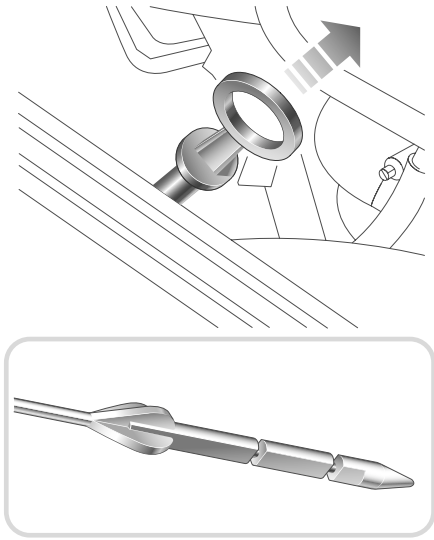
CHECK & TOP-UP

Check the oil level at least every 400 km, when the engine is COLD and with the vehicle resting on level ground.

NOTE: *If it is necessary to check the oil level when the engine is hot, switch off the engine and let the vehicle stand for five minutes to allow the oil to drain back into the sump. DO NOT start the engine.*

As a general guide, if the level on the dipstick:

- is nearer to the upper mark than the lower, add no oil.
- is nearer to the lower mark than the upper, add half a litre of oil.
- is below the lower mark, add one litre of oil and re-check the level after a further five minutes.



H3963

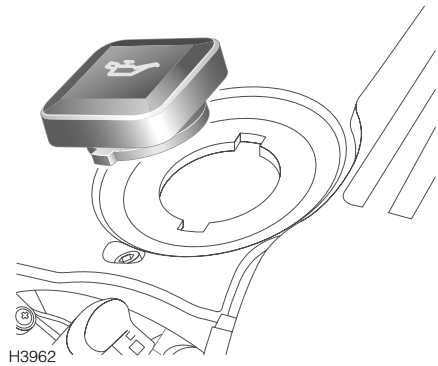
Oil specification

It is essential to use an oil suitable for the climatic conditions in which the vehicle is to be operated. Precise specifications are shown in *'LUBRICANTS AND FLUIDS', page 237*. If in doubt, contact your Land Rover dealer.

Diesel engine vehicles

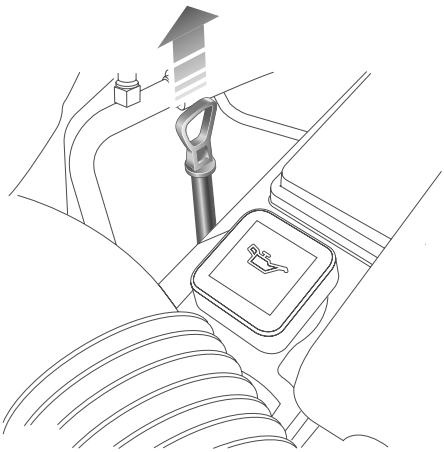
1. Withdraw the dipstick and wipe the blade clean.
2. Fully re-insert the dipstick and withdraw again to check the level, which should NEVER be allowed to fall below the lower mark on the dipstick.
3. To top-up, unscrew the oil filler cap and add oil to maintain the level between the UPPER and LOWER marks on the dipstick.

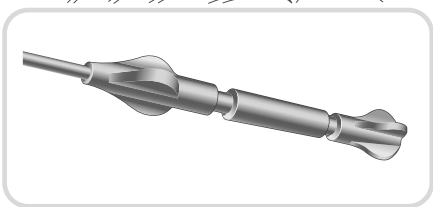
   DO NOT OVERFILL! Clean up any oil spillage incurred when topping-up.
4. Check the oil level again.



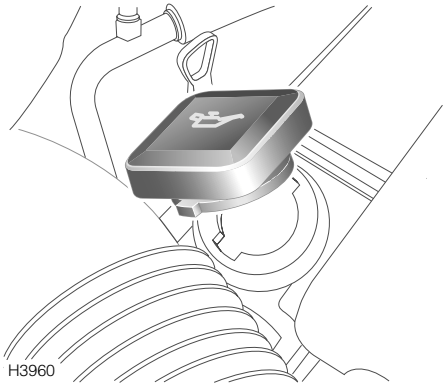
H3962

Petrol engine vehicles





H3961



H3960

1. Withdraw the dipstick and wipe the blade clean.
2. Fully re-insert the dipstick and withdraw again to check the level, which should NEVER be allowed to fall below the lower mark on the dipstick.
3. To top-up, unscrew the oil filler cap and add oil to maintain the level between the UPPER and LOWER marks on the dipstick.
   DO NOT OVERFILL!

COOLANT CHECK AND TOP-UP

WARNING

NEVER remove the filler cap when the engine is hot -escaping steam or scalding water could cause serious personal injury.

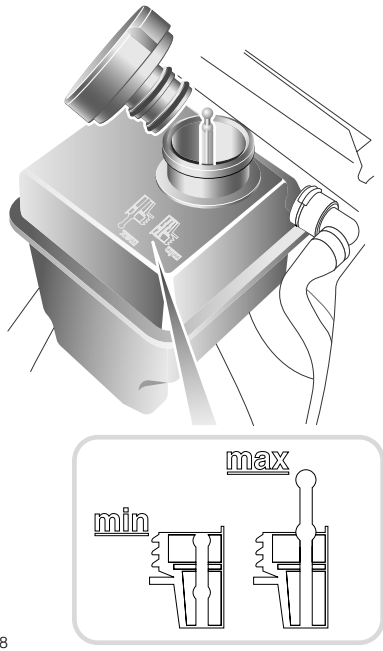
Unscrew the filler cap slowly, allowing the pressure to escape before removing completely.

NEVER run the engine without coolant.

Anti-freeze 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.

NEVER top-up with salt water. When travelling in territories where the water supply contains salt, always ensure you carry a supply of fresh (rain or distilled) water.

Avoid spilling anti-freeze onto a hot engine - a fire may result.



H3908

The coolant level in the expansion tank should be checked at least weekly (more frequently in high mileage or arduous operating conditions). Always check the level WHEN THE SYSTEM IS COLD.

If it is necessary to remove the filler cap before the system has fully cooled, loosen the cap slowly, allowing the air pressure to escape gradually.

Top-up with a 50% mixture of anti-freeze and water so that the float protrudes slightly from the filler neck, in accordance with the illustration inset. **DO NOT OVERFILL!**

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

If the level has fallen appreciably, suspect leakage or overheating and arrange for your dealer to examine the vehicle.

ANTI-FREEZE

WARNING

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

Prevent anti-freeze coming in contact with the skin or eyes. If this occurs, rinse immediately with plenty of water.

Anti-freeze contains important corrosion inhibitors. The anti-freeze content of the coolant must be maintained at 50% ± 5% all year round (not just in cold conditions). To ensure that the anti-corrosion properties of the coolant are retained, the anti-freeze content should be checked once a year and completely renewed every 4 years, regardless of distance travelled. Failure to do so may cause corrosion of the radiator and engine components.

The specific gravity of a 50% anti-freeze solution at 20°C is 1.075 and protects against frost down to -36°C.

Coolant specification
Use ONLY a 50% mix of water and Texaco AFC Coolant. If this is unavailable, use any ethylene glycol based anti-freeze (containing no methanol) with only Silicate based non-phosphate corrosion inhibitors.

In an emergency - and only if this type of anti-freeze is unavailable - top-up the cooling system with clean water, but be aware of the resultant reduction in frost protection. DO NOT top-up or refill with conventional anti-freeze formulations. If in doubt consult a Land Rover dealer.

BRAKE FLUID

WARNING

Brake fluid is highly toxic - keep containers sealed and out of the reach of children. If accidental consumption of 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.

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

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

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.

Check

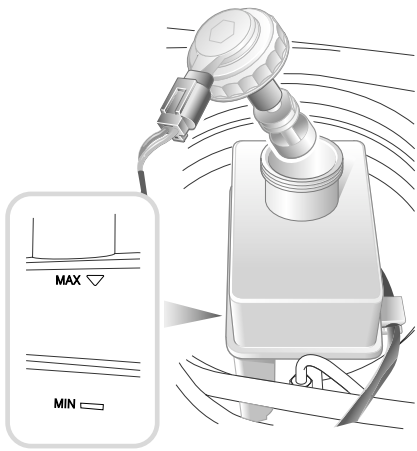
The fluid level may fall slightly during normal use as a result of brake pad wear but should not be allowed to fall below the 'MIN' mark. Any substantial drop in fluid indicates a leak in the system, in which case the vehicle must NOT be driven and you should contact your dealer.

WARNING

Contact your dealer immediately if brake pedal travel is unusually long or if there is any appreciable drop in brake fluid level.

With the vehicle on level ground, check the fluid level at least every week (more frequently in high mileage or arduous operating conditions). Check the level visually through the side of the transparent reservoir without removing the filler cap.

Top-up



H4226

Wipe the filler cap clean before removing to prevent dirt from entering the reservoir. Unscrew the cap (1/8 turn) and top-up the reservoir to the 'MAX' mark using Shell Donax YB brake fluid conforming to DOT 4 specification.

Use only new fluid from an airtight container (old fluid from opened containers or fluid previously bled from the system will have absorbed moisture, which will adversely affect performance, and must NOT be used). **DO NOT OVERFILL!**

Brake fluid must be completely renewed every 3 years regardless of distance travelled.

POWER STEERING FLUID

WARNING

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

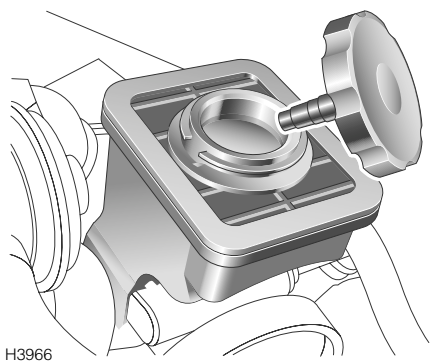
If power steering fluid should come into contact with the skin or eyes, rinse immediately with plenty of water.

Do not spill power steering fluid onto a hot engine - a fire may result.

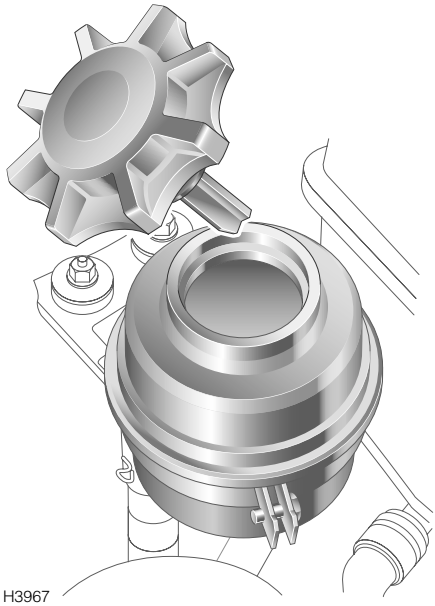
Power steering fluid will damage painted surfaces: Soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.

Check and Top-up

Check and top-up the fluid level ONLY with the engine switched off and the system cold, and ensure that the steering wheel is not turned after stopping the engine.



Diesel engines



Petrol engines

Wipe the filler cap clean to prevent dirt from entering the reservoir. Remove the filler cap and, using a lint-free cloth, wipe the dipstick clean. Refit the filler cap fully and remove it again to check the fluid level. Add fluid to the reservoir until the level is between the upper mark and the bottom of the dipstick. **DO NOT fill above the upper mark on the dipstick.**

WARNING

The engine must NOT be started if the fluid level has dropped below the bottom of the dipstick - severe damage to the pump could result.

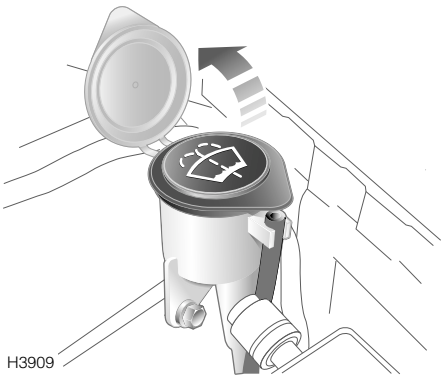
Emergency operation

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

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 qualified dealer for examination.

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.

WINDSCREEN WASHER TOP-UP



The windscreen washer reservoir supplies both front and rear screen washer jets and headlight washer jets*.

Check the reservoir level at least every week and top-up with a mixture of water and Land Rover Parts STC 8249 Screenwash. Preferably mix the recommended quantities of water and screenwash in a separate container before topping-up, and always follow the instructions on the container. Note that an approved screenwash is necessary to prevent freezing in very cold weather.

Operate the washer switches periodically to check that the nozzles are clear and properly directed.

WARNING

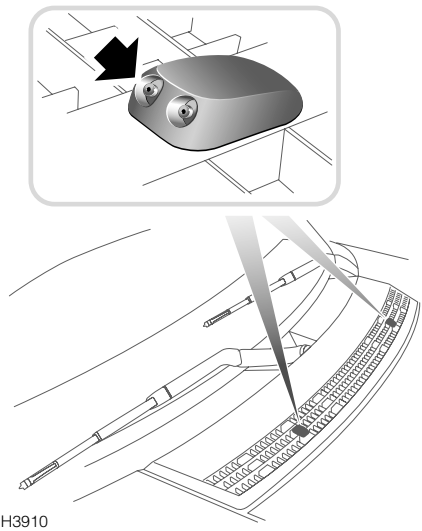
DO NOT use an anti-freeze or vinegar/water solution in the washer reservoir - anti-freeze will damage painted surfaces, while vinegar can damage the windscreen washer pump.

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

WASHER JETS

The windscreen washer jets are set during manufacture and should not need adjusting. However, if adjustment is ever necessary, insert a needle into the jet orifice and lever gently to position each jet so that the spray is directed towards the centre of the windscreen.



H3910

The rear screen jets located in the wiper arm are not adjustable.

Should any jet become obstructed, insert a needle or thin strand of wire into the orifice to clear the blockage.

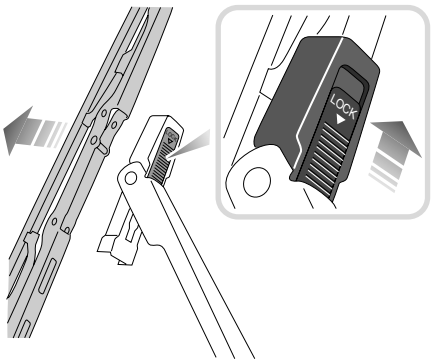
HEADLIGHT WASHERS*

The spray jets are set during manufacture and should not need to be adjusted.

