



RANGE ROVER

OWNER'S HANDBOOK

Publication Part No. LRL 10 02 55 801

About this handbook

This handbook forms part of the Owner literature supplied with your new vehicle. Left hand drive and right hand drive conditions may be shown in the graphics and where information is specific to a particular country, it is indicated as such.

The **Quick start** section is designed to rapidly familiarise the driver with the initial set up and also explain some of the unique features. Please take the time to study the operating instructions with your vehicle as soon as you can.

Important

The information contained in this handbook covers all vehicle derivatives and optional equipment. Some of the options may not be fitted to your vehicle unless they formed part of the original vehicle specification. Therefore some parts of this handbook may not apply to your vehicle. Furthermore, due to printing cycles, it may include descriptions of options before they become generally available.

The options, hardware and software in your vehicle are from the available specifications for the market in which the vehicle was intended for sale. If your vehicle is to be used in another geographical area you may have to modify the vehicle specification to suit local conditions. Land Rover is not responsible for the cost of any modifications.

The information contained in this publication was correct when it went to print. Vehicle design changes may have been made after this handbook was printed. When this occurs a handbook supplement is added to the literature pack. Subsequent updates can be viewed on the Land Rover Internet site at; www.ownerinfo.landrover.com.

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Television

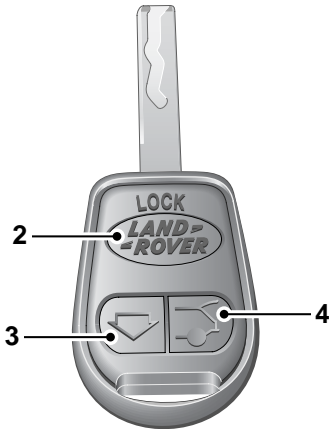
Television	390
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Quick Start

REMOTE CONTROL

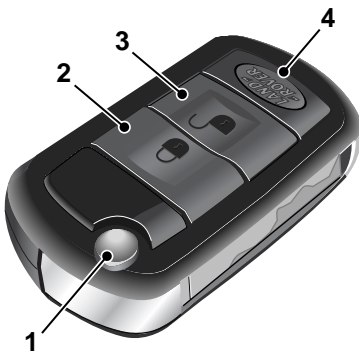
Two remote controls, with integral keys are supplied with your vehicle. The type of remote control supplied will vary according to vehicle specification.

Type 1



LAN1149

Type 2



LAN1162

1. Key release button
Press to release the folded key.
2. Lock button
Press once to superlock and activate the perimetric alarm, interior space alarm and tilt sensor.
Press twice to superlock and activate the perimetric alarm, but not activate interior space protection and tilt sensor.
3. Unlock button
Press once to disarm the alarm, unlock the driver's door and activate seat/mirror memory.
Press twice to unlock the remaining doors.
4. Tailgate button
Press to unlock tailgate and de-activate the interior space protection only.
Press and hold to activate the panic alarm.

For more information, see **ALARM SYSTEM**, 38.

Single point entry

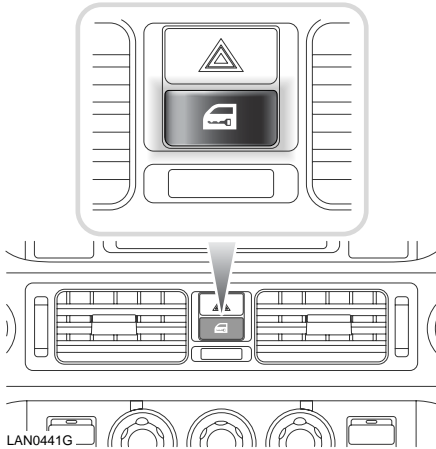
This is a security feature that unlocks only the driver's door. It can be disabled on all remote controls, or on an individual remote control, by a Land Rover Dealer/Authorised Repairer.

Quick Start

CENTRAL LOCKING

Master locking switch

Press the master locking switch to lock or unlock all the doors. Pressing this switch will not enable the alarm.



Tailgate release switch



If single point entry has been used and only the driver's door is unlocked, the tailgate can be opened by pressing the release switch.

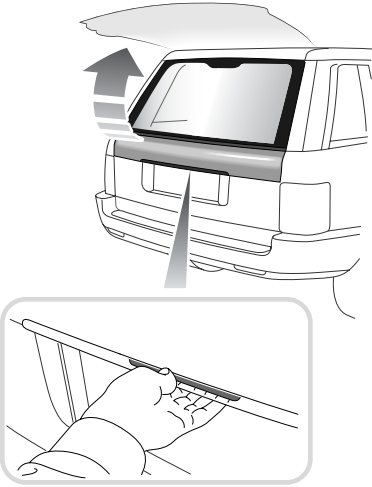
Operating note

If the locks have already been locked using the remote control, the switch will not release the locks.

Quick Start

TAILGATE

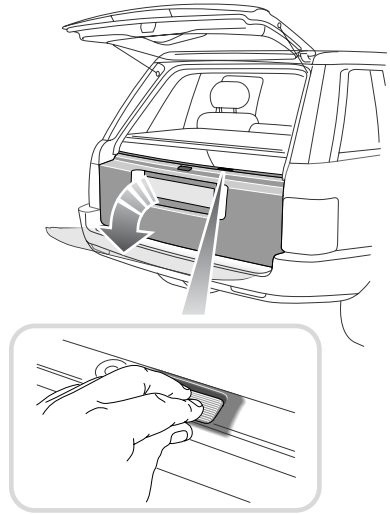
Opening the upper tailgate



H3929

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

Opening the lower tailgate



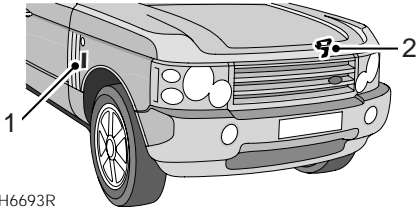
H3930

With the upper tailgate open, press the release switch on the top of the lower tailgate, then lower the tailgate.

Quick Start

BONNET

Opening



H6693R

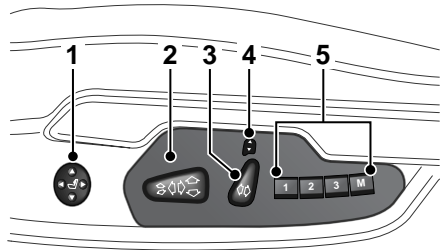
1. Pull bonnet release handle located to the outside of the driver's footwell.
2. Lift the bonnet safety catch lever, located under the front edge of the bonnet and raise bonnet.

Closing

The recommended method of closing the bonnet is to let it drop close from a height of 300 mm (12 inches). To avoid damage, do not press down on the bonnet.

Check that the lock is fully engaged, by trying to lift the front edge of the bonnet. This should be free from all movement.

SEAT ADJUSTMENT

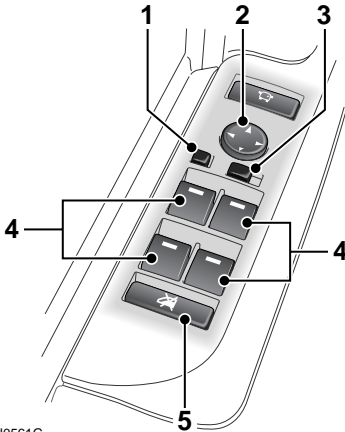


LAN0558G

1. Lumbar support switch.
2. Seat fore/aft, cushion height and cushion angle switch.
3. Seat back switch.
4. Head restraint switch.
5. Position memory controls (driver's seat only).

Quick Start

DOOR MIRRORS/ELECTRIC WINDOWS



LAN0561G

Door mirrors

To adjust the door mirrors, move the mirror selector switch (3) left or right, to select the appropriate mirror. Use the four-way switch (2) to adjust the position.