NOTE: *Ensure an approved screen washer solvent is used in the windscreen washer reservoir to prevent freezing.*

WIPER BLADE REPLACEMENT

Front wiper blades



H3912

Lift the wiper arm away from the windscreen. Disconnect the blade by pushing the locking tab (see inset in illustration) to the unlock position.

Fitting a replacement blade is a reversal of this process. Check that the blade is securely locked before returning the wiper assembly to the windscreen.

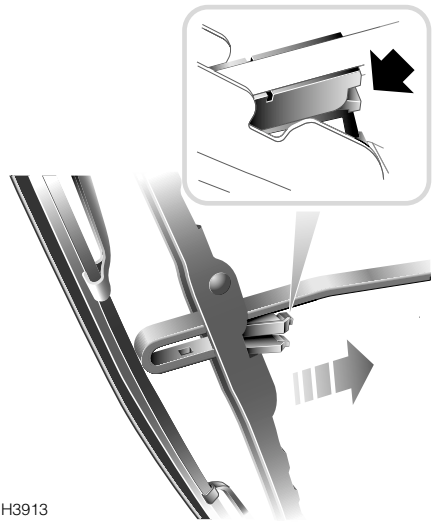
Only fit replacement wiper blades that are identical to the original specification.

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.

Rear wiper blade



H3913

Lift the wiper arm away from the rear screen and pivot the blade assembly away from the arm. Press the tab (arrowed in inset), to release the blade assembly and slide the assembly off the end of the wiper 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 and push firmly into position until the blade clips into place.

Headlight wiper blade*

The headlight wiper blade and wiper arm are an integral unit and should only be replaced by qualified personnel.

BATTERY SAFETY

WARNING

Batteries contain 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.

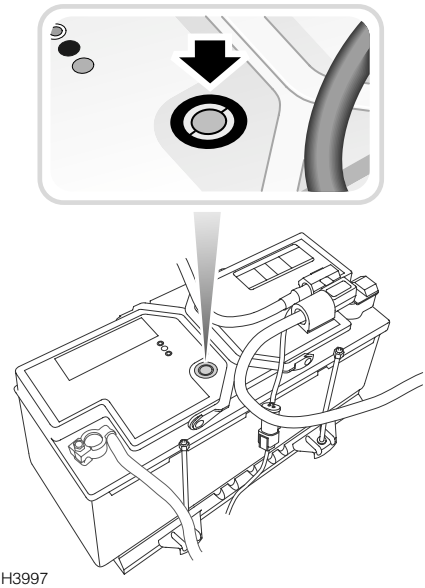
During normal operation batteries emit explosive hydrogen gas - ensure sparks and naked lights are kept away from the engine compartment.

For your safety, remove all metal wrist bands and jewellery before working in the engine compartment and NEVER allow the battery terminals or vehicle leads to make contact with tools or metal parts of the vehicle.

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 inset). 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 vehicle in this condition.



H3997

NOTE: *When checking the battery condition indicator, if necessary, clean the battery top to ensure a clear view.*

If the indicator shows clear or yellow, tap the indicator with the handle of a screwdriver to disperse any air bubbles. If the colour is unchanged, the battery must be replaced.

Battery disconnection, charging, removal and replacement

There may at times be a requirement to disconnect the battery, eg, to necessitate Interlock Code emergency deactivation - *see your Audio & Navigation handbook.*

- Turn the starter switch off and remove the starter key.
- Wait for at least two minutes before starting the disconnection procedure. Ensure you have your remote handset available as you may have to turn off the alarm sounder.
- Disconnect ONLY the negative ('-') terminal.

- Wait for two minutes before reconnecting the battery.

If the alarm sounds when the battery is reconnected, use the key fob to turn it off.

WARNING

The battery positive ('+') terminal is fitted with a pyrotechnic charge, designed to disconnect the battery as a safety precaution in the event of a severe collision. For this reason, the battery charging, disconnection and removal should only be attempted by qualified personnel.

WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

Effects of battery disconnection

Following disconnection and subsequent reconnection of the vehicle battery, a number of the vehicle systems will be reset automatically. This may take a few minutes and with some systems, sensors have to detect certain actions whilst driving before full operability returns. This in no way affects the safe operation of the vehicle.

CARING FOR YOUR TYRES

WARNING

DEFECTIVE TYRES ARE DANGEROUS! Do not drive if any tyre is damaged, is excessively worn, or is inflated to an incorrect pressure.

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 are:

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

NOTE: *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 rapidly, can seriously affect the vehicle's road handling characteristics and fuel consumption, as well as increasing the risk of tyre failure.
Over-inflated tyres give a harsher ride, wear unevenly and are more prone to damage.

Tyre pressures should be checked at least once a week with normal road use, but should be checked DAILY if the vehicle is used off-road.

Check the pressures (including the spare wheel) when the tyres are cold - be aware that it only takes a 1.6 km of driving to warm up the tyres sufficiently to affect the tyre pressures.

NOTE: *On vehicles fitted with Tyre Pressure Monitoring System (TPMS), the tyre pressures are monitored automatically and a warning message and tone will alert the driver if a significant drop in tyre pressure is detected. See "TYRE PRESSURE MONITORING SYSTEM (TPMS)*', page 66, for further information.*

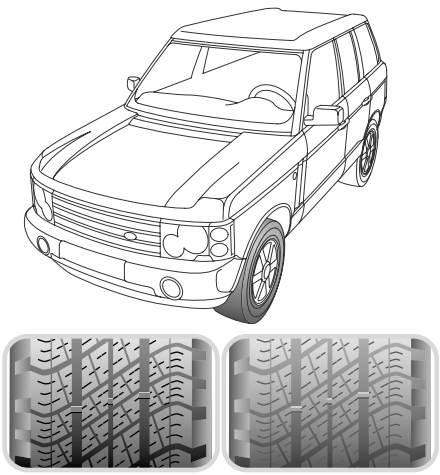
Air pressure naturally increases in warm tyres; if it is necessary to check the tyres when they are warm (after the vehicle has been driven for a while), you should expect the pressures to have increased between 0.3 to 0.4 bar. In this circumstance, NEVER let air out of the tyres in order to match the recommended pressures.

WARNING

If the vehicle has been parked in strong sunlight or used in high ambient temperatures, DO NOT reduce tyre pressures; instead, move the vehicle into the shade and allow the tyres to cool before checking.

The recommended pressures for cold tyres are shown in *'WHEELS & TYRES', page 242*.

Tyre wear



H3831

Tyres fitted as original equipment have wear indicators moulded into the tread pattern. When the tread has worn down to 1.6 mm the indicators start appearing at the surface of the tread pattern, producing the effect of a continuous band of rubber across the width of the tyre.

A tyre MUST be replaced as soon as an indicator band becomes visible or the tread depth reaches the minimum permitted by legislation.

Tread depth must be checked regularly (at every maintenance service, or more frequently). Always replace a tyre before the tread reaches a remaining depth of 1.6 mm. DO NOT drive with tyres worn to this limit, the safety of the vehicle and occupants will be adversely affected.

NOTE: *After off-road use, check to make sure there are no lumps or bulges in the tyres or exposure of the ply or cord structure.*

Valves

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.

Punctured tyres

Your vehicle is fitted with tubeless tyres, which may not leak if penetrated by a sharp object, provided the object 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.

A puncture of this kind will eventually cause the tyre to lose pressure, which is why regular (and frequent) checking of tyre pressures is important. Punctured or damaged tyres must be permanently repaired or replaced as soon as possible. DO NOT DRIVE WITH A PUNCTURED TYRE!

Replacement tyres

Wheel rims and tyres are matched to suit the handling characteristics of the vehicle. For safety, ALWAYS check that replacement tyres comply with the original specification (see *'WHEELS & TYRES', page 242*) and that the load and speed ratings shown on the side wall are the same as that of the original equipment. Contact your Land Rover dealer for further information or assistance.

WARNING

ALWAYS use the same make and type of radial-ply tyres front and rear. DO NOT use cross-ply tyres, or interchange tyres from front to rear.

Your vehicle is fitted with road wheels that will NOT accept inner tubes. DO NOT fit a tubed tyre.

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

Always have replacement wheels and tyres balanced before use.

SNOW CHAINS

Snow chains are designed for use on metalled roads in extreme snow conditions only, and are not recommended for off-road use. If it is necessary to fit snow chains to your vehicle, ALWAYS observe the following:

- ***Front wheels:*** Snow chains must not be fitted to the front wheels unless the vehicle is equipped with 235/65 R18 tyres.
- ***Rear wheels:*** Snow chains can be fitted to the rear wheels of any vehicle, provided the wheels and tyres conform to one of the original equipment or applicable accessory fit specifications listed later in the handbook (see *'WHEELS & TYRES', page 242*).
- Whether chains are to be fitted to the rear wheels only, or to all four wheels, then ONLY Land Rover approved chains should be used - these are designed for your vehicle and will eliminate any risk of damage to other components. Approved snow chains are only available from a Land Rover dealer.
- Always adhere to the snow chain fitting and retensioning instructions and the speed limitations recommended for varying road conditions. NEVER exceed 50 km/h.
- ONLY fit snow chains in pairs.
- Avoid tyre damage by removing the chains as soon as the road is free from snow.

WARNING

DO NOT fit unapproved snow chains - this could damage tyres, wheels, suspension and brake components and could result in damage to the bodywork of the vehicle.

WASHING YOUR VEHICLE


H3854

WARNING

Some high pressure cleaning systems are sufficiently powerful to penetrate door and window seals and damage rubbing strips and locking mechanisms. Never aim the water jet directly at heater air intakes, body and sunroof seals, or at any components that might easily be damaged.

Wash your vehicle frequently using a sponge and generous quantities of cold or lukewarm water containing a car shampoo. Rinse and dry off with a chamois leather.

- Do not use hot water!
- Do not use detergent soap products or washing-up liquid!
- In hot weather, do not wash the vehicle in direct sunlight.

Underbody maintenance

Corrosive materials used for snow and ice removal and dust control can collect on underbody parts. If these materials are not removed, accelerated rusting can occur. Use a hose to regularly flush the underbody with plain water, taking particular care to thoroughly clean those areas where mud and other debris can easily collect.

Similarly, after off-road driving or wading in muddy or salt water conditions, use a hose to wash underbody components and other exposed parts of the vehicle.

When using a hose, do not direct the jet into the heater air intake ducts, or through the wheel trim apertures onto the brake components, or at the door, window or sunroof seals, where water pressure could penetrate the seals.

If damage or corrosion to the underbody area is detected, please have the vehicle checked by a dealer at the earliest opportunity.

Removing tar spots

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

Body protection

After washing, inspect the paintwork for damage. Any stone chips, fractures or deep scratches in the bodywork should be repaired promptly. Bare metal will corrode quickly and can develop into major repair expense. Some exterior panels of your vehicle are made of aluminium which will not corrode in the same manner as steel. However, any damage should still receive prompt attention. Minor chips and scratches can be repaired with touch-up materials available from your dealer. Larger areas of damage need to be corrected to professional standards immediately.

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.

NOTE: *DO NOT apply car polish to the unpainted areas of the bumper mouldings - polish will become ingrained in the textured finished.*

Glass and mirrors
Clean the rear window with a soft cloth to avoid damaging the heating elements. DO NOT scrape the glass or use an abrasive cleaning fluid.

Mirror glass is particularly susceptible to damage. Wash with soapy water. DO NOT use abrasive cleaning compounds or metal scrapers to remove ice.

CLEANING THE INTERIOR

Plastic materials
Clean plastic-faced or cloth covered surfaces with diluted upholstery cleaner and wipe with a clean cloth.

NOTE: *DO NOT polish fascia components - for safety, these should remain non-reflective.*

Leather
Leather seats, steering wheel and trim features should be cleaned with a damp cloth moistened with undiluted upholstery cleaner. Leave for five minutes, and then repeat the operation using a clean cloth and water - but avoid flooding the area! Dry and polish the leather with a dry, lint-free cloth.

DO NOT use petrol, detergents, furniture creams or polishes!

Carpet and fabrics
Clean with diluted nylon upholstery cleaner - test on a concealed area first.

Instrument pack, clock and radio
Clean with a dry cloth only! DO NOT use cleaning fluids or sprays.

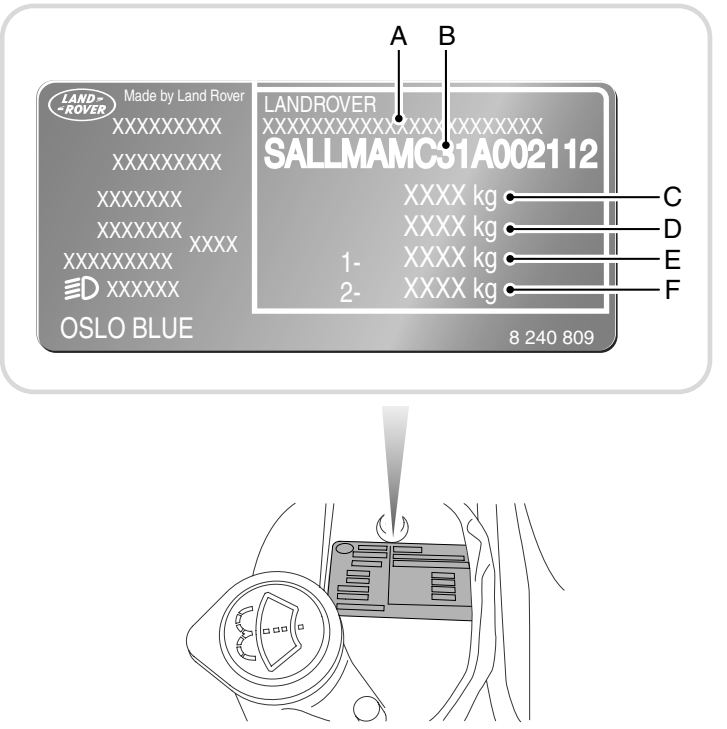
Seat belts
Extend the belts, then use warm water and a non-detergent soap to clean. Allow the belts to dry naturally, and do not retract them or use the vehicle until they are completely dry.

Airbag module covers
To prevent airbag SRS damage, the steering wheel centre pad 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.

Identification Numbers

VEHICLE IDENTIFICATION NUMBER (VIN)



A. Type approval (where required)
B. Vehicle Identification Number (VIN)
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)

If you need to communicate with a Land Rover dealer, you may be asked to quote the Vehicle Identification Number (VIN).

The VIN (and recommended maximum vehicle weights) is stamped on a plate riveted to the top of the left hand front suspension tower in the engine compartment (this should match the VIN recorded in the Service Portfolio book).

In addition, as a deterrent to car thieves and to assist the police, the VIN is stamped on a plate which is visible through the lowest part of the left side of the windscreen and also stamped on the vehicle body (on the front face of the right hand front suspension tower).

PARTS AND ACCESSORIES

WARNING

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

Your vehicle has been designed, built and tested to cope with a variety of off-road driving conditions, some of which can place the severest possible demands on control systems and components. As such, fitting replacement parts and accessories that have been developed and tested to the same stringent standards as the original components will safeguard the continued reliability, safety and performance of your vehicle.

To augment the vehicle's already impressive performance, a comprehensive range of Land Rover-approved spare parts and accessories is available, enabling the vehicle to fulfil a wide variety of roles, and enhancing and protecting the vehicle in the many tasks to which it can be applied.

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.

Electrical equipment

WARNING

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

ALWAYS consult a Land Rover dealer before fitting any accessory.

Fitting inferior quality parts or accessories, may be dangerous and could invalidate the vehicle warranty.

It is recommended that you always consult a Land Rover dealer for advice regarding the approval, suitability, installation and use of any parts or accessories before fitting.

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.

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.

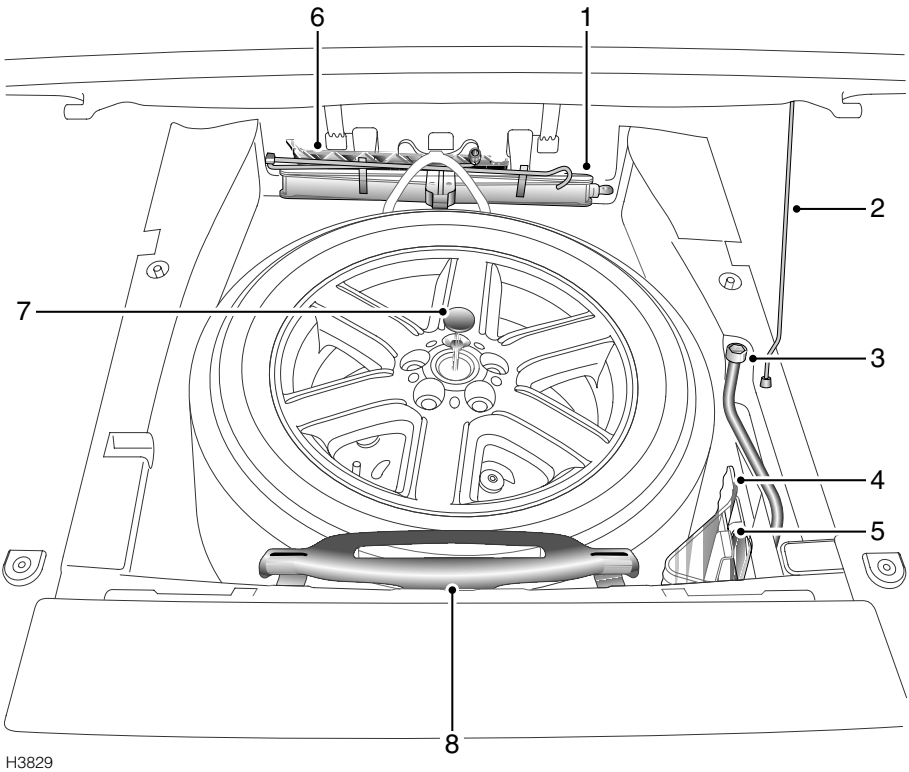
Travelling abroad

In certain countries, it is illegal to fit parts which have not been made to the vehicle manufacturers' 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 own country when they return home.

Emergency Information

TOOL KIT



The wheel change tool kit is stowed in the spare wheel well, under an access hatch in the rear loadspace area.

1. Wheel change jack.
2. Spare wheel hatch support stay.
3. Wheel nut brace.
4. Wheel chocks.
5. Tool bag.
6. Tailgate hinge-stop.
7. Spare wheel retaining bolt.
8. Spare wheel lifting strap handle*.

Care of the jack

Examine the jack occasionally, clean and grease the moving parts, particularly the screw thread, to prevent corrosion.

To avoid contamination, the jack should always be stowed in its fully closed position.

WARNING

After wheel changing, always secure tools, chocks, jack and replaced wheel in their correct storage positions.

WHEEL CHANGING SAFETY

If possible, choose a safe place to stop away from the main thoroughfare. Always ask your passengers to get out of the vehicle and wait in a safe area away from other traffic.

NOTE: *Switch on the hazard warning lights and set the hazard warning triangle*, a suitable distance behind the vehicle, to alert other road users.*

Before changing a wheel, ensure the front wheels are in the straight ahead position (if possible), apply the handbrake, select 'P' (Park) and select LOW range in the transfer box.

Turn off the starter switch, remove the key and engage the steering lock. Observe the following precautions:

- Ensure the jack will be positioned on firm, level ground; NEVER on soft ground, or over metal gratings or manhole covers. DO NOT place additional material between the jack and the ground, this may jeopardise the safety of the jacking operation.
- Chock both sides of the wheel diagonally opposite the one to be removed.

  If jacking the vehicle on a slope is unavoidable, place the chocks on the downhill side of the two opposite wheels.
- NEVER raise the vehicle with passengers inside, or with a caravan or trailer connected!

Tilt Sensor

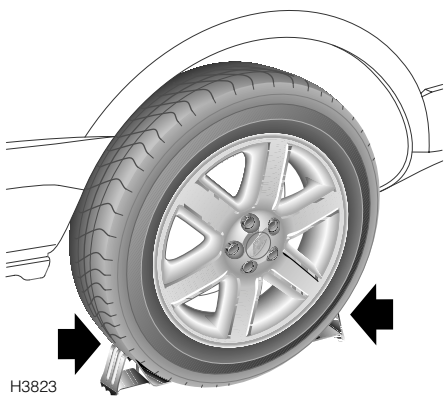
Your vehicle is fitted with a tilt sensor which activates the alarm if the vehicle is tilted fore and aft, or side to side, after it has been locked.

If you wish to have the doors locked while jacking up the vehicle, for any reason, lock the doors by pressing the lock button twice within 10 seconds. If you use the key to lock the doors, turn the key in the driver's door lock towards the rear of the vehicle twice within 10 seconds.

Using wheel chocks

WARNING

Before raising the vehicle, as an additional safety precaution, it is advisable to chock the road wheels in two places.

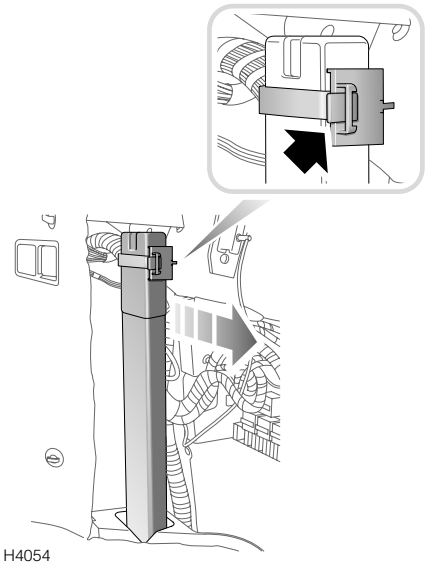


If possible, position the vehicle on level ground, chocking both sides of the wheel diagonally opposite the one to be removed.

If jacking the vehicle on a slope is unavoidable, place the chocks on the downhill side of the two opposite wheels.

The wheel chocks are stowed in the spare wheel well, where shown in *'TOOL KIT', page 199*.

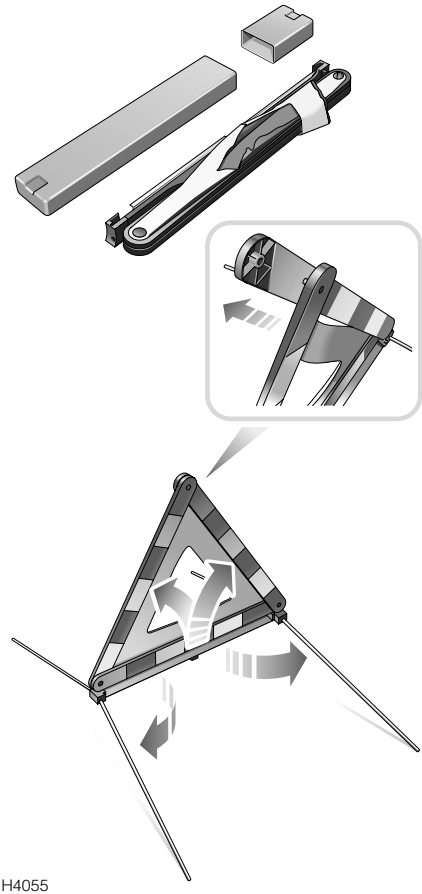
Using the warning triangle*



H4054

The warning triangle* is located behind the rear loadspace access hatch. Consult *'REAR LOADSPACE ACCESS HATCH', page 107*, for instructions on opening the hatch.

With the access hatch open, depress the tab (arrowed in inset) to release the safety strap and remove the warning triangle case. Open the case and remove the warning triangle assembly.



H4055

Fold out the four metal 'legs', then lift and fold out the two upper sides of the triangle (see main illustration). Secure the apex of the triangle with the press stud (see inset).

Place the warning triangle at a suitable distance behind the vehicle, to warn other drivers of a possible obstruction.

REMOVING THE SPARE WHEEL

Space saver spare wheel

WARNING

The space saver spare wheel is heavy. Take care when lifting and particularly when removing the spare wheel from the rear loadspace and when lifting the replaced wheel back into the spare wheel well.

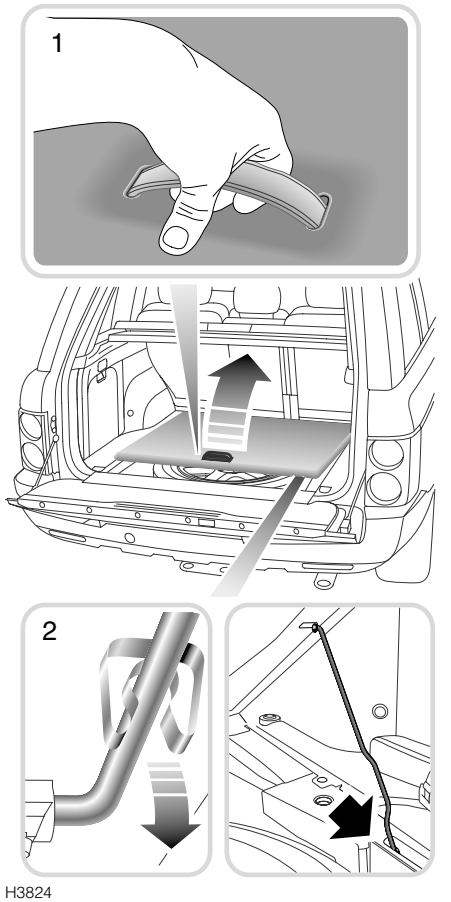
To access the spare wheel well, it is necessary to fold the rear edge of the loadspace cover forward (see *'LOADSPACE COVER', page 109*, for further details.

With the tailgate open:

1. Lift the handle to open the spare wheel access hatch.
2. Unclip the support stay from the underside of the hatch and slot the end into the hole to the side of the spare wheel aperture (solid arrow in inset), to keep the access hatch open.

   Unhook the wheel changing jack restraining strap and remove the jack and tailgate hinge-stop. Remove the wheel chocks and wheel nut brace (see *'TOOL KIT', page 199*).

Loosen the spare wheel retaining bolt wingnut, then unscrew the spare wheel retaining bolt and remove. Lift and remove the spare wheel from the spare wheel well.

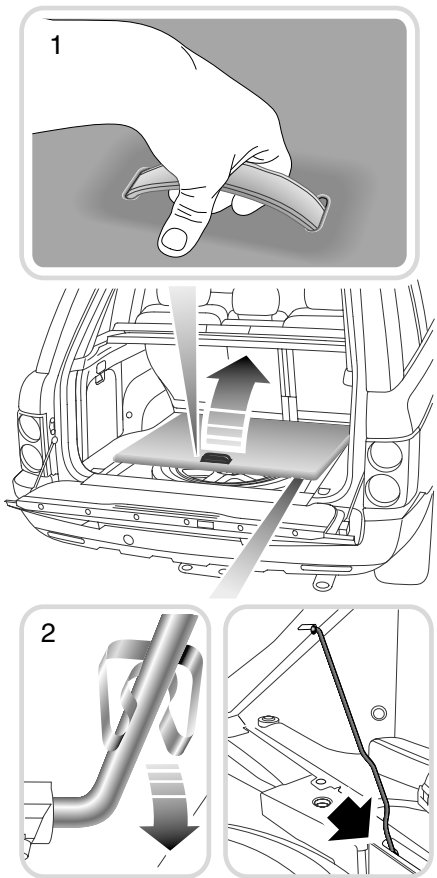


H3824

Full size spare wheel*

WARNING

The wheels are extremely heavy. Take care when lifting and particularly when removing the spare wheel from the rear loadspace and when lifting the replaced wheel back into the spare wheel well.



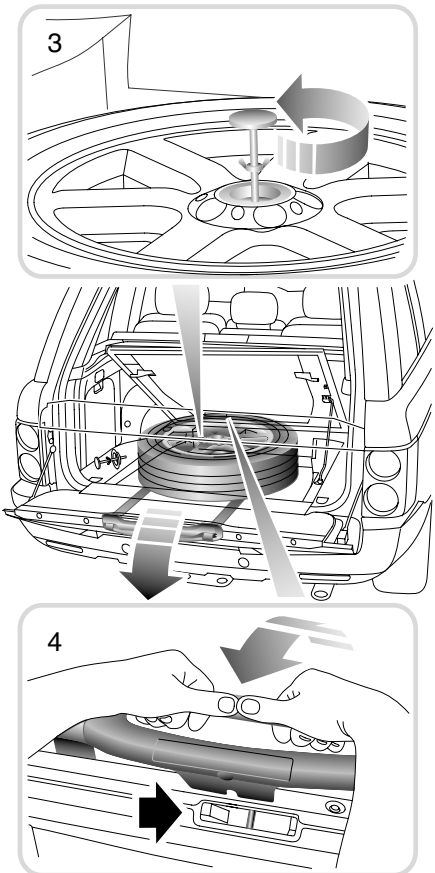
H3824

To access the spare wheel well, it is necessary to fold the rear edge of the loadspace cover forward (see *'LOADSPACE COVER', page 109*, for further details.