Door mirror dip

The passenger door mirror will dip when reversing, if the mirror selector switch (3) is set to the driver's side. This provides the driver with a view of the kerbside.

Powerfold mirrors

The door mirrors are designed to fold back, to enable the vehicle to negotiate narrow openings.

Press the mirror fold button (1) to fold the mirrors. Press the button again to return the mirrors to the normal position.

Electric windows

The windows are fitted with a facility that allows them to be fully opened or closed in a single operation.

To open a window, fully press the respective window switch (4).

To close a window, pull the respective switch fully upwards.

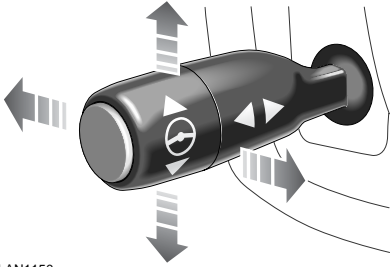
The rear window controls can be inhibited by pressing the button (5).

Resonance with lowered windows

If a resonance/booming sound occurs with only the rear windows open, lowering an adjacent front window about 25 mm (1 inch), will eliminate the condition. This will change the frequency of the air volume moving in/out of the vehicle and therefore lessen or remove the booming sound.

Quick Start

STEERING COLUMN ADJUSTMENT



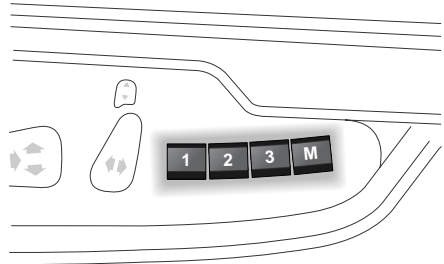
LAN1150

The steering column adjustment stalk is located on the left-hand side of the steering wheel.

The steering wheel position can be adjusted in four directions, corresponding with the movement of the adjustment stalk.

With the vehicle stationary, move the stalk up or down to adjust the height and forwards or rearward to adjust the distance between the steering wheel and the driver.

DRIVER POSITION MEMORY



LAN0560G

Once you have adjusted the driver's seat, steering column and exterior mirrors for your ideal driving position, the vehicle can memorise these settings for future use.

1. Press the **M** button to activate the memory function. The button will illuminate to indicate the memory function is active.
2. Press button **1**, **2** or **3**, to store the current driving position to the chosen number.

Operating note

If button **1**, **2** or **3** is not pressed within seven seconds of the **M** button being pressed, the memory function will cancel.

With the driver's door open, you can recall a stored seat position with a press of the appropriate button; **1**, **2** or **3**. The seat, steering wheel and mirrors will move to their preset positions.

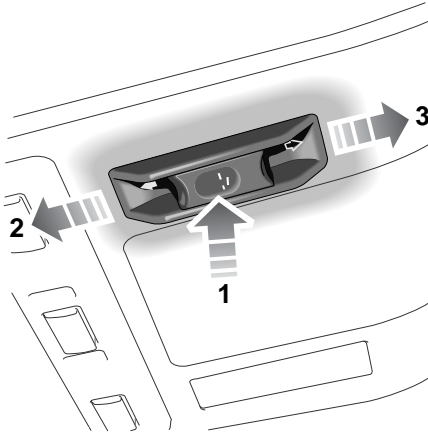
If the driver's door is closed, turn the starter key to the first position, before pressing the seat memory button.

Quick Start

SUNROOF

Sunroof operation

The sunroof is fitted with an anti-trap mechanism, which will open the sunroof slightly if resistance is encountered during closing.



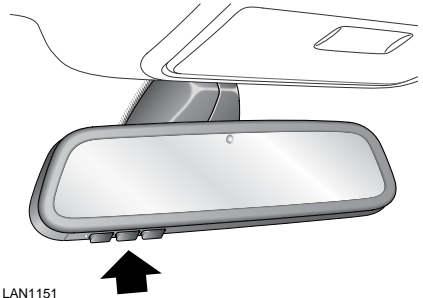
LAN0562G

1. Press to tilt the sunroof.
2. Push rearwards to open the sunroof.
3. Push forward to close the sunroof.

Switch operation

The sunroof switch has two forward and rearward positions. In the first position, the sunroof will open or close until the switch is released. To open or close the sunroof fully in a single operation, push the switch fully forwards or rearward to the second position.

HOMELINK TRANSMITTER



LAN1151

The buttons (arrowed in illustration) can be programmed to transmit radio frequencies that can operate external devices i.e. garage doors, entry gates, security systems, etc.

For more information, refer to Land Rover Homelink® on page 154.

Quick Start

SEAT BELTS AND CHILD RESTRAINTS

The use of front and rear seat belts is mandatory in most countries. Using seat belts saves lives. They should be worn by all occupants, whenever the vehicle is in use.

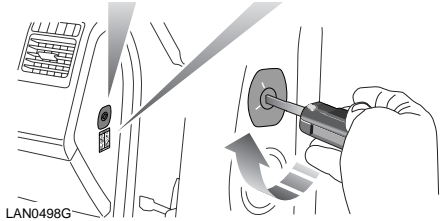


A warning indicator on the instrument panel will illuminate to alert you that the driver's and/or passenger's seat belt is unbuckled. Dependent upon specification, this may be accompanied by an intermittent chime.

Child restraints

It is important to remember that your child's weight, rather than age, determines the type of restraint that is required.

PASSENGER AIRBAG DEACTIVATION



If it becomes necessary to fit a child restraint on the front passenger seat, the passenger airbag must be deactivated.

To deactivate the airbag, open the front passenger door and use the starter key to turn the **PASS.AIRBAG** switch (located on the end of the fascia) to the **OFF** position.

Quick Start



LAN0499G

With the airbag deactivated, the status indicator, located on the overhead console, will illuminate whenever the ignition is on.

Operating note

When an adult is seated in the front passenger seat, ensure the **PASS.AIRBAG** switch is turned to the **ON** position.

PARKING AID

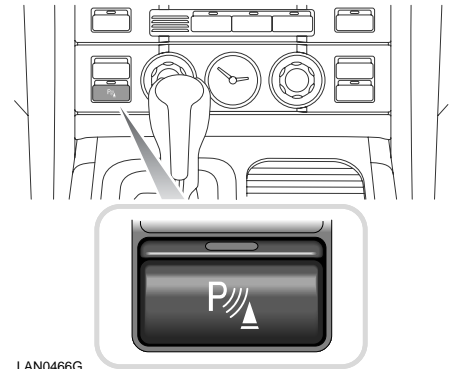
With the ignition on, the front and rear parking aid are activated whenever reverse gear is selected. A short confirmation tone will sound after one second.

If an obstruction is detected by the sensors, an intermittent tone will sound. As the vehicle moves closer to the obstruction the intermittent tone increases in frequency.

When the distance between the sensor and the obstruction is less than approximately 30 cm (1 foot), the tone becomes continuous.

The parking aid is automatically switched off when the vehicles forward speed exceeds 32 km/h (20 mph).

Front parking aid - manual operation

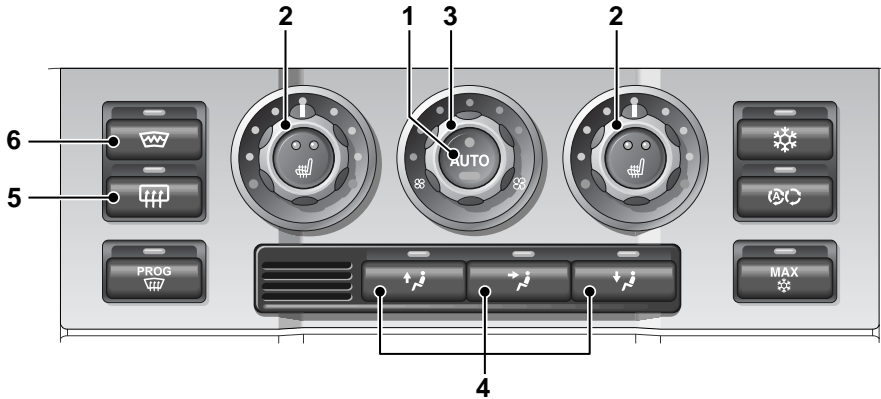


LAN0466G

When driving into a limited space, the front parking aid can be manually activated by pressing the switch on the facia. The switch will illuminate and a short confirmation tone will sound.