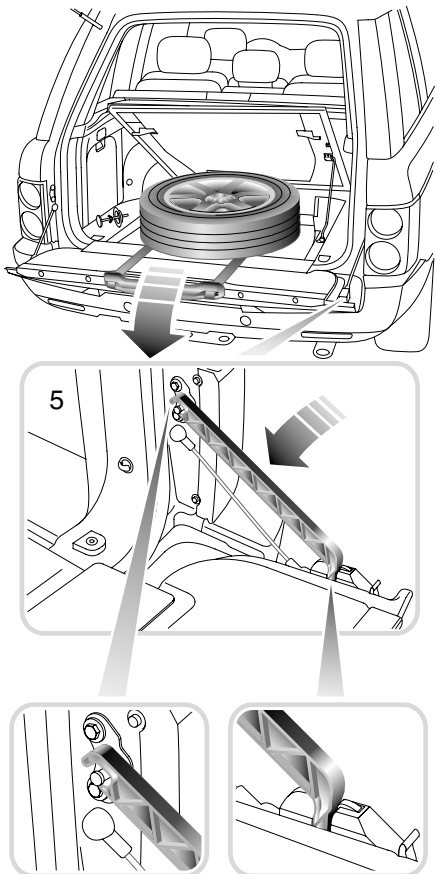
With the tailgate open:

1. Lift the handle to open the spare wheel access hatch.
2. Unclip the support stay from the underside of the hatch and slot the end into the hole to the side of the spare wheel aperture (solid arrow in inset), to keep the access hatch open.

   Unhook the wheel changing jack restraining strap and remove the jack and tailgate hinge-stop. Remove the wheel chocks and wheel nut brace (see *'TOOL KIT', page 199*).
3. Loosen the spare wheel retaining bolt wingnut, then unscrew the spare wheel retaining bolt and remove, then fully close the lower tailgate.



H3825



H3826

4. Attach the spare wheel lifting strap handle to the top of the lower tailgate (as inset 4), ensuring that the two lugs engage fully with the corresponding apertures in the top of the tailgate. Once the handle is correctly located, the tailgate is automatically released. Lower the tailgate; the wheel lifting strap automatically raises the wheel out of the spare wheel well and onto the lower tailgate, therefore improving ease of removal.

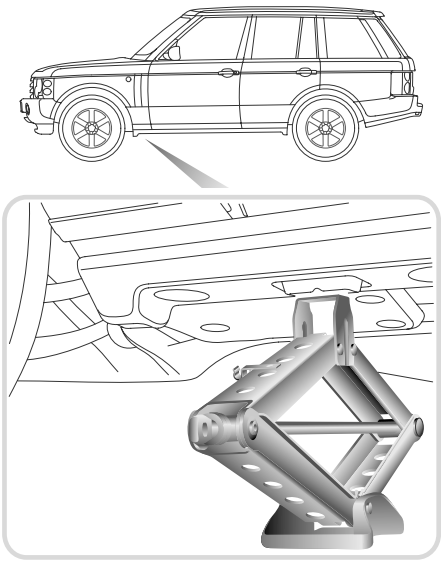
5. Once the wheel has been lifted onto the tailgate, attach the hinge-stop, to prevent the tailgate from lifting. Remove the spare wheel from the loadspace area.

CHANGING A WHEEL

Positioning the jack

WARNING

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

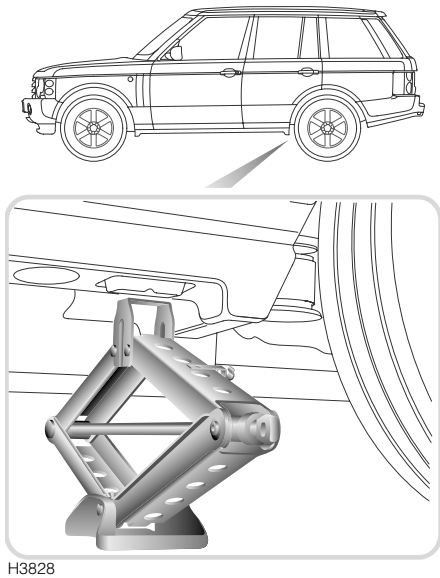


H3827

Front jacking point

Always position the jack from the side of the vehicle, approximately in line with the appropriate jacking point. Ensure the jack is positioned on firm, level ground.

Position the jack so that, when raised the cradle head of the jack engages with the shaped notches on the underside of the front or rear sill trim - either just forward of the rear wheels or just to the rear of the front wheels.



H3828

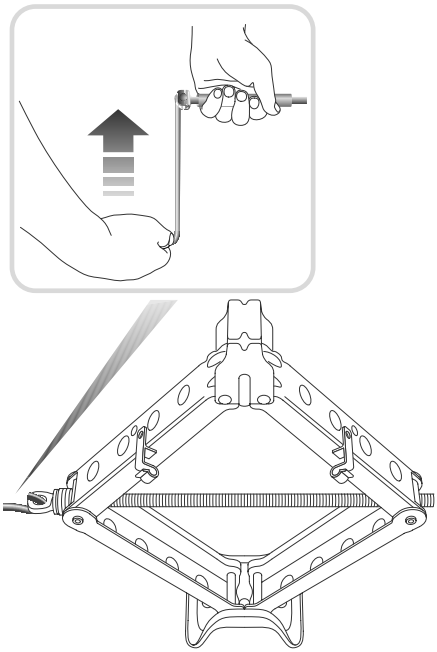
Rear jacking point

WARNING

ALWAYS use the complete, two-piece, jack lever throughout to minimise any chance of accidental damage or injury.

ONLY jack the vehicle using the jack location points described, or damage to the vehicle could occur.

Operating the jack



H4110

Position the jack under the relevant jacking point, attach the jack cranking handle to the jack. Turn the jack handle clockwise to raise the jack cradle until it engages with the jacking point. Ensure that the base of the jack is in full contact with the road surface.

Changing a wheel

1. Before raising the vehicle, use the wheel nut brace to slacken the wheel nuts half a turn anti-clockwise.
2. Raise the vehicle until the tyre is clear of the ground.
3. Remove the wheel nuts and place to one side to prevent them from being lost.
4. Remove the road wheel.

NOTE: *DO NOT damage the surface of the wheel by placing it face down on the road.*

5. On alloy wheels, use an approved anti-seize compound to treat the wheel mounting bore. This will minimise any tendency for adhesion between the wheel and the bore.

   Ensure that no compound comes into contact with the brake components or the flat mounting surfaces of the wheel.

   If, due to an emergency situation, this treatment is not practicable; refit the spare wheel for the time being, but remove and treat the wheel at the earliest opportunity.
6. Fit the spare wheel and lightly tighten the wheel nuts, ensuring they are firmly seated. DO NOT fully tighten whilst the tyre is clear of the ground.

WARNING

When fitting a wheel, ensure that the mating faces of the hub and wheel are clean and free from rust or anti-seize compound - any accumulation of dirt or rust could cause the wheel nuts to become loose.

7. Ensure that the space under and around the vehicle is free from obstructions then lower the vehicle and remove the jack and wheel chocks.
8. Fully tighten the wheel nuts in an alternating pattern until all are tightened. DO NOT OVERTIGHTEN by using foot pressure or extension bars on the wheel stud brace, as this could overstress the wheel nuts. Check the wheel nut torque at the earliest opportunity (see *'WHEELS & TYRES', page 242*).

9. Using a suitable blunt tool, apply light pressure to the rear of the replaced wheel centre cap and remove. Using hand pressure only, fit the centre cap into the newly fitted wheel. Return tools, chocks, jack and the replaced wheel to their correct storage positions.

   NOTE: *Storing the wheel in the spare wheel well can be achieved by following the full size spare wheel removal procedure in the reverse order.*
10. REMEMBER to change to 'H' (high range) before driving.
11. Finally, check the tyre pressure at the earliest opportunity (see *'WHEELS & TYRES', page 242*).

Using a space saver spare wheel*

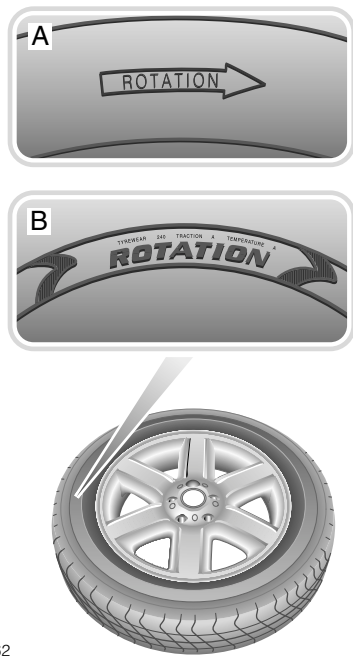
IMPORTANT INFORMATION
The following precautions must be observed when using the space saver spare wheel: • The space saver spare wheel is for temporary use only. It must be replaced by the repaired standard wheel as soon as possible. • Only one space saver wheel is to be used on the vehicle at any one time. • A maximum speed of 80 km/h must be observed. • The inflation pressure of the space saver tyre must be maintained at 4.2 bar. • The use of snow chains is NOT permitted on the space saver spare wheel. • Take care when driving; the space saver tyre is smaller in size and higher in pressure than a regular tyre. It will cause a harsher ride and may have less traction on some road surfaces.

Directional Tyres*

Directional tyres give greater benefit when they rotate in a forward direction, ie, when the vehicle is moving forwards. They give enhanced levels of deep-water grip while still maintaining low tyre noise generation.

Should a tyre be fitted to a vehicle in the wrong directional sense, these benefits will only be maintained if the tyre is remounted to the rim so that it rotates in the direction indicated on the sidewall.

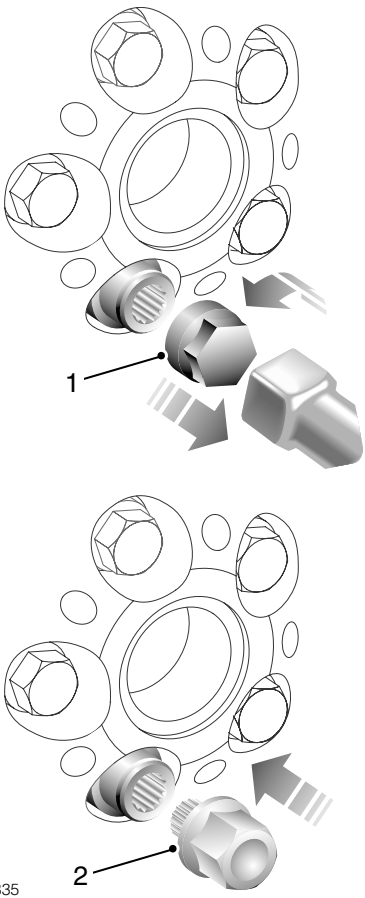
There are two types of directional tyre and the direction indicators are shown in the illustration below.



H4562

LOCKING WHEEL NUTS

Vehicles may be equipped with a locking wheel nut on each wheel. These are similar to standard wheel nuts, but have a removable cap (1) and can only be removed using the special adaptor (2) provided in the tool kit.



NOTE: *A code number is stamped on the underside of the adaptor. Ensure the number is recorded on the Security Information card supplied with the literature pack. Quote this number if a replacement is required. DO NOT keep the Security Information card in the vehicle.*

Use the wheel nut brace to twist the wheel nut cap (1) slightly anti-clockwise and remove.

Insert the adaptor (2) firmly into the locking wheel nut.

Using the wheel nut brace, unscrew the wheel nut and adaptor.

Be sure to return the locking wheel nut adaptor to the correct storage position.

STARTING AN ENGINE WITH A DISCHARGED BATTERY

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 discharged battery. This procedure differs to that used to charge a battery, which should not be attempted with the battery connected to the vehicle.

Push or tow starting is NOT recommended!

WARNING

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

DO NOT attempt to start the vehicle if the electrolyte in the battery is suspected of being frozen.

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

DO NOT disconnect the discharged battery.

DO NOT connect positive (+) terminals to negative (-) terminals, and ensure booster cables are kept away from any moving parts in the engine compartment.

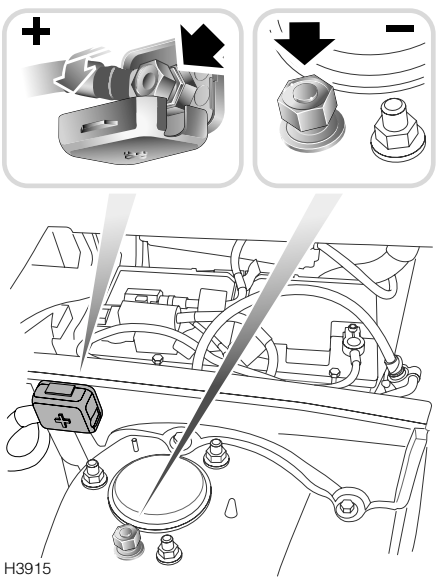
Take care when working near rotating parts of the engine.

If a donor vehicle is to be used, both vehicles should be parked with their battery locations adjacent to each other. Ensure that the two vehicles do not touch.

Apply the handbrakes and ensure that the transmission of both vehicles is set in neutral ('P' or Park for vehicles with automatic transmission).

Turn off the starter switch and ALL electrical equipment of BOTH vehicles, then follow the connection instructions on the following page.

USING BOOSTER CABLES



WARNING

ALWAYS use the recommended connection points.

DO NOT attach booster cables to the positive terminal of the vehicle battery. The positive terminal is equipped with a pyrotechnic device, that disconnects the battery as a safety precaution when the vehicle is involved in a collision. Attaching a booster cable to the positive terminal may cause inadvertent firing of the device - this may result in personal injury or death and may damage the vehicle.

ENSURE that each connection is securely made and that there is no risk of the clips accidentally slipping or being pulled from connection points - this could cause sparking, which could lead to explosion or fire.

Booster cable connection points

The booster cable connection points (both negative (-) and positive (+)) located in the engine compartment, are remote from the vehicle battery. These are provided to improve personal safety when attempting to receive or give a booster start.

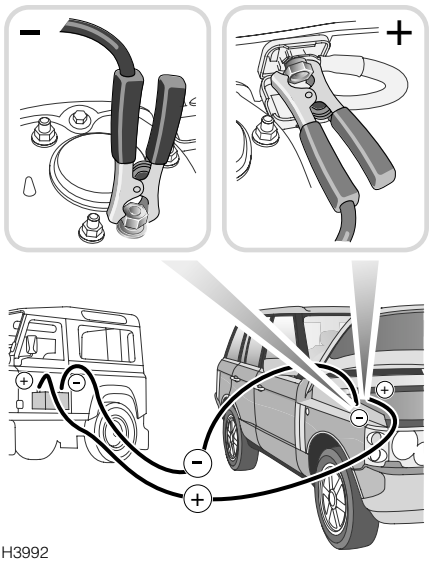
The positive (+) connection point, shown in the left inset of the illustration, is protected by a cover to prevent an inadvertent connection and to avoid contamination. Open the cover before attempting to connect a booster cable.

The negative (-) connection point is a special nut, located on the suspension turret (see illustration).

Always use these connection points when connecting booster cables and ensure the cables are kept clear of any moving parts in the engine compartment.

RECEIVING A BOOSTER START

Connecting the booster cables



IMPORTANT INFORMATION

Ensure that you have read and fully understood the information and warnings given earlier in this section (see *'STARTING AN ENGINE WITH A DISCHARGED BATTERY', page 209* and *'USING BOOSTER CABLES', page 210*), BEFORE attempting to give or receive a booster start.

WARNING

DO NOT connect the BLACK cable to the negative terminal of the discharged battery, always use the negative (-) connection point - if in doubt, seek qualified assistance.

Always adopt the following procedure, ensuring the cables are connected in the order shown below:

1. Connect one end of the RED booster cable to the positive (+) terminal of the DONOR battery or the donor vehicle's positive (+) connection point.
2. Connect the other end of the RED booster cable to the positive (+) connection point in the engine compartment of the Range Rover (see left inset).
3. Connect one end of the BLACK booster cable to the negative (-) terminal of the DONOR battery or the donor vehicle's negative (-) connection point.
4. Connect the other end of the BLACK booster cable to the negative (-) connection point in the engine compartment of the Range Rover (see right inset).

WARNING

ENSURE that each connection is securely made and that there is no risk of the clips accidentally slipping or being pulled from the connection points/battery terminal - this could cause sparking, which could lead to fire or explosion.

Check that the cables are clear of any moving parts of both engines, then start the engine of the donor vehicle and allow it to idle for a few minutes.

Now start the vehicle with the discharged battery. Once both engines are running normally, allow them to idle for two minutes before switching off the donor vehicle engine.

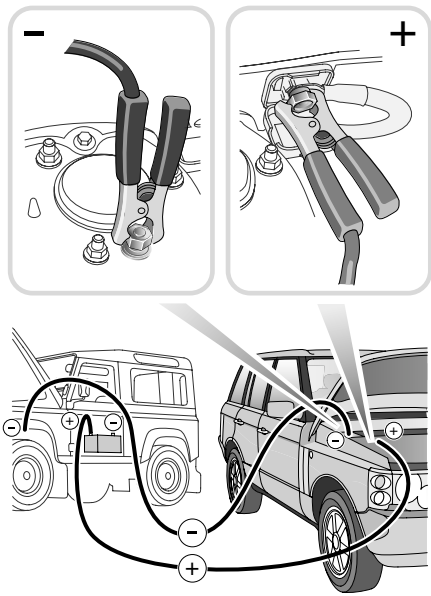
DO NOT switch on any electrical circuits on the previously disabled vehicle until AFTER the booster cables have been removed.

Disconnecting the booster cables must be an EXACT reversal of the procedure used to connect them, i.e. disconnect the BLACK cable from the negative (-) connection on the Range Rover FIRST.

If the vehicle power supply has been interrupted, ABS and DSC will be deactivated (the relevant warning lights will illuminate). They can be reactivated by driving a short distance or by turning the steering wheel from full lock to lock, with the engine running and the vehicle stationary. The ABS and DSC warning lights will extinguish when the systems are reactivated.

GIVING A BOOSTER START

Connecting the booster cables



H3994

IMPORTANT INFORMATION

Ensure that you have read and fully understood the information and warnings given earlier in this section (see *'STARTING AN ENGINE WITH A DISCHARGED BATTERY', page 209* and *'USING BOOSTER CABLES', page 210*), BEFORE attempting to give or receive a booster start.

WARNING

DO NOT connect the BLACK cable to the negative terminal of the discharged battery - if in doubt, seek qualified assistance.

Emergency Starting

Always adopt the following procedure, ensuring the cables are connected in the order shown below:

1. Connect one end of the RED booster cable to the positive (+) connection point (see left inset).
2. Connect the other end of the RED booster cable to the positive (+) connection point (if fitted) on the disabled vehicle, or positive (+) terminal of the discharged battery.
3. Connect one end of the BLACK booster cable to the negative (-) connection point (see right inset).
4. Connect the other end of the BLACK booster cable to the negative (-) connection point (if fitted) on the disabled vehicle, or to a good earth point (e.g. an engine mounting or other unpainted metal surface) at least 0.5m from the battery and well away from fuel and brake lines.

WARNING

ENSURE that each connection is securely made and that there is no risk of the clips accidentally slipping or being pulled from the connection points/battery terminal - this could cause sparking, which could lead to fire or explosion.

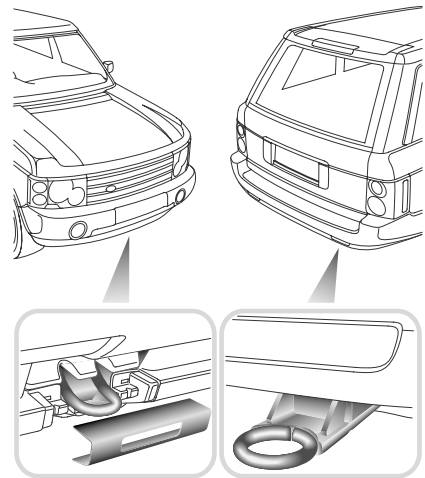
Check that the cables are clear of any moving parts of both engines, then start the engine of the donor vehicle and allow it to idle for a few minutes.

Now start the vehicle with the discharged battery. Once both engines are running normally, allow them to idle for two minutes before switching off the donor vehicle engine.

DO NOT switch on any electrical circuits on the previously disabled vehicle until AFTER the booster cables have been removed.

Disconnecting the booster cables must be an EXACT reversal of the procedure used to connect them, i.e. disconnect the BLACK cable from the negative (-) connection on the previously disabled vehicle FIRST.

TOWING EYES



H3899

WARNING

The towing eyes at the front and rear of the vehicle are designed for on-road vehicle recovery purposes only and must NOT be used to tow a trailer or caravan.

Front

A single towing eye, set behind a removable panel in the front spoiler is provided at the front of the vehicle for on-road recovery.

Before driving off-road, remove the panel from the spoiler as a precaution against accidental loss.

Removing the panel: Using both hands, one either side of the towing eye, squeeze the cover and pull away from the vehicle. To replace the cover, push it firmly back into position.

Rear

The towing eye provided at the rear of the vehicle can be used for towing your vehicle or towing another vehicle in off-road recovery situations.

TOWING FOR RECOVERY

Most vehicle recovery specialists will load your vehicle onto a trailer - this is the recommended method. However, if it is necessary to recover the vehicle by towing with all four wheels on the ground, observe the following procedure:

Towing the vehicle on four wheels

WARNING

ALWAYS adhere to the following procedure when towing the vehicle with all four wheels on the ground. Failure to do so could result in unintended vehicle movement or unanticipated vehicle conditions.

When preparing to tow the vehicle on four wheels, it is essential that neutral is selected on the transfer gearbox - before attempting to select transfer neutral, ensure that the handbrake is properly and securely applied.

IMPORTANT INFORMATION

Your vehicle has permanent four-wheel drive and is fitted with a steering lock. The following instructions must be carried out carefully to prevent damage to the vehicle.

Leaving the starter switch in position 'I' or 'II' for extended periods may drain the vehicle battery.

1. Secure the towing attachment from the recovery vehicle to the front towing eye of the vehicle to be recovered (see *'TOWING EYES', page 214*).
2. With the handbrake applied, insert the starter key and turn it to position 'II'.
3. Place the gear lever in 'N' (neutral).
4. Turn the starter switch to position '0'.
5. Insert a fuse (5 amps) into position 37 of the passenger compartment fuse box (see *'PASSENGER COMPARTMENT FUSE BOX', page 218*).
6. Turn the starter switch to position 'II'. The transfer gearbox will automatically select transfer neutral - wait until the message centre displays 'TRANSFER NEUTRAL'.
7. Place the gear lever in 'P' (park).
8. Turn the starter switch to position 'I' (DO NOT turn the starter switch to position '0').

   NOTE: *The transfer gearbox is now in neutral and the steering wheel is unlocked. The vehicle MUST remain in this condition whilst being towed on all four wheels.*
9. If required, the starter switch may be turned to position 'II', to operate the brake lights and direction indicators.
10. Release the handbrake before towing the vehicle.

WARNING

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

Without the engine running, the brake servo and power steering pump cannot provide assistance; greater effort will therefore be required to operate the brake pedal and turn the steering wheel. Longer stopping distances will also be experienced.

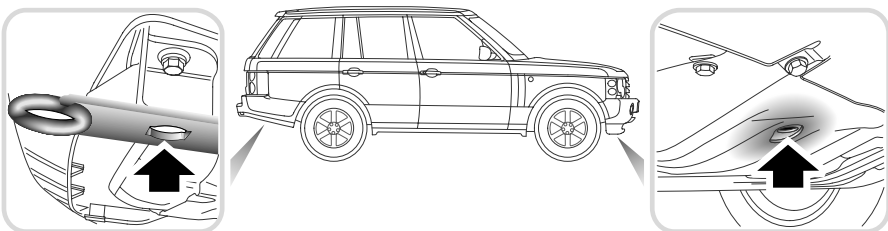
IMPORTANT INFORMATION
If the above conditions are met, the vehicle may be towed for up to 6 hours at a maximum speed of 80 km/h. If, for any reason, power from the battery is lost and transfer neutral cannot be engaged, the vehicle can still be towed for up to 3 hours at a maximum speed of 30 km/h. If the main gearbox cannot be set in neutral, the vehicle must not be towed under any circumstances.

After towing on four wheels

To engage the transfer gearbox after towing, perform the following steps:

1. Apply the handbrake and verify that 'N' (neutral) is selected in the main gearbox.
2. Turn the starter switch to position '0'.
3. Remove the fuse from position 37 of the passenger compartment fuse box.
4. Turn the starter switch to position 'II'. The transfer gearbox will engage and 'TRANSFER NEUTRAL' will extinguish from the message centre display. Press the range change switch to select either HIGH or LOW range.
5. Select 'P' (park) in the main gearbox.
6. Turn the starter switch to position '0'.

TRANSPORTER OR TRAILER LASHING



H3986

Pairs of lashing eyes are fixed to the underside of the vehicle - at the front (to the rear of the front wheels) and at the rear (backward of the rear wheels). DO NOT secure lashing hooks or trailer fixings to any other part of the vehicle.

NOTE: *The front and rear lashing eyes are for lashing only and must NOT be used for towing.*

IMPORTANT INFORMATION
Once the vehicle is loaded onto the trailer and if the vehicle electronics are operational, the electronic air suspension (EAS) must be set to Access height. This should be done BEFORE securing the vehicle to the trailer.

FUSES

Fuses are simple circuit devices which protect electrical equipment against the effects of excess current.

A 'blown' fuse is indicated when the electrical equipment it protects becomes inoperative.

Fuses are colour coded to help identify their amperage, as follows:

Fuse colours

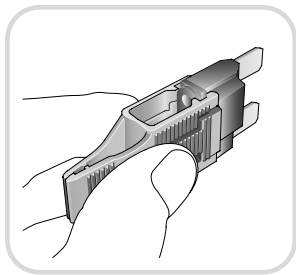
VIOLET	3 amp
TAN	5 amp
BROWN	7.5 amp
RED	10 amp
BLUE	15 amp
YELLOW	20 amp
WHITE	25 amp
GREEN	30 amp
ORANGE	40 amp

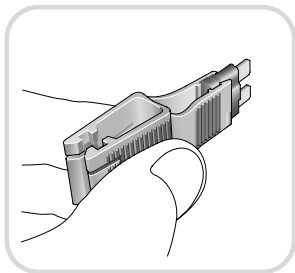
Checking or renewing a fuse

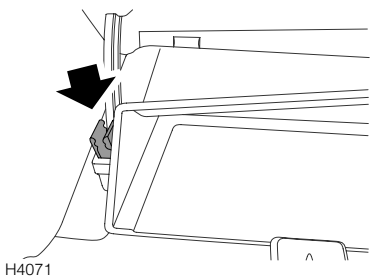
Always turn the starter switch to position 'O' and switch off the affected electrical circuit before removing a fuse.

WARNING

Fit only replacement fuses of the same rating and type. Always rectify the cause of the failure before replacing a fuse. Seek qualified assistance if necessary.



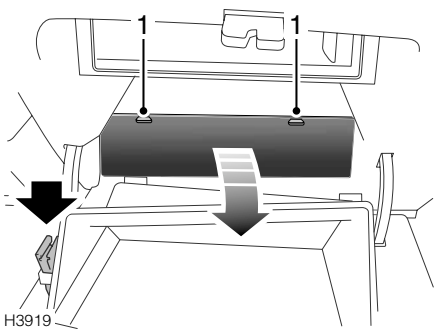




The fuse removal tweezers are located in the glovebox (arrowed in illustration). Press the tweezers onto the head of the suspect fuse (as shown) and pull to remove. A break in the wire inside the fuse indicates that the fuse has 'blown' and must be replaced.

Always replace a fuse with another of the same value, however, if the replacement fuse blows immediately the circuit MUST be checked by a qualified dealer.

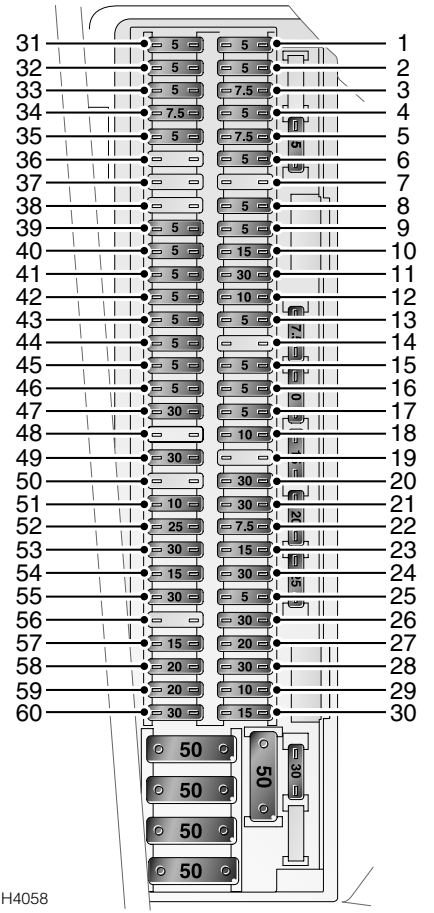
PASSENGER COMPARTMENT FUSE BOX



The passenger compartment fuse box is fitted behind the glovebox; to access the fuses, open the glovebox, then press down on the catches (1) whilst pulling the cover rearwards. The solid arrow in the illustration indicates the location of the fuse removal tool.