Quick Start

CLIMATE CONTROL



I AN1152

The following provides a brief overview of the basic functions of the climate control system.

Recommended mode

Select **AUTO** as the normal operating mode. This will help prevent window misting.

1. Auto mode

Press to select automatic operation of the climate control system. The system will automatically adjust the heat output, blower speed, air intake and airflow distribution so as to maintain the selected temperature(s) and reduce misting without constant adjustments from the driver or passengers.

2. Temperature control

Rotate the controls to set the required temperature for the corresponding side of the passenger compartment.

3. Blower control

Rotate clockwise to increase and anticlockwise to decrease airflow from the vents.

4. Air distribution controls

More than one setting can be selected at once.

5. Heated front screen

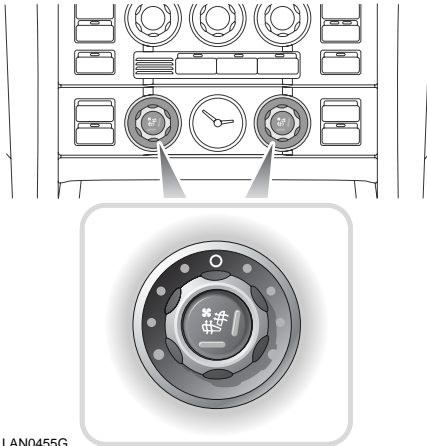
6. Heated rear screen

External water deposits

The air conditioning system removes moisture from the air and deposits the excess water beneath the vehicle. Puddles may form but this is normal and no cause for concern.

Quick Start

Climatic seats



LAN0455G

Rotate to start the climatic seat function and to adjust the temperature of the airflow.

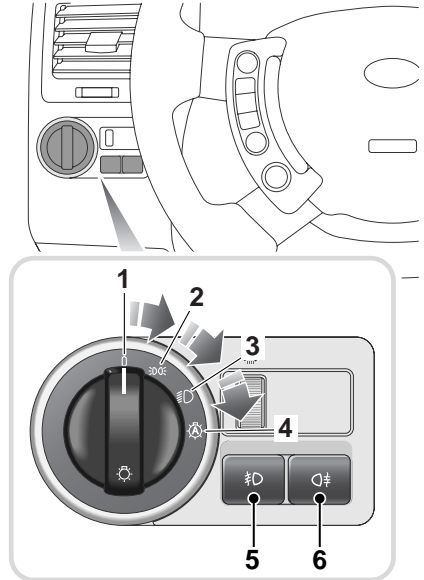
Press once to ventilate the seat back only. Press a second time to switch the climatic seat function off. A third press will ventilate the seat back and seat cushion.

Operating note

Climatic seats consume considerable power from the battery. For this reason, they should only be operated while the engine is running.

EXTERIOR LIGHTING

Lamps master switch



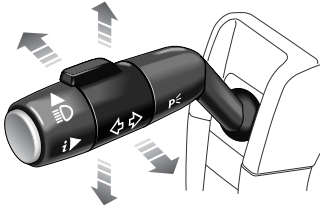
LAN1153

1. Side lamps and headlamps off.
2. Side lamps on.
3. Headlamps on.
4. Auto mode on.

In Auto mode, a light sensor monitors the exterior light levels and automatically switches the side lamps and low beam headlamps on and off.

5. Front fog lamps.
6. Rear fog lamps.

Quick Start



LAN1154

Direction indicators

Move the stalk up or down to operate the direction indicators.

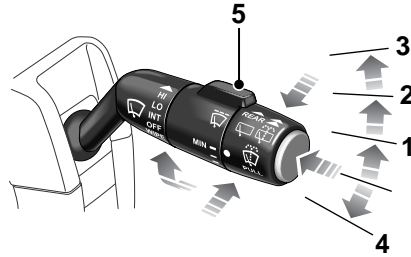
Move the lever partially up or down against spring pressure, then release, to indicate a lane change. The relevant direction indicator flashes three times.

Headlamp main beam

Push stalk forwards to change headlamps to high beam. Pull stalk to return to low beam.

To flash the headlamps, pull the stalk part way towards the steering wheel and release.

WIPERS AND WASHERS



LAN1143

1. Intermittent wipe or rain sensor operation.
2. Normal speed wipe.
3. Fast speed wipe.
4. Single wipe.
5. Rotate collar to adjust the speed of the intermittent wipe or sensitivity of the rain sensor.

Rear wiper and washer

Push the lever forwards to the first position to operate the rear wiper. Push to the second position to operate the rear washers. The lever will return to the first position when released.

Pull the lever back to switch off the rear wiper.

Windscreen wiper

Press and release the button on the end of the lever to operate the windscreen washer.

Press and hold the button to operate washers and wipers.

Care point

Before entering an automatic car wash, turn the wipers off, to deactivate the rain sensor. Otherwise, the wipers will operate during the car wash program and may be damaged.

Quick Start

WARNING INDICATORS



Headlamp main beam - BLUE.



Direction indicators - GREEN.



Glow plugs - AMBER.



Dynamic Stability Control (DSC) - AMBER.



Hill Descent Control (HDC) information - GREEN.



Front fog lamps - GREEN.



Rear fog lamps - AMBER.



Battery charging - RED.



Low oil pressure - RED.



Tyre Pressure Monitoring (TPM) system - YELLOW.



Check engine - AMBER.



LOW range - GREEN.



Side lamps - GREEN.



Electronic Parking Brake (EPB) - RED.



Brake system - RED.



Emergency Brake Assist (EBA) - AMBER.



Anti-lock Braking System (ABS) - AMBER.



Airbag SRS - RED.



Cruise control - GREEN.



Seat belt reminder - RED.



Trailer direction indicators - GREEN.