NOTE: *There are a number of spare fuses included within the fuse box (see fuse box label).*

A label in the fuse box cover shows the circuits protected, the fuse values and their locations. They are also listed on the following page.



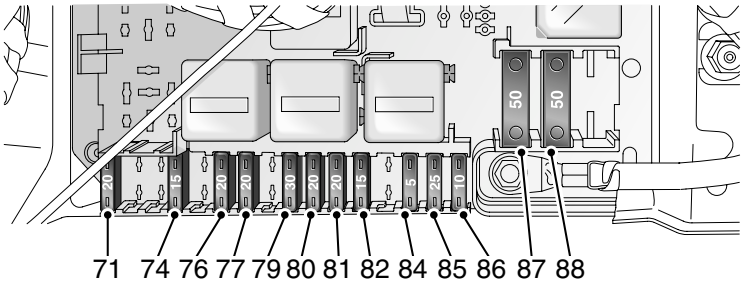
Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	5	Instruments
2	5	Heated rear window, Rear blower, Heated seats - rear, Trailer socket
3	7.5	Fuel cooler fan (diesel vehicles only)
4	5	Lights
5	7.5	Engine management/Diagnostics
6	5	Rear view mirror, Parking distance control, Tyre pressure control
7	-	-
8	5	On-board computer, Audio system, Telephone*
9	5	Brake lights, Light module, Speed control
10	15	Horn
11	30	Central locking, External mirrors, Electric windows - front
12	10	Air conditioning, Heated seats - front
13	5	Anti-lock Braking System, Dynamic Stability Control, Transmission
14	-	-
15	5	Central locking, Diagnostics, Electric windows - front
16	5	Tyre pressure monitoring system (TPMS)*
17	5	Exterior mirrors, Interior lights
18	10	Immobilisation
19	-	-

Fuse number	Rating (amps)	Circuit protected
20	30	Driver's seat, Steering column
21	30	Passenger's seat
22	7.5	Telephone*
23	15	Steering column
24	30	Central locking, Exterior mirrors Electric windows - front
25	5	Immobilisation
26	30	Windscreen wipers
27	20	Glove box light, Interior lights, Windscreen washers
28	30	Headlight cleaning
29	10	Heated steering wheel
30	15	Electronic damper control
31	5	Engine management, Immobilisation
32	5	
33	5	Transmission
34	7.5	Air conditioning, Blower
35	5	Anti-lock Braking System, Dynamic Stability Control
36	-	-
37	5	Transfer neutral - to be inserted when 4-wheel towing
38	-	-
39	5	Immobilisation
40	5	CD autochanger*
41	5	Rain sensor*, Rear window wash/wipe
42	5	Vanity mirror illumination
43	5	Alarm
44	5	**Airbag SRS - DO NOT REMOVE**
45	5	Instruments
46	5	Instruments

Fuse number	Rating (amps)	Circuit protected
47	30	Heated screen washers, Heated windscreen
48	-	-
49	30	Navigation system,* On-board computer,* On-board monitor,* Audio system
50	-	-
51	10	Anti-lock Braking System, Dynamic Stability Control, Fuel pump, Air pump
52	25	Heated seats - front
53	30	Engine management
54	15	Transmission
55	30	Anti-lock Braking System, Dynamic Stability Control
56	-	-
57	15	Air suspension
58	20	Sunroof
59	20	Auxiliary heater (diesel models only), Independent heater
60	30	Central locking, Electric windows - rear

REAR LOADSPACE FUSE BOX



H4053

The fuse box is situated on the right hand side of the loadspace behind the rear loadspace access hatch. Pull the handle to open the panel (see *'REAR LOADSPACE ACCESS HATCH', page 107*).

Owners are advised against removing or replacing the relays (identified as R1-R10) and fusible links (MF1-MF3). Failure of any of these items should be investigated by a qualified technician.

Fuse specification

Fuse number	Rating (amps)	Circuit protected
71	20	Cigar lighter/socket
72	-	-
73	-	-
74	15	Trailer socket
75	-	-
76	20	Trailer socket
77	20	Auxiliary power socket (loadspace)
78	-	-
79	30	Heated rear window
80	20	Rear screen wash/wipe
81	20	Heated rear seats
82	15	Rear blower
83	-	-
84	5	Remote handset
85	25	Fuel pump
86	10	Central locking system, tailgate
87	50	Trailer socket
88	50	Trailer socket
89	-	

REPLACING BULBS

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

IMPORTANT INFORMATION
Before replacing a bulb, always switch off the starter switch and appropriate lighting switch to prevent any possibility of a short circuit. Only replace bulbs with the same type and specification.

Replacement bulbs

NOTE: *All bulbs must be rated at 12 volts*

Bulb	Watts
Headlights dipped beam (Halogen)	55 (H7)
Headlights main beam	55 (H7)
Front side lights	5
Direction indicators	21
Front fog lights	55 (H7)
Side repeater lights	5
Reverse lights	6 (H6)
Rear fog guard lights	21
Tail lights	5
Number plate lights	5
Door/puddle lights	5
Interior lights	6
Luggage/footwell lights	5
Luggage/tailgate lights	6
Glovebox light	5
Vanity mirror light	1.2

NOTE: *In certain territories it is a legal requirement to carry spare bulbs, in case of bulb failure. A replacement bulb kit is available as an approved accessory from your Land Rover dealer.*

Halogen bulbs

Halogen bulbs are used for main beam, dipped beam and front fog and reverse lights. Take care NOT to touch this type of bulb with your fingers; always use a cloth to handle them. If necessary, clean the bulb with methylated spirits to remove fingerprints.

Xenon light units*

Some vehicles are fitted with Xenon dipped beam headlight units. Xenon lights provide significantly improved visibility, especially during adverse weather and driving conditions.

The operational life of a Xenon light is significantly longer than that of a conventional or Halogen bulb. However, the very high voltage required to ignite the gas and metal vapour used to power Xenon lights could cause very serious injury. Replacement or maintenance of Xenon lights should only be carried out by qualified personnel.

Used Xenon light units contain mercury, which is hazardous and can be injurious to health. Seek advice about the proper disposal of Xenon light units from a Land Rover dealer or your local authority.

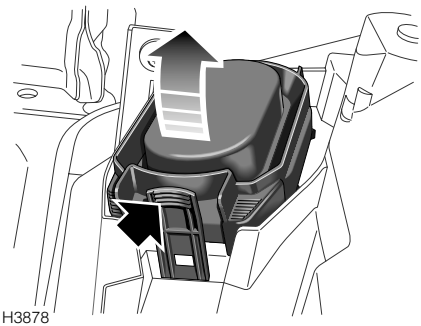
Light emitting diodes (LEDs)

Controls, displays and some lights and other equipment items inside your vehicle have light emitting diodes (LEDs) behind a cover as their light source. These LEDs resemble conventional lasers and are classified by law as “Class 1 light emitting diodes”. Replacement LEDs should be fitted only by qualified personnel.

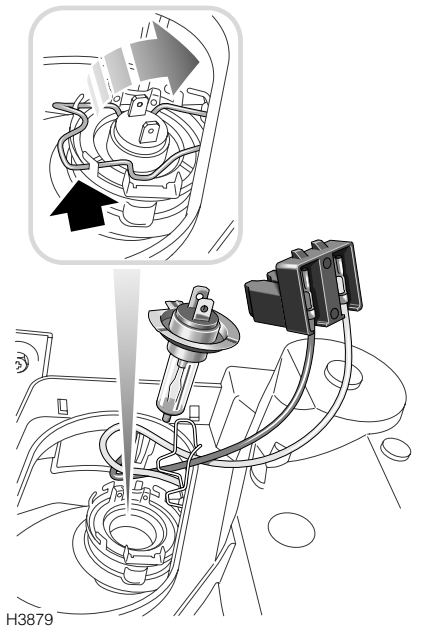
WARNING

DO NOT remove the cover or expose the eyes directly to the unfiltered light source for several hours at a time, as this could cause irritation to the iris.

HEADLIGHT MAIN BEAM



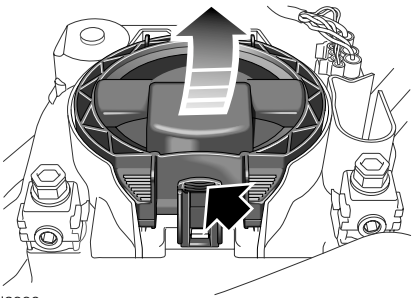
From inside the engine compartment, press the tab (solid arrow) and open the cover.



Disconnect the electrical connector and release the spring clip (see inset). Pull the bulb out to remove.

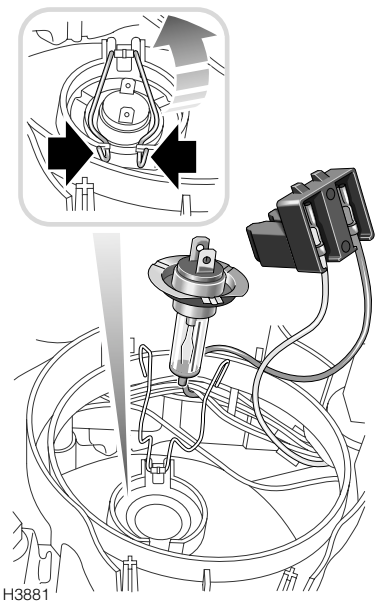
NOTE: *Do not touch the replacement bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.*

HEADLIGHT DIPPED BEAM



H3880

From inside the engine compartment, press the tab (solid arrow) and open the cover.



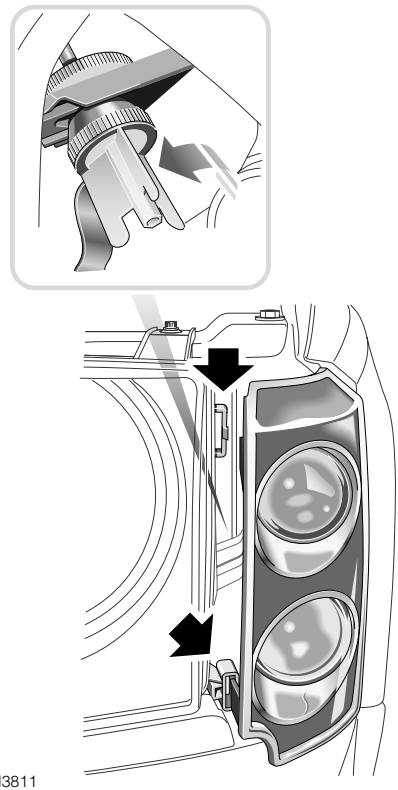
H3881

Disconnect the electrical connector and release the spring clip (see inset). Pull the bulb out to remove.

NOTE: *Do not touch the replacement bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.*

FRONT DIRECTION INDICATOR AND SIDELIGHT

Light unit removal

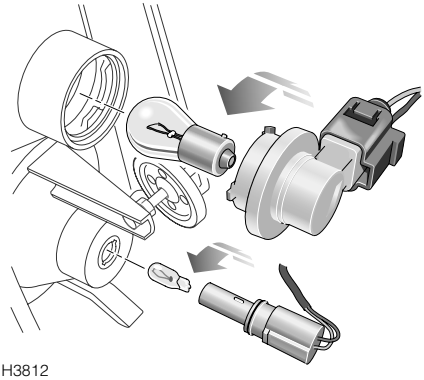


H3811

From inside the engine compartment, unscrew the nut (anti-clockwise), to release the light unit (see inset). The nut is attached to a safety strap, which prevents it from falling into the engine.

Keeping hold of the light unit, ease it away from the vehicle body, disengaging the two locating lugs (arrowed).

Bulb replacement



H3812

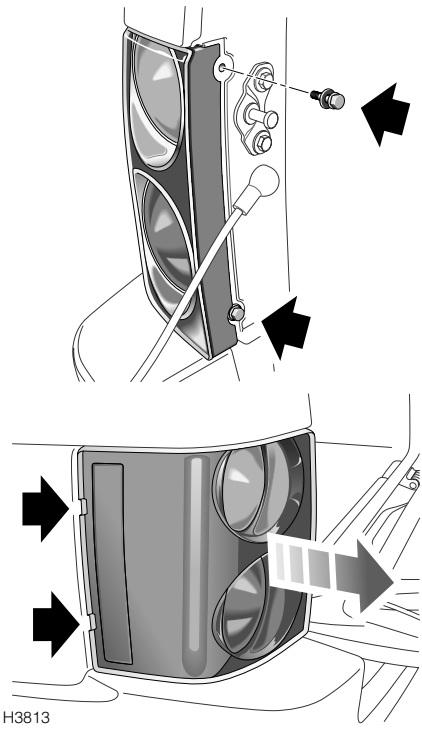
The upper of the two bulbs is the direction indicator, the lower is the sidelight bulb. The removal process is identical for both bulbs.

Having released the light unit form the front of the vehicle, turn the relevant bulb holder 90º anti-clockwise and pull to release. Twist and pull to remove the bulb.

Refitting the light unit

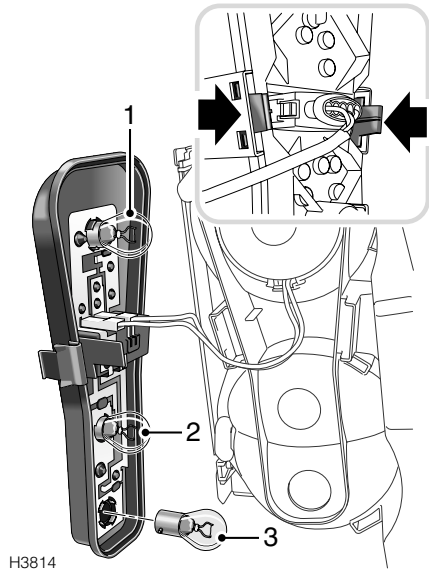
When refitting the light unit, position the two lugs first, then position the light unit, so that the securing bolt lines up correctly with the thumbwheel. Tighten the nut (turn clockwise) to fix the unit in position.

REAR LIGHT CLUSTER
(Tail, indicator & fog lights)



From outside the vehicle and with the tailgate fully open, remove the two retaining screws (as shown). From the side of the vehicle, use a suitable tool to carefully lever the unit away from the vehicle and rearwards, to release the light unit from the vehicle.