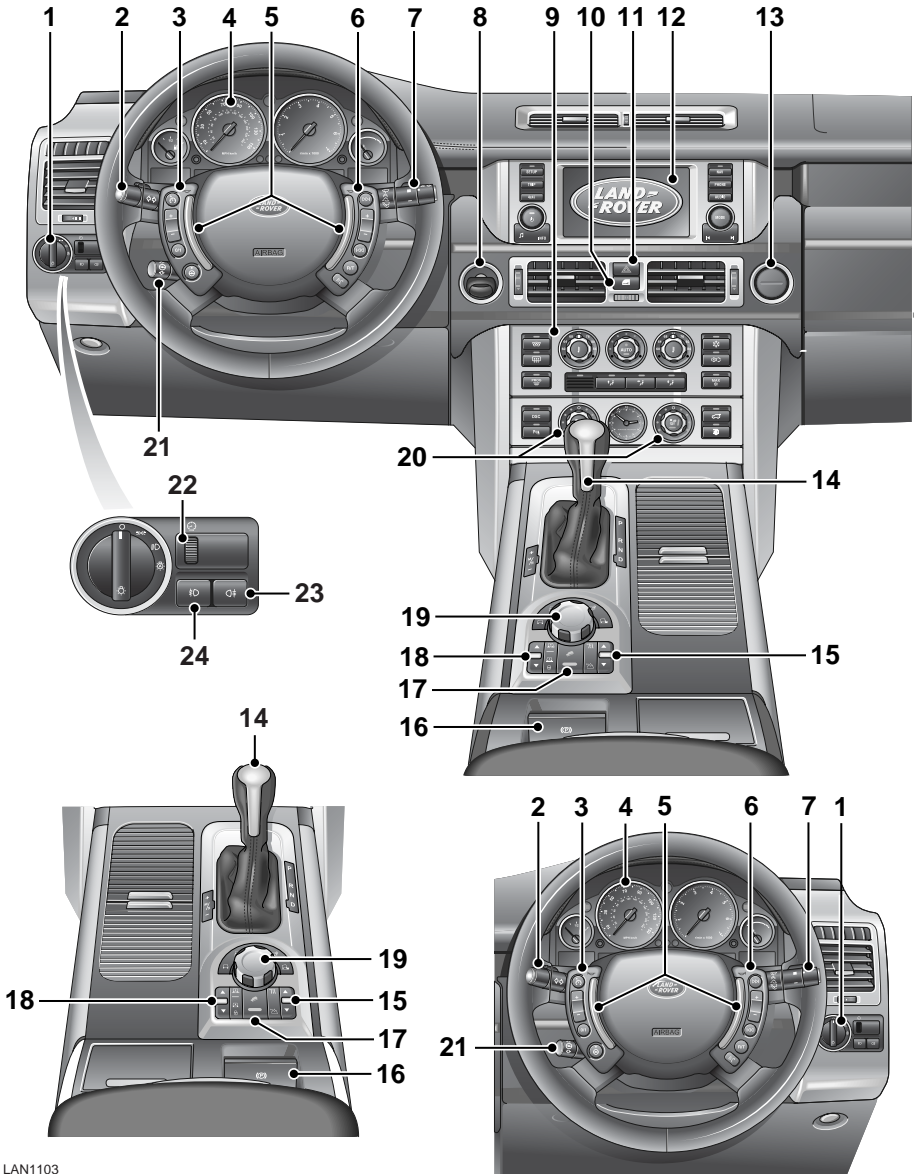


Adaptive Front Lighting System (AFS) - AMBER.

Caution: If one of the red warning indicators illuminates, a serious fault is indicated. Stop the vehicle as soon as safety permits and refer to WARNING INDICATORS, 109.

Quick Start

FACIA

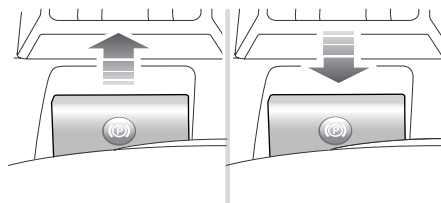


LAN1103

Quick Start

1. Lamps master switch
2. Headlamps and direction indicator controls
3. Cruise control switches
4. Instrument pack
5. Horn switches
6. Remote audio controls
7. Windscreen wiper/washer controls
8. Starter switch
9. Heater/air conditioning controls
10. Master locking switch
11. Hazard warning lamp switch
12. Touch screen controls
13. Glove box switch
14. Main gear selector
15. Transfer gear switch
16. Electronic parking brake
17. Hill descent control switch
18. Air suspension controls
19. Terrain response control
20. Climatic seat controls
21. Steering column adjuster
22. Instrument illumination control
23. Rear fog lamps
24. Front fog lamps

ELECTRIC PARKING BRAKE



LAN0590G

Applying

With the vehicle stationary, pull up the parking brake lever and then release it. The red warning indicator in the instrument pack will illuminate.

Releasing

With the starter switch in the first or second position, apply the foot brake and press down on the parking brake lever.

If the vehicle is stationary with the parking brake applied and either **D** (Drive) or **R** (Reverse) selected, pressing the accelerator will automatically release the parking brake.

For further information, see **ELECTRONIC PARKING BRAKE (EPB)**, 197.

Quick Start

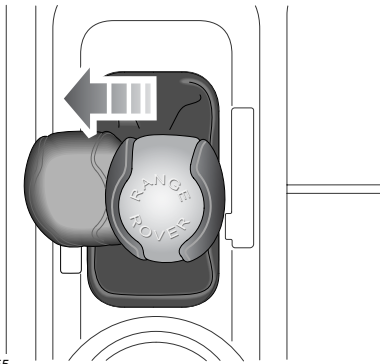
TRANSMISSION

Gearshift interlock

The starter switch must be in the second position and the foot brake applied, before the gear selector can be moved from **P** to **R**.

Also, the selector release button must be pressed when moving between **P** and **R**.

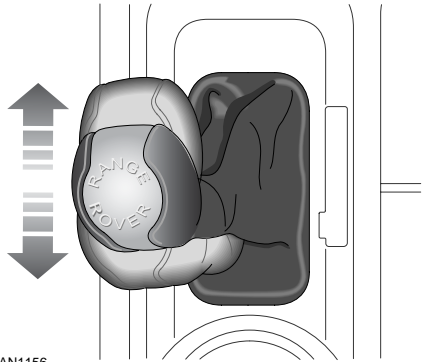
Sport mode



LAN1155

To select sport mode, move the gear selector from the **D** position, towards the left-hand side of the vehicle. The word **SPORT** appears in the message centre and the **M/S** indicator on the selector surround illuminates. To cancel sport mode, return the gear selector to the **D** position.

CommandShift™ manual gear selection



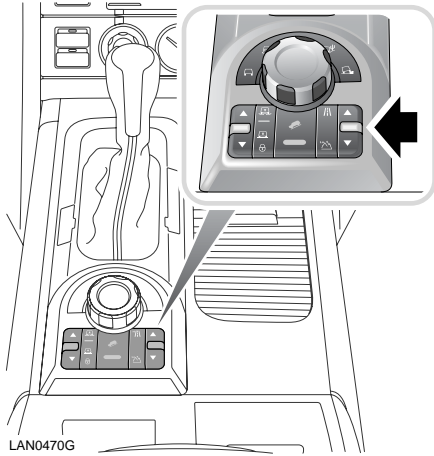
LAN1156

With the gear selector in Sport mode, a single forward movement of the gear selector, will change the transmission to a higher gear. A rearward movement will change down to a lower gear. Repeated forward and rearward movements of the lever can be made, until the desired gear ratio has been selected. The current ratio appears in the message centre.

To deselect CommandShift mode, move the gear selector back to the **D** position.

Quick Start

TRANSFER GEARBOX



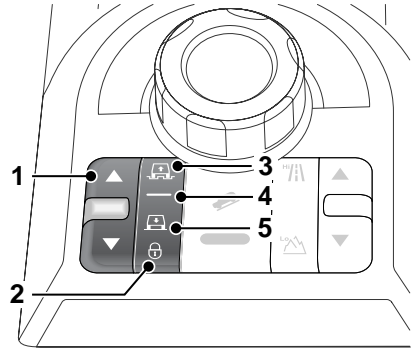
HIGH range should be used for all normal road driving and also for off-road driving across dry level terrain.

LOW range should be used in situations where low speed manoeuvring is necessary, or in extreme off-road conditions.

Range changing

The recommended method for range changing is with the vehicle stationary. With the engine running, and the main gearbox in **N** (Neutral), press and release the front/rear of the transfer gearbox switch to select the range required. When range changing is complete a chime will sound and a message will be displayed on the message centre.

AIR SUSPENSION



LAN0601G

Vehicle height can be manually adjusted via the raise/lower switch (1). Height changes can only be made with the engine is running and the doors closed. The arrow indicators on the switch will illuminate to show the direction of movement and extinguish when height change movement is complete.

Off-road height (3) provides improved ground clearance and approach, departure and break-over angles.