Be careful to avoid damage to the paintwork, when levering the light unit from the vehicle. Cover any tool used with a cloth and apply gentle and constant pressure. Do not use excessive force - if in doubt, consult your dealer.



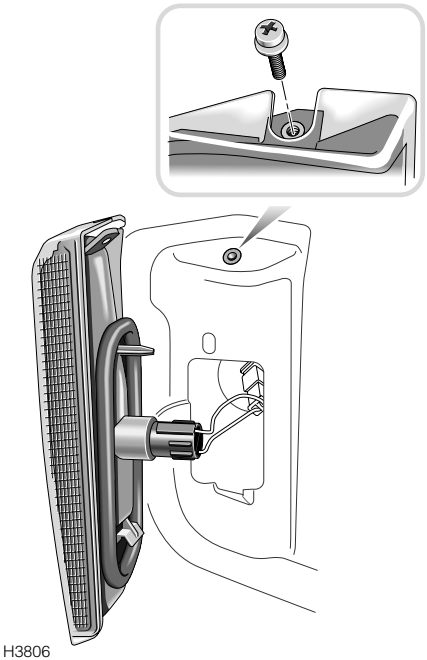
Press the two tabs (arrowed in inset) together, to release the light unit from the lens assembly. Twist and pull the appropriate bulb to release.

The bulbs are located as follows:

1. Rear indicator bulb.
2. Tail light bulb.
3. Rear fog guard light bulb.

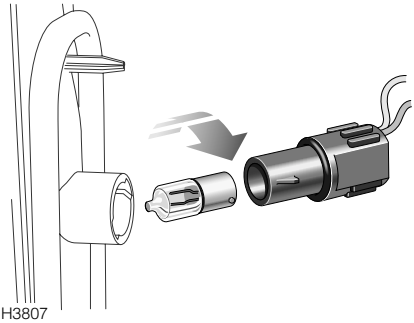
NOTE: *The brake lights and high mounted stop light fitted to your vehicle, are LED lights and should be replaced by your dealer if they fail.*

REVERSE LIGHTS


H3806

The reverse lights are located on either side of the rear number plate, mounted on the lower tailgate.

With the upper tailgate raised, remove the screw (see inset) to release the light unit from the tailgate.

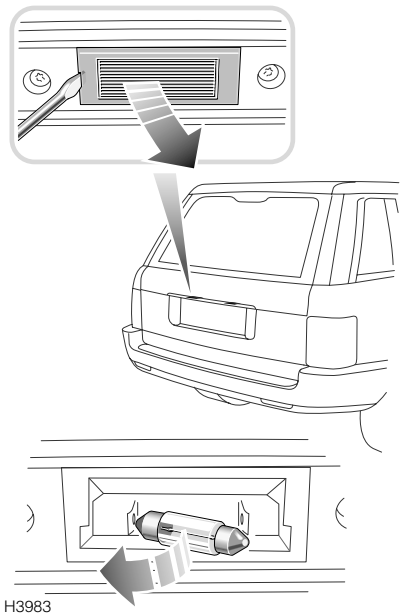

H3807

Twist and pull the bulb holder to release from the rear of the light unit, then pull the bulb to remove.

NOTE: *Do not touch the replacement bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.*

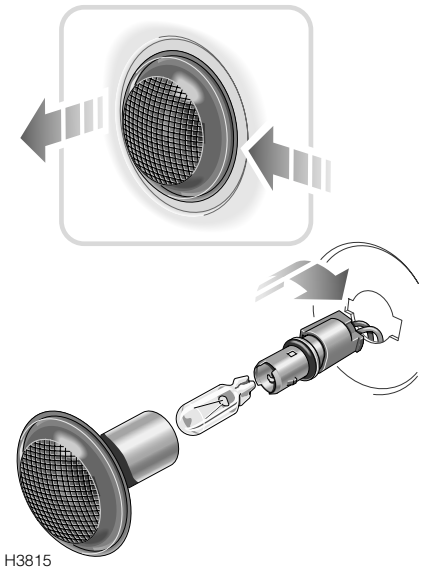
Bulb Replacement

NUMBER PLATE LIGHTS



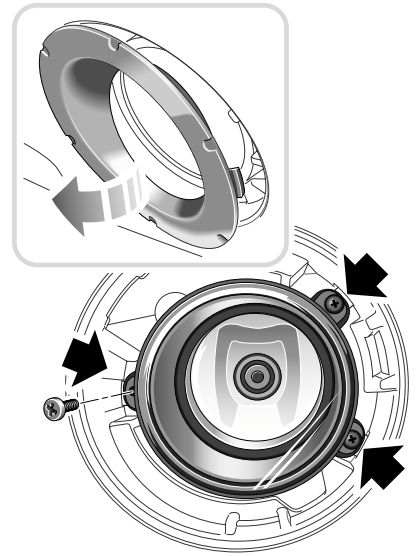
With the upper tailgate open and using a suitable tool, lever the lens from the tailgate (see inset). Pull the bulb to remove.

SIDE REPEATER LIGHT



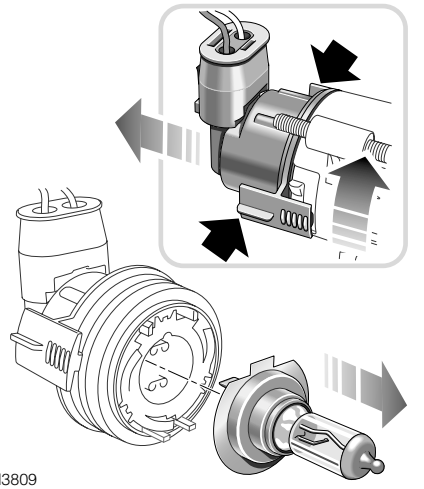
Push the lens firmly towards the front of the vehicle and withdraw the light unit from the wing. Twist to release the bulb holder from the lens unit, then pull the bulb from its socket.

FRONT FOG LIGHTS



H3808

To access the bulb; using a suitable tool, lever the fog light surround panel out of the front bumper. Remove the three securing screws to release the light unit. Ease the unit out of the front bumper.



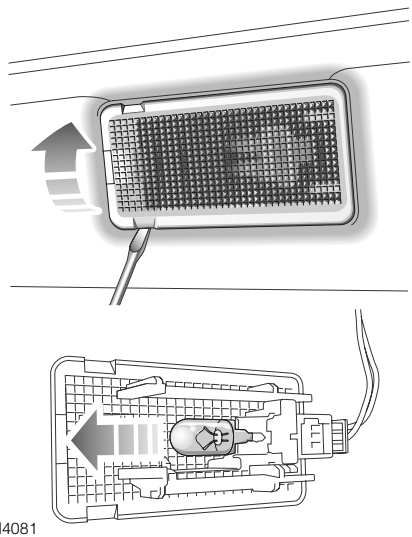
H3809

Depress the two catches (solid arrows in upper inset), then twist and pull to remove the bulb holder from the lens assembly. Pull the bulb from the holder to remove.

Before fitting the replacement bulb, note the 'flat' and the tab on the otherwise circular shape of the bulb mounting flange. The tab acts as a key to enable correct positioning of the bulb in the bulb holder.

NOTE: *Do not touch the bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.*

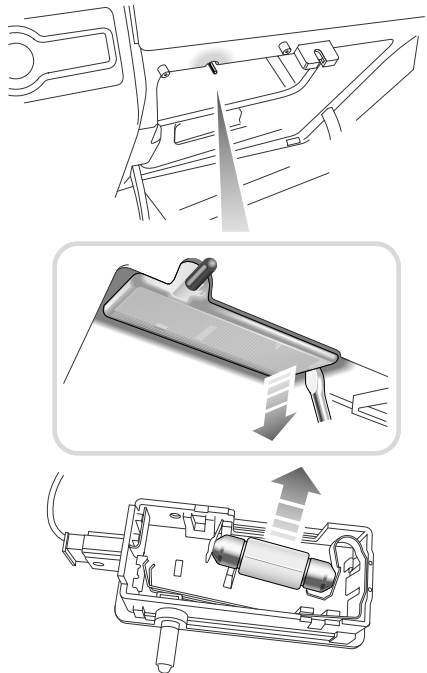
DOOR/PUDDLE/LOWER FOOTWELL LIGHTS



H4081

With the relevant door open, insert a small flat-bladed screwdriver under the forward edge of the lens. to lever the light unit out of the door. Pull the bulb out to remove.

GLOVEBOX LIGHT

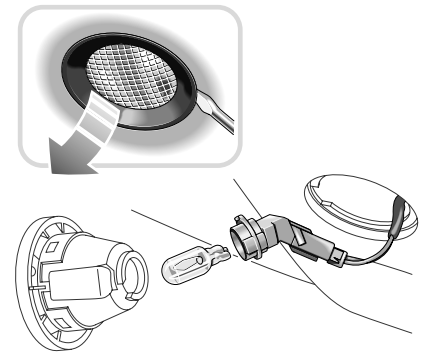


H4082

Insert a small flat-bladed screwdriver into the indent (see inset) on the side of the light unit, and carefully prise the unit from the glovebox panel. Remove the bulb from its clips.

Bulb Replacement

UPPER FOOTWELL LIGHTS

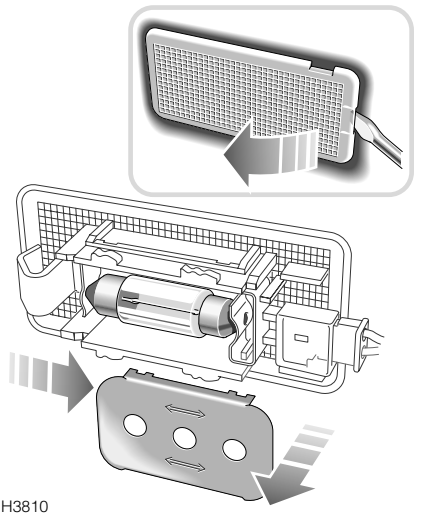


H3884

Insert a small flat-bladed screwdriver under the side of the light unit and carefully prise the unit out of the footwell.

Twist and pull the bulb holder access the bulb and pull the bulb to remove.

LUGGAGE LIGHTS



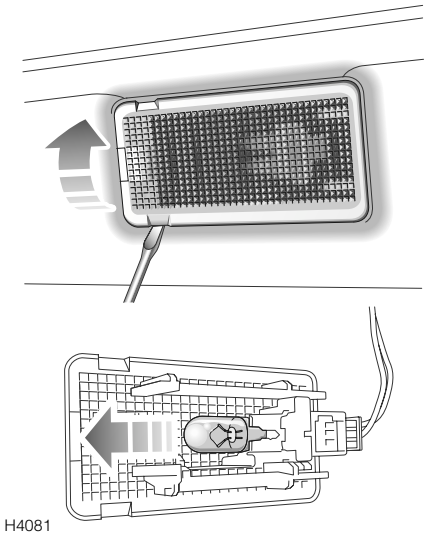
H3810

Insert a small flat-bladed screwdriver into the indent on the side of the lens and carefully prise the lens from the light unit (see inset).

Slide the metal plate to the right and then pull away from the back of the light unit (see main illustration). Pull the bulb to remove.

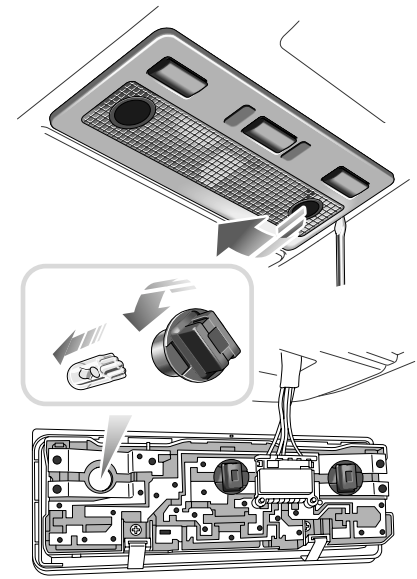
Bulb Replacement

TAILGATE LIGHT


H4081

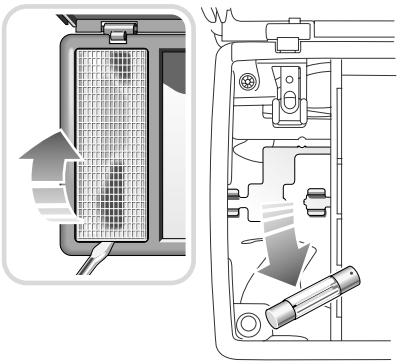
Insert a small flat-bladed screwdriver under the lens and carefully prise the lens from the light unit. Pull the bulb to remove.

MAP LIGHT


H3883

Insert a small flat-bladed screwdriver into the indent on the side of the lens (as illustrated) and prise the lens from the light unit. Twist the relevant bulb holder anti-clockwise and withdraw from the light unit, then pull the bulb out to remove.

VANITY MIRROR LIGHT



H3882

With the vanity mirror cover open, use a small flat-bladed screwdriver to lever the relevant lens from the mirror/light unit. Pull out bulb to remove.

Technical Data

Technical Data

Appendices

LUBRICANTS AND FLUIDS

Recommendations for all climates and conditions.

NOTE: *Recommended oils are complete in themselves and additives should not be used.*

NOTE: *It is essential to change oil much more frequently if the vehicle is operated under severe conditions, especially if deep wading is carried out.*

Engine oil - Petrol vehicles

Use a 0W/30, 0W/40, 5W/30 or 5W/40, 5W/50 oil meeting specification
ACEA: A3 and B3 and having a viscosity band recommended for the temperature range of your locality.

NOTE: *ACEA A2 oils are also suitable.*

Engine oil - Diesel vehicles

Use a 5W/30, 5W/40, 5W/50 or 10W/40 oil meeting specification ACEA: A1 and B1, and having a viscosity band recommended for the temperature range of your locality.

NOTE: *ACEA B2 oils are also suitable.*

Engine oil temperature ranges

0W/30 will protect from -30ºC (-22ºF) to 35ºC (95ºF).

0W/40 will protect from -30ºC (-22ºF) to 50ºC (122ºF).

5W/30 will protect from -30ºC (-22ºF) to 35ºC (95ºF).

5W/40 will protect from -30ºC (-22ºF) to 50ºC (122ºF).

10W/40 will protect from -10ºC (14ºF) to 50ºC (122ºF).

Main gearbox

Diesel vehicles: Filled for life.
Petrol vehicles: Filled for life.

Power steering

Texaco Cold Climate PAS fluid 14315.

Brake reservoir

Any brake fluid having a minimum boiling point of 260°C and complying with FMVSS 116 DOT4.

Windscreen washers

Screen washer fluid.

Engine cooling system

Use Texaco AFC coolant, if unavailable, use any ethylene glycol based anti-freeze (containing no methanol) with only Silicate based non-phosphate corrosion inhibitors. Use one part anti-freeze to one part water for protection down to -36° C.

Inertia reel seat belts
DO NOT LUBRICATE. These components are lubricated for life during manufacture.

CAPACITIES

The following capacities are approximate and provided as a guide only. All oil levels must be checked using the dipstick or level plugs as applicable.

Fuel tank	100 litre
Engine oil (from dry):	
- Diesel vehicles	9,5 litre
- Petrol vehicles	9,1 litre
Engine oil refill and filter change:	
- Diesel vehicles	8,75 litre
- Petrol vehicles	8,5 litre
Main gearbox:	
- Diesel vehicles	9,7 litre
- Petrol vehicles	10,4 litre
Transfer box	1 litre
Front differential	0,8 litre
Rear differential	1,3 litre
Washer reservoir	5,0 litre
Cooling system (fill from dry):	
- Diesel vehicles	12,73 litre
- Petrol vehicles	17,31 litre
Cooling system (refill):	
- Diesel vehicles	11 litre
- Petrol vehicles	13 litre

ENGINES

Diesel

Fuel	Diesel or Automotive Gas Oil (AGO) to EN 590 specification
Capacity	2926 cm^3
Firing order	1-5-3-6-2-4
Bore	84,0 mm
Stroke	88,0 mm
Number of cylinders	6
Compression ratio	18:1

V8 Petrol

Fuel	UNLEADED 95 RON to EN 228 specification
Capacity	4398 cm^3
Firing order	1-5-4-8-6-3-7-2
Idle speed	600 - 750 rev/min
Bore	92,0 mm
Stroke	82,7 mm
Number of cylinders	8
Compression ratio	10:1
Spark plugs	Bosch FGR7DQP or NGK BKR6EQUP
Spark plug gap	Non-adjustable

ELECTRICAL SYSTEM

Battery type:	
Petrol vehicles	Group 95R, sealed for life
Diesel vehicles	Group 95R, sealed for life
Battery rating:	
Petrol vehicles	90 amp/hr or 110 amp/hr
Diesel vehicles	90 amp/hr or 110 amp/hr
Voltage and polarity	12 V, negative (-) earth
Charging circuit	Alternator

STEERING

Steering wheel turns lock to lock	3.5
Turning circle between kerbs	11,6 metres
Camber angle	-0.2°
Castor angle	6.69°
King pin inclination	11.76°
Front wheel toe-out included angle	0^{o}

WHEELS & TYRES

Wheel size and type

Type	Size
Alloy wheels - space saver	7,5J x 18 8J x 19 8.5J x 20 (accessory only) 5,5J x 19
Road wheel nut torque	140 Nm

Tyre specification

Wheel size	Tyre
7,5J x 18	255/60 R18 H - All terrain tyre
8J x 19	255/55 R19 H - All terrain tyre 255/55 R19 V - All season tyre
5,5J x 19 (space saver)	T175/80 R19 M

Accessory fit tyres

Wheel size	Tyre
7,5J x 18	235/65 R18 H - Winter tyre
8J x 19	255/55 R19 Q/T - Off-road tyre
8.5J x 20	255/50 R20 V - All season tyre

NOTE: *When towing, the additional load imposed may cause the tyre maximum load rating to be exceeded. This is permissible provided the load rating is not exceeded by more than 15% and that road speeds are limited to 100 km/h and tyre pressures are increased by at least 0.2 bar.*

NOTE: *The space saver spare wheel is for temporary use only, with maximum road speed limited to 80 km/h. Only one space saver spare wheel to be used at any one time. For further information, please refer to “Using a space saver spare wheel” on page 207.*

NOTE: *Accessory fit off-road tyres (with a speed rating of Q or T) are subject to speed restrictions. Q-rated tyres should not be used at speeds greater than 160 km/h, T-rated tyres should not be used at speeds greater than 190 km/h.*

NOTE: *Unidirectional tyres are available for all of the above wheels, see “Directional Tyres*” on page 207.*

Tyre pressures

Loading condition		Pressure - bar (lbf/in^2)
Normal operating conditions	Front	2.3
	Rear	2.5
Vehicle loaded to maximum gross vehicle weight	Front	2.5
	Rear	3.0
Space saver tyre	Front & rear (all conditions)	4.2

NOTE: *When towing, the additional load imposed may cause the tyre maximum load rating to be exceeded. This is permissible provided the load rating is not exceeded by more than 15% and that road speeds are limited to 100 km/h and tyre pressures are increased by at least 0.2 bar.*

VEHICLE WEIGHTS

Approximate EEC kerb weights (full fuel tank)	
- Petrol engine vehicles	2440 - 2570 kg
- Diesel engine vehicles	2435 - 2570 kg
Maximum gross vehicle weight	
- All vehicles	3050 kg
Maximum front axle load	
- All vehicles	1530 kg
Maximum rear axle load	
- All vehicles	1850 kg

NOTE: *The rear axle load can be increased to a maximum of 2050 kg when towing, provided road speed is limited to 100 km/h.*

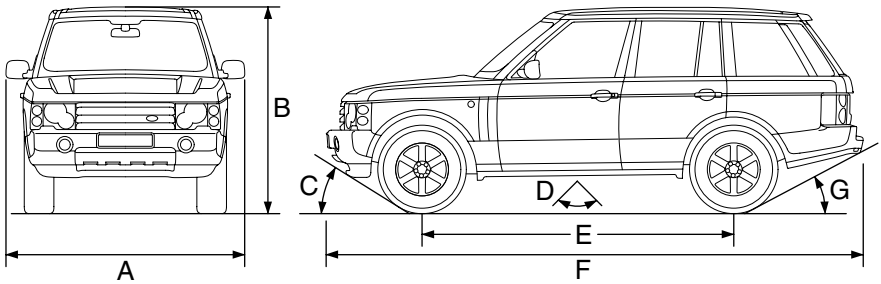
NOTE: *Axle weights are non additive. The individual maximum axle weights and gross vehicle weight must not be exceeded.*

TOWING WEIGHTS

Maximum permissible towed weights	On-road	Off-road
Unbraked trailers	750 kg	750 kg
Trailers with overrun brakes	3500 kg	1000 kg
Roof rack load (including the mass of roof rack)	100 kg	30 kg

Maximum tow hitch load (Nose weight)
If the vehicle is loaded to the Gross Vehicle Weight (GVW), the nose weight is limited to 150 kg. If a greater nose weight is necessary (up to 250 kg maximum), vehicle loading should be adjusted to ensure the GVW and rear axle weights are not exceeded - see the vehicle/trailer/tow hitch chart in 'Technical Data'.

DIMENSIONS



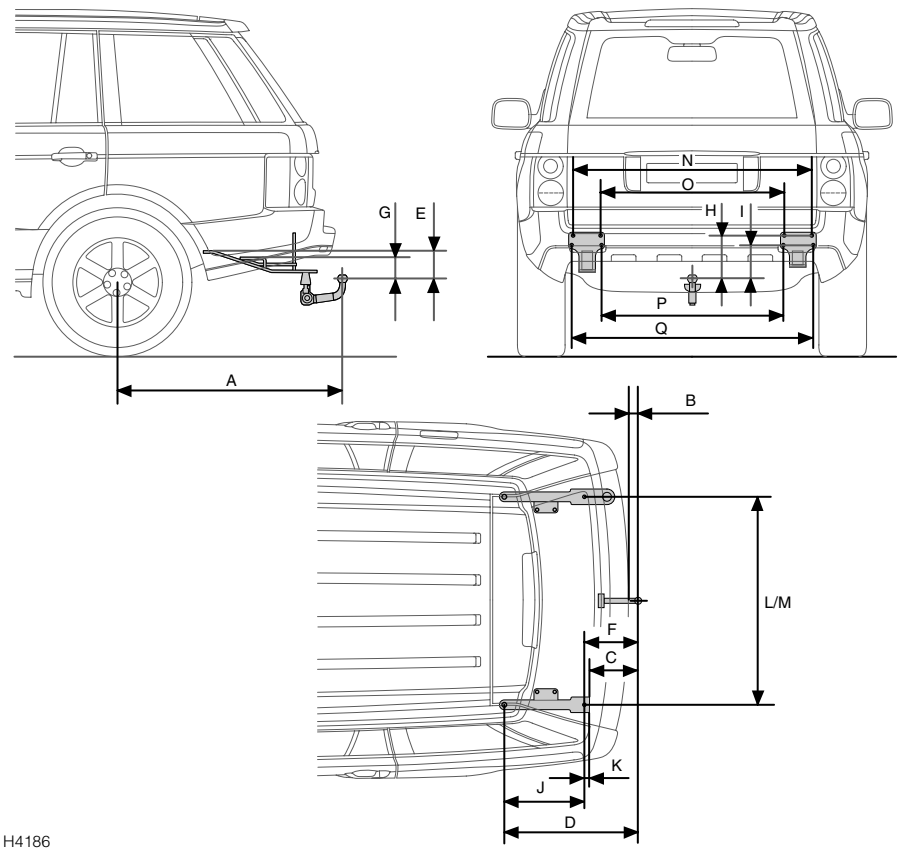
H3769

A	Overall width	2191 mm
	Overall width (mirrors folded)	2009 mm
B	Overall height	
	- Access height	1820 mm
	- Motorway height	1840 mm
	- Standard height	1863 mm
	- Off-road height	1913 mm
E	Wheelbase	2880 mm
F	Overall length	4950 mm
	Overall length (including tow hitch - to centre of tow ball)	5015 mm
	Track:	
	- Front	1629 mm
	- Rear	1626 mm

Off road performance

C	Approach angle (at EEC kerb weight)	35º
D	Breakover angle (at EEC kerb weight)	30º
G	Departure angle without tow hitch (at EEC kerb weight)	29º
	Departure angle with tow hitch (at EEC kerb weight):	
	- Standard ride height	15.1º
	- Off-road ride height	!7.4º
	Wading depth	500 mm
	Minimum ground clearance (off-road height)	281 mm

TOW BAR DIMENSIONS



A	Wheel centre to centre of towball	1235 mm
B	Ground to centre of towball	397 mm
C	Centre of outer attachment points to centre of towball	252.7 mm
D	Centre of rear inner attachment points to centre of towball (horizontal)	713.5 mm
E	Centre of rear inner attachment points to centre of towball (vertical)	152.7 mm
F	Centre of inner attachments to centre of towball (horizontal)	286 mm
G	Centre of inner attachments to centre of towball (vertical)	138.2 mm
Dimensions refer to towing equipment officially released by Land Rover		

H	Centre of outer No. 1 & 2 attachments to centre of towball	236.4 mm
I	Centre of outer No. 3 & 4 attachments to centre of towball	184.2 mm
J	Rear inner attachments to inner attachments	427.5 mm
K	Inner attachments to outer attachments	33.3 mm
L	Distance between the rear inner attachments	1092 mm
M	Distance between the inner attachments	1092 mm
N	Distance between the outer No. 1 attachments	1230.6 mm
O	Distance between the outer No. 2 attachments	953.4 mm
P	Distance between the outer No. 3 attachments	940 mm
Q	Distance between the outer No. 4 attachments	1244 mm
Dimensions refer to towing equipment officially released by Land Rover		

FUEL CONSUMPTION

The fuel consumption figures shown below have been calculated using a standard testing procedure (the new EC test procedure from Directive 99/100/EC), and produced in accordance with The Passenger Car Fuel Consumption (Amendment) Order 1996. Under normal use, a vehicle's actual fuel consumption figures may differ from those achieved through the test procedure, depending on driving technique, road and traffic conditions, environmental factors, vehicle load and condition.

Fuel consumption figures

	URBAN	EXTRA-URBAN	COMBINED
	l/100km	l/100km	l/100km
Petrol	22,2	12,6	16,2
Diesel	14,4	9,4	11,3

Urban cycle

The urban test cycle is carried out from a cold start and consists of a series of accelerations, decelerations and periods of steady speed driving and engine idling. The maximum speed attained during the test is 50 km/h with an average speed of 19 km/h.

Extra-urban cycle

The extra urban test cycle is carried out immediately after the urban test. Approximately half of the test comprises steady-speed driving, while the remainder consists of a series of accelerations, decelerations and engine idling. The maximum test speed is 120 km/h and the average speed 63 km/h. The test is carried out over a distance of 7 km.

Combined

The combined figure is an average of the urban and extra-urban test cycle results, which has been weighted to take account of the different distances covered during the two tests.

NOTE: *These figures should not be compared with the figures produced using the ECE/EEC procedure previously required by The Passenger Car Fuel Consumption Order 1983. Because of the changes in test procedure, even the urban figures would differ if the same car were subjected to both tests.*

DECLARATIONS OF CONFORMITY

IMPORTANT INFORMATION

The Declarations of Conformity detailed on the following pages are from manufacturers of RF (Radio Frequency) equipment, whose components are used in the manufacture of your Range Rover.

These manufacturers state that their components comply with relevant rules of the R & TTE (Radio and Telecommunication Terminal Equipment) directive.

The directive requires the manufacturer of short range radio devices to self certify that RF parts fitted to Land Rover vehicles are fit for use and that the declarations are supplied with the vehicle documentation. If at a future date a technical inspection is required, the declarations will provide all necessary information.

NOTE: *The Declarations of Conformity are published in the native language of the RF equipment manufacturer, in compliance with the R & TTE Directive.*

Konformitätserklärung gemäß dem Gesetz über Funkanlagen und Telekommunikationsendeinrichtungen (1999/5/EG)

Declaration of conformity in accordance with the radio and telecommunications terminal equipment acc (1999/5/EC)

Hersteller: manufacturer:	**BMW AG**
Anschrift: Address:	**D-80788 München**

Produkt: Product:	**EWS** **mit x für beliebige Ziffem / x for any figure**

Der Hersteller erklärt, daß dieses Produkt bei bestimmungsgemäßer Verwendung den Anforderungen des Artikel 3 der Richtlinie 1999/5/EG (R&TTE) entspricht und konform ist mit / The manufacturer declares that this product complies with the essential requirements of article 3 of the directive 1999/5/EC and is in conformity with:

Dokument-Nr. Document No.	Titel Title	Ausgabe/ Ausgabedatum Edition / Date of issue
EN 300330 V 1.2.2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics and test methods for radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz	1999-05-06

München, 27.02.2001

Martin Kaltenbrunner
Development engineer

Dieter Stoll
Vehicle Regulations; Product Certification
Active safety

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