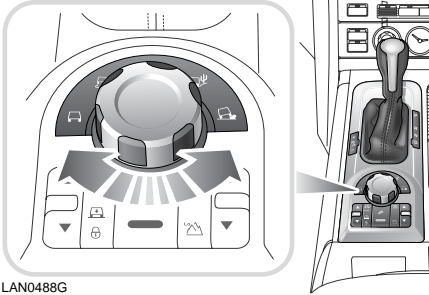
On-road height (4) is the normal height of the vehicle.

Access height (5) provides easier entry, exit and loading of the vehicle. This position may be selected up to 40 seconds after the starter switch has been turned off. Access height can also be selected by pressing the Access button on the driver's door control panel.

Crawl (2) locks the suspension at Access height, allowing the vehicle to be driven at low speeds at Access height, to give increased roof clearance.

Quick Start

TERRAIN RESPONSE



LAN0488G

The Terrain Response system is always active and cannot be switched off. When the vehicle is started, the system will normally start in its General program (SPECIAL PROGRAMS OFF).

Rotate the knob to select a special program. This provides benefits in how the vehicle can be driven over different surfaces or terrains, by automatically adjusting the vehicle's drive and suspension systems.

It is recommended that a special program be engaged whenever driving conditions could become difficult and cancelled once the conditions for use are no longer present.



General (SPECIAL PROGRAMS OFF) - suitable for surfaces that match typical road surfaces.



Grass-Gravel-Snow - suitable for surfaces which are firm, but have a slippery surface, e.g. grass, snow, loose gravel, pebbles or icy conditions.



Mud-Ruts - suitable for soft, muddy, uneven or deeply rutted ground. It is recommended that transfer Low range is selected.



Sand - suitable for soft, predominantly dry, yielding sandy ground, e.g. sand dunes and deserts. If the sand is damp or wet, the Mud-Ruts program may be more beneficial.



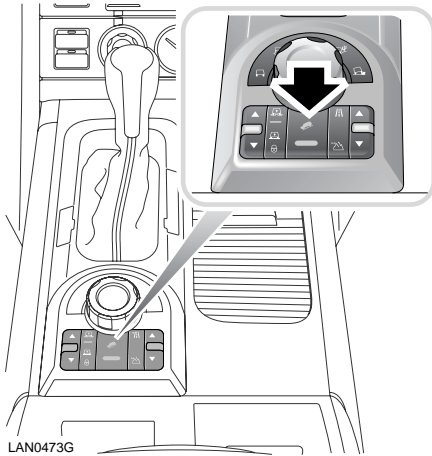
Rock Crawl - only selectable in transfer Low range. Suitable for crossing wet or dry, solid, unyielding ground, requiring high levels of wheel displacement, e.g. clusters of boulders or rocky river beds.

Wading

When wading through water, select the program suitable for the surface beneath the water. The maximum depth of the water should not exceed 700 mm (27.5 inches).

Quick Start

HILL DESCENT CONTROL (HDC)



LAN0473G

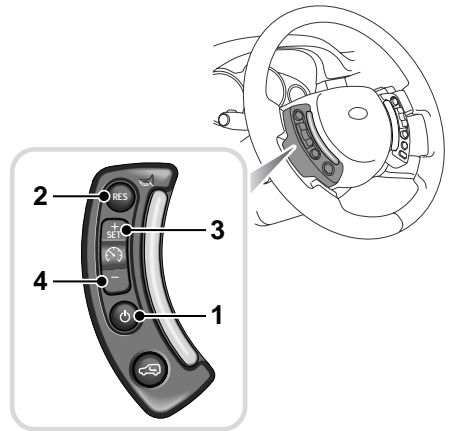
HDC provides greater control in off-road situations, particularly when descending severe gradients.



Press the switch (arrowed) to select HDC. HDC can be selected at speeds up to 80 km/h (50 mph), but will not be fully active until speed reduces below 50 km/h (30 mph), confirmed by the HDC information warning indicator on the instrument panel.

Press the switch again to deselect HDC.

CRUISE CONTROL



LAN1132

Cruise control enables the driver to maintain a constant road speed, without using the accelerator pedal.

1. Master button - press to activate/deactivate the cruise control system.
2. Resume button - press to resume a set speed retained in the system memory.
3. + Accelerate/Set button - press to set the road speed to be maintained or increase the speed in 2 km/h (1 mph) steps, when cruise control is operating.
4. - Decelerate button - press to decrease the speed in 2 km/h (1 mph) steps when cruise control is operating.

Brake pedal override

Cruise control will automatically disengage when the brake pedal is pressed or when the vehicle speed falls below 32 km/h (20 mph).

Quick Start

AUDIO SYSTEM OPERATION

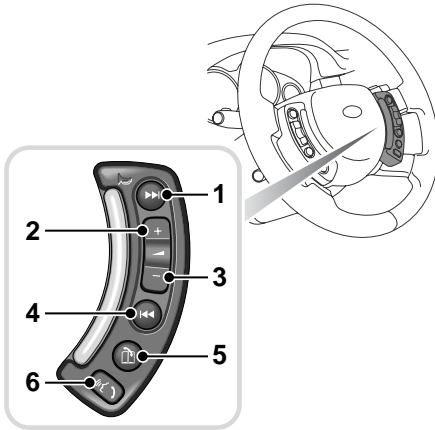


LAN1157

1. Press to access system settings.
2. Press for Navigation functions.
3. Telephone button.
4. Audio and video button.
5. Press to access Audio mode and rotate to select Radio, CD, TV, or AUX.
6. Press to scroll through preset radio stations or to skip CD/MP3 tracks.
7. Briefly press to set Traffic Information on or off. Press and hold for two seconds to set News Information.
8. Press to access the sound settings menu rotate control to adjust.
9. Press to switch the audio unit on or off and rotate to adjust the volume.
10. Press for Off-road information.
11. Press for On-road information.

Quick Start

Steering wheel controls



LAN1131

1. Press and release to scroll through preset radio stations or CD/MP3 tracks. Press and hold for two seconds to search up for the next radio station or to advance through the CD/MP3 track.
2. Press to increase volume.
3. Press to decrease volume.
4. Press and release to scroll through preset radio stations or CD/MP3 tracks. Press and hold for two seconds to search down for the next radio station or to reverse through the CD/MP3 track.
5. Press to switch between audio and telephone mode.
6. Press to activate the voice recognition feature.

RADIO OPERATION



LAN1158 ENG

Select **Radio** from the Audio mode menu. When in radio mode, touch the **Band** icon 1 repeatedly until the required waveband is selected (e.g. FM, MW, AM depending on market).

Storing radio stations

Touch the FM settings icon 2 to access the tuning screen. With the **Tuning** tab selected, touch the **Auto Store** icon to automatically store the 9 strongest signals. Repeat this process for all wavebands.

To manually store a selection of radio presets, refer to the Owner's Handbook.

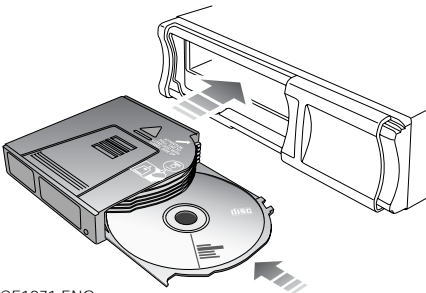
Quick Start

CD OPERATION

CD autochanger

The CD autochanger is located in the upper glove box.

1. Fully open the autochanger door, press the **EJECT** button and remove the magazine. Close the autochanger door.
2. Pull a tray out of the magazine until resistance is felt, then insert a CD/MP3 disc (label side up). Slide the tray into the magazine until a click is heard.
3. Open the autochanger door and, ensuring correct orientation, replace the magazine. Ensure that it clicks into position.



ICE1971 ENG

Care point

Close the autochanger door to prevent dirt getting into the unit and to help reduce skipping.

Playing CD/MP3 discs

Select **CD** from the Audio menu. When in **CD** mode, the system will load the discs in the magazine. Once complete, the display will show a list of loaded CD/MP3 discs, and start playing the first disc.

Playback can be paused by touching the pause icon. Touch again to resume playback.



LAN1159 ENG

When an MP3 disc is selected, the folder information is displayed in an additional information window. To scroll through the folders, touch the forward and back arrow on-screen icons.

CD selection

Touch the appropriate CD icon **1** to **6** on the screen to select a disc from the auto-changer.

Once selected, playback automatically commences and progresses sequentially through all of the loaded discs in the magazine.

Quick Start

TELEPHONE - BLUETOOTH SYSTEM

Mobile phones with Bluetooth capability can communicate with the vehicle's inbuilt telephone feature.

The following procedure demonstrates how to connect the most popular brands of mobile phone.

Pairing a handset

Prepare the mobile phone for pairing to the system. See the telephone manufacturer's instructions for further details, or follow the table below for generic commands.

Nokia	Motorola	Ericsson
1. Select Menu	Select Menu	Select Menu
2. Select Settings	Select Settings	Select Connectivity
3. Select Bluetooth OR Connectivity then Bluetooth	Select Connection	Select Bluetooth
4. Select On	Select Bluetooth link	Select My Devices
5. Select Search for audio devices	Select Hands-free	With New Device highlighted, select Add. Press OK to confirm
6. After Search select Land Rover	Select Look for devices	After Search select Land Rover
7. Enter Pass Code 2121. Press OK to confirm	After Search select Land Rover	Select Connect
8. No connection? Select Bluetooth (Menu) then Paired devices Land Rover	Permission to bond? Select Yes and enter pass code 2121	Enter pass code 2121 after prompt

When the handset has been successfully paired to the system, **Bluetooth** will appear on the phone menu screen.

Telephone echo

If an echo is experienced when using the telephone, reduce the volume on the audio system.

Bluetooth selection

If more than one paired Bluetooth phone is in range, then the system will automatically select the last phone used.

Mobile phone compatibility

There are a number of mobile phones that have been tested to function correctly with the Land Rover system, however not all mobile phones are compatible. For the latest list of compatible phones and software versions, please refer to

www.ownerinfo.landrover.com.

Alternatively consult your Dealer/Authorised Repairer.

Non-approved handsets cannot be guaranteed to operate reliably.

Quick Start

Making a call

1. With a paired handset, select **Phone** from the Home screen, or press the **PHONE** button on the screen surround.
2. Enter the required telephone number using the on-screen keypad.
3. Touch the send softkey on the screen or press the phone/voice button on the steering wheel control to send.

Receiving a call

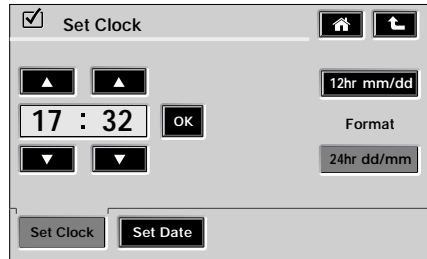
To answer or end a call, touch the send softkey on the screen, or press the phone/voice button on the steering wheel control.

CLOCK SETTING



LAN1160

To set the time, press the **SETUP** button.



LAN1161 ENG

From the setup screen, touch the **Clock** icon to access the **Set Clock** screen.

Filling Station Information

FUEL FILLER

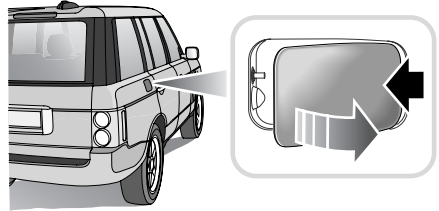
WARNING

Always ensure that the fuel burning heater IS NOT operating when refuelling the vehicle. See TIMED CLIMATE CONTROL, 137.

The fuel filler is located in the rear right-hand wing. With vehicle fully unlocked, press the right side of the flap to open it.

Turn the cap anticlockwise and allow any pressure inside the tank to escape before removing cap.

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



H6536G

Fuel type	
Petrol vehicles	Premium unleaded 95 RON.
Diesel vehicles	To EN590 specification. Maximum allowable Bio-diesel mix is 5%.

Caution:

If the fuel tank is accidentally filled with the wrong type of fuel, do not start the engine. It is essential that you seek qualified assistance.

Note:

For more detailed information, see **FUEL FILLING, 178**.

Ethanol E85 fuel

Caution:

This vehicle is not suitable for use with fuels containing more than 10% Ethanol.

Do not use E85 fuels (85% Ethanol content). Equipment necessary for the use of fuels containing more than 10% Ethanol is not fitted to this vehicle. If E85 fuels are used, serious engine and fuel system damage will occur.

Petrol fuel guard

On diesel engine vehicles, to prevent the tank being accidentally filled with petrol, the filler neck incorporates a fuel guard system. The narrow filler nozzle fitted to pumps delivering unleaded petrol activates a protective guard, which prevents the fuel from being delivered.

If this occurs, the fuel guard will need to be reset before the tank can be correctly filled with diesel fuel. This is achieved using the reset tool, located in the tool kit. For further information, see **PETROL FUEL GUARD, 179** and **TOOL KIT, 261**.

Note: It is the driver's responsibility to fill the vehicle with the correct fuel. The petrol fuel guard only reduces the risk of filling the vehicle with the incorrect fuel.

Caution: Using the incorrect fuel can result in major damage to your vehicle's engine and fuel system.

Filling Station Information

TYRE PRESSURE

Tyre pressures are listed on a placard on the B pillar on the driver's side (visible with the driver's door open). See **Tyre information label, 251**.

Check pressures when the tyres are cold. Air pressure naturally increases in warm tyres (after the vehicle has been driven for a while). If you have to check warm tyres, you should expect the pressures to have increased between 30 - 40 kPa, (0.3 - 0.4 bar/4 - 6 lbf/in²). In this circumstance, never let air out of the tyres in order to match the recommended pressures.

Note: For more detailed information on tyre pressures, see **Tyre pressures, 249**.

Temporary spare tyre pressure	kPa	bar	lbf/in ²
Any position or load condition	420	4.2	60

FLUID SPECIFICATIONS

Engine oil top-up	
Petrol vehicles	Use a 5W/30 oil to specification ACEA:A3 (with API SL or SM). Land Rover WSS-M2C913-B preferred.
Diesel vehicles	Use a 5W/30 oil meeting Land Rover WSS-M2C913-B only.
Cooling system top-up	
All vehicles to -40°C (-40°F)	50% mix of fresh water and an approved antifreeze.

Note: For more detailed information, see **LUBRICANTS AND FLUIDS, 294**.

General Information

SYMBOLS GLOSSARY

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

Warnings

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.

Cautions

Caution: Cautions 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 damage to your vehicle.

Symbols



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/Authorised Repairer.

WARNING LABELS ATTACHED TO THE VEHICLE



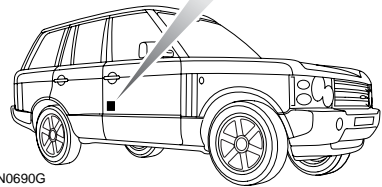
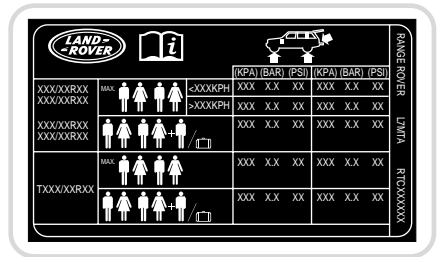
Warning labels attached to your vehicle bearing this symbol mean: Do not touch or adjust components until you have read the relevant instructions in the handbook.



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.



Warning labels



LAN0690G

Example

Labels are attached to your vehicle at several positions. These are applied to draw your attention to important subjects, e.g. tyre pressures, tow bar use, airbags, roll-over risk, engine compartment hazards, etc.

It is important that you are familiar with these subjects to ensure that your vehicle and its features are used safely. Using the index at the back of this handbook, refer to the relevant topic for more information.

General Information

HEALTH AND SAFETY

WARNING

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 off-road applications. An advantage of the higher ground clearance is a better view of the road allowing you to anticipate problems.

The vehicle is not designed for cornering at the same speed as conventional passenger cars any more than a low slung sports car is designed to perform satisfactorily under off-road conditions. If at all possible, avoid sharp turns or abrupt manoeuvres. As with other vehicles of this type, failure to operate the vehicle correctly may result in loss of control or vehicle roll-over.

The vehicle should not be parked over long dry grass or other combustible material, particularly during dry weather. As the heat generated by the exhaust and emission control systems may be sufficient to start a fire.

Before exiting the vehicle ensure that P (park) is selected and the park brake applied. When exiting the vehicle ensure that the remote control is removed from the vehicle.

Vehicle stability

WARNING

Utility vehicles have a significantly higher roll-over rate than other types of vehicles. Since these vehicles are designed to be operated off-road, they have a higher ground clearance and hence a higher centre of gravity. Such a feature has been associated with an increased risk of vehicle roll-over.

Another factor shown to significantly increase rollover risk is unauthorised vehicle modifications such as fitting incorrect specification tires, oversize tires, body lifting, incorrect springs/dampers, incorrect vehicle loading/trailer towing.

However, on-road crash data also indicates that driver behaviour is a greater factor than a high centre of gravity in determining a vehicle's overall rollover rate. The single most effective driver behaviour that can reduce the risk of injury or death in all crashes including roll-over is to ALWAYS WEAR YOUR SEAT BELT and to properly restrain all child passengers in the rear seat in an appropriate child safety seat. In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

Many vehicle rollovers occur when a driver attempts to bring a vehicle back onto the road after some or all of the wheels drift onto the shoulder of the road, especially when the shoulder is unpaved. If you find yourself in such a situation, do not initiate any sharp or abrupt steering and/or braking manoeuvres to re-enter the roadway. Instead, let the vehicle slow down as much as is safely possible before attempting to re-enter the roadway and keep your wheels as straight as possible while re-entering the roadway.

General Information

DATA RECORDING

Service data recording

Service data recorders in your vehicle are capable of collecting and storing diagnostic information about your vehicle. This potentially includes information about the performance or status of various systems and modules in the vehicle such as engine, throttle, steering or brakes.

In order to properly diagnose and service your vehicle, Land Rover and service and repair facilities may access vehicle diagnostic information through a direct connection to your vehicle.

Event data recording

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal;
- How fast the vehicle was traveling; and,
- The rotational position of the steering wheel.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Note: EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

DISABILITY MODIFICATIONS

Occupants with disabilities which may require modification of the vehicle must contact a Land Rover Dealer before any modifications are made.

Parts and Accessories

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.

Land Rover will not accept any liability for death, personal injury or damage to property which may occur as a direct result of fitment on non-approved accessories or the carrying out of non-approved conversions to Land Rover vehicles.

Land Rover strongly advise against making any modifications to the suspension or steering system. This could seriously affect the handling and stability of the vehicle leading to loss of control or roll-over.

The 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/ Authorised Repairer.

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 Dealer/Authorised Repairer, 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.

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.

Parts and Accessories

Electrical equipment

WARNING

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

Always consult a Land Rover Dealer/Authorised Repairer 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/Authorised Repairer for advice regarding the approval, suitability, installation and use of any parts or accessories before fitting.

Airbag SRS

WARNING

The components that make up the airbag system 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 module.

To prevent malfunction of the airbag system always consult your Dealer/Authorised Repairer before fitting any of the following:

- Electronic equipment such as a mobile phone, two-way radio or in-car entertainment system.
- Accessories attached to the front or side of the vehicle.
- Any modification to the front or side of the vehicle.
- Any modification involving the removal or repair of any wiring or component in the vicinity of any of the SRS components, including the steering wheel, steering column, seats, instrument and facia panels.
- Any modification to the seats, facia panels or steering wheel.

Keys and Remote Controls

KEYS AND REMOTE CONTROLS



H6718G



H5816G

You have been supplied with two remote controls, with integral keys, which operate all of the vehicle's locks.

The operation of all buttons, on all remote controls, will be inhibited while a key is in the starter switch.

***Note:** The remote control may not operate correctly in areas that are subject to interference from other radio equipment operating on a similar frequency. Areas where, for example, equipment such as amateur radio, medical devices, telecommunications equipment or other remotely operated alarms are in use may cause difficulty. If such difficulties are experienced, try to operate the remote control as close as possible to the vehicle, or use the key in the door lock.*

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

Caution: Keep the spare remote control in a safe place - not in the vehicle.

***Note:** Land Rover Dealers do not stock spare remote controls, time has to be allowed for replacements to be programmed to your security system and then delivered to the Dealer. The Dealer will require proof of ownership, and keep a log of all enquiries for replacement remote controls.*

It is advisable to notify your dealer as soon as possible if a remote control is lost or stolen. A remote control reported lost will be deactivated. If the remote control is later recovered, your Land Rover Dealer will be able to have it reactivated.

Keys and Remote Controls

Remote control battery

Caution: The remote control 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 is rechargeable. The fact that the battery needs recharging will be apparent from the following:

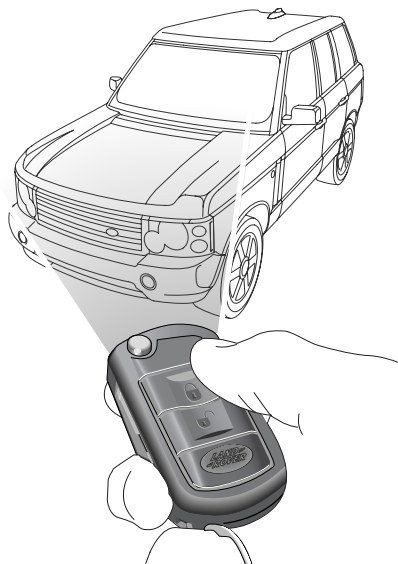
- **KEY BATTERY LOW** will be displayed in the main message centre.
- A gradual deterioration in range and performance will be noticed.

Battery recharge

Insert the key into the starter switch and start the engine. This will start to recharge the remote control battery.

Locks and Alarm

ALARM SYSTEM



LAN0557G

The security system fitted to your vehicle is Thatcham category one approved, and meets European regulation 97 and directive 95/56/EC.

Note: *The radio frequency used by your remote control may be used by other devices. For example: amateur radios, medical equipment, wireless headphones, or other remote control devices. This may cause the frequency to be jammed, and prevent your remote control from operating correctly.*

Environmental and atmospheric conditions can affect the operation of remote controls and the operating range may vary considerably depending on the vehicle's location.

Security Information

For your own safety, and that of the vehicle, when the vehicle is left unattended:

- Apply the parking brake.
- Remove all keys and remote controls from the vehicle prior to locking the doors.
- Close all doors, windows, luggage compartment (including blind), sunroof, and glove box.
- Park the vehicle where it is visible (a well lit area after dark).
- Keep your vehicles keys safely out of sight.
- Never leave children or pets unattended in the vehicle.
- Never leave luggage or valuables on display.

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.

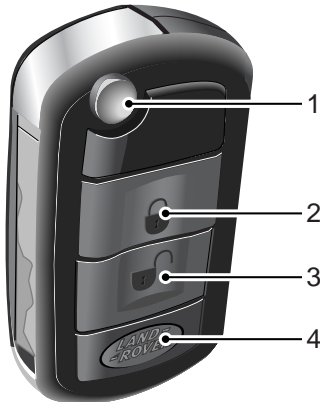
Note: *For maximum security always superlock the vehicle. If passengers or animals are to be left in the vehicle, windows and/or sunroof are left open, or the vehicle is on a moving platform, e.g. a ferry, lock the vehicle by pressing the lock button (or turning the key) twice within ten seconds. This disables the superlocking, tilt sensing and interior space protection.*

Locks and Alarm

Using the remote control

While it is not necessary to point the remote control at the vehicle, the remote control must be within range of the vehicle when a button is pressed. The operating range may vary depending upon the condition of the remote control battery, and may sometimes be limited by physical and geographical factors.

Remote control buttons



The four buttons on the remote control are used as follows:

1. Key release button: Press to unfold the key.
2. Lock button: Press to superlock all doors and to activate the perimetric alarm and interior space protection and activate the tilt sensor. See **Superlocking, 41** and **Tilt sensor, 42**.

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, 45**.

3. 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, 43**.

Press once to activate the memory seats, mirrors and steering column settings. See **DRIVER'S SEAT MEMORY FACILITY, 54**. This will also activate the lazy unlocking facility. See **Lazy locking/unlocking, 45**.

4. 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.

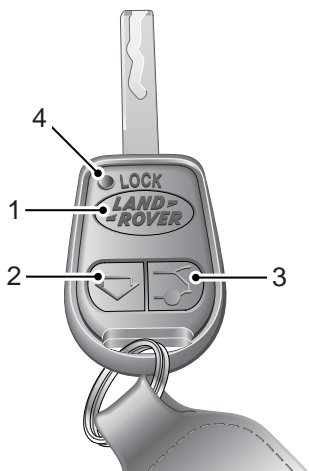
Press and hold to activate the panic alarm.

WARNING

Never leave the remote control in the vehicle if children or animals are also left in the vehicle. The vehicle's systems and remote control functions could be operated, which may result in injury.

Locks and Alarm

Remote control buttons (Japan only)



H5822G

The three buttons on the remote control are used as follows:

1. Lock button: Press to superlock all doors and to activate the perimeter alarm and interior space protection and activate the tilt sensor. See **Superlocking, 41** and **Tilt sensor, 42**.

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

Press and hold to activate the lazy locking facility. See **Lazy locking/unlocking, 45**.

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, 43**.

Press once to activate the memory seats, mirrors and steering column settings. See **DRIVER'S SEAT MEMORY FACILITY, 54**. This will also activate the lazy unlocking facility. See **Lazy locking/unlocking, 45**.

3. Tailgate button: Press to unlock the tailgate and to disarm the interior space protection. All other apertures remain locked and the perimeter protection on the other apertures remains armed.

Press and hold to activate the panic alarm.

4. Remote control indicator: Flashes once for each press of any button, as confirmation of operation.

Locking

Shut all doors, bonnet and tailgate, then press the lock 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, 41**.
- Engine immobilised.
- Perimeter alarm activated (protects the doors, bonnet and tailgate).
- Interior space protection activated.
- Tilt sensor activated.

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

Unlocking with the remote control

- Press the unlock button once to disarm the alarm and unlock the driver's door only. See **Single point entry, 43**.
- 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.

Locks and Alarm

Unlocking with the key

After a remote control 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 remote control, or turn the starter switch to the second position, 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

Never superlock the vehicle with people, children or pets inside. In an emergency they would be unable to escape and the emergency services would be unable to release them quickly.

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.

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

If superlocking is required, but NOT interior space protection, press the lock button on the remote control twice within 10 seconds (or turn the key towards the rear of the vehicle twice within the same time period). Allow for a two-second delay before pressing the lock button a second time.

Locks and Alarm

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.

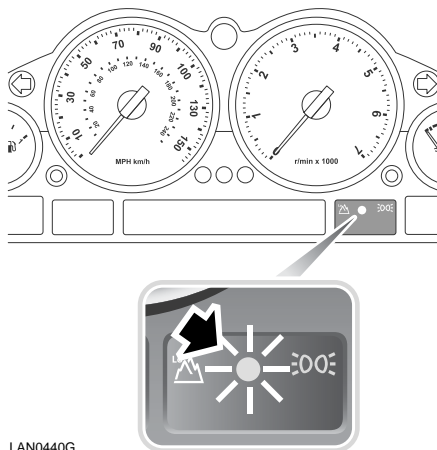
If you wish to have the doors locked but the tilt sensor disabled (e.g. when aboard a ferry or having the vehicle transported on a recovery truck) press the lock button on the remote control twice within 10 seconds (or turn the key in the driver's door lock towards the rear of the vehicle twice within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

Partial arming

If the driver's door is not fully closed when the remote control 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 remote control 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



LAN0440G

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

When the alarm is armed: The indicator 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 indicator will illuminate constantly for 1 second as confirmation.

When the alarm is partially armed (mislock): The indicator 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 indicator flashes rapidly for 5 minutes, before returning to a slow frequency.

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

Locks and Alarm

If the alarm sounds

If the alarm is triggered, the alarm will sound for 30 seconds and the hazard warning lamps 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 control.

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 is operated as follows:

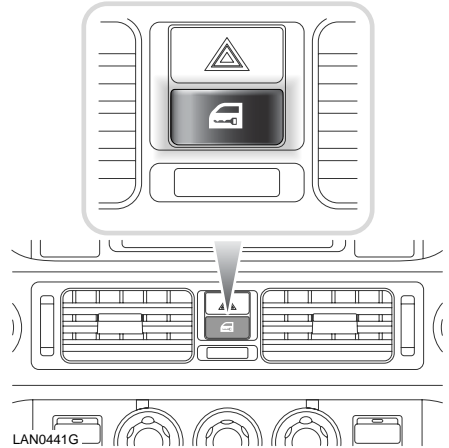
- Press the unlock button once to unlock the driver's door (or turn the key in the driver's door lock towards the front of the vehicle, if the vehicle was locked using the key).
- Press the unlock button (or turn the key) a second time to unlock the remaining doors.

When the vehicle is unlocked using single point entry, if the master locking switch 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 remote controls, or on an individual remote control, by a Land Rover Dealer/ Authorised Repairer.

Master locking switch



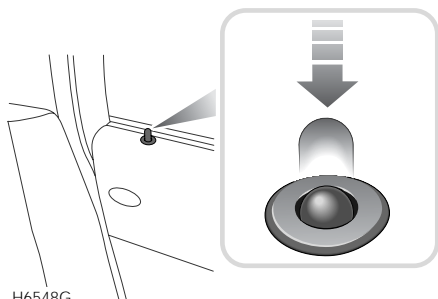
This is a personal security feature which allows all the doors to be locked or unlocked from inside the vehicle (while driving or with the vehicle stationary). Press the switch to lock (the alarm will not be armed) or unlock.

If passengers are to be left inside the vehicle when it is locked, do not use the remote control or key to lock the vehicle. Always get a passenger to use the Master locking switch to lock the vehicle, once the doors are shut.

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

Locks and Alarm

Interior door handles and door sill locking buttons



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:

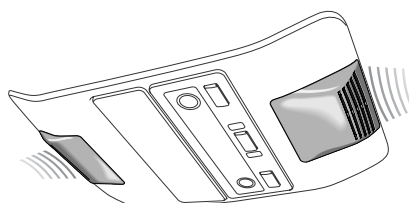
- First operation of the door handle unlocks the door.
- Second operation of the door handle opens the door.

When the master 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.

Caution: 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.



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.

Locks and Alarm

Drive-away locking

This security feature locks all the doors automatically when the vehicle speed exceeds 16 km/h (10 mph).

Note that drive-away locking is not selectable by the driver, and that operation of the door locks by any other means (master locking switch on the fascia panel, for example) will unlock the doors. Drive-away locking can be configured by your Land Rover Dealer/ Authorised Repairer to automatically relock the doors after they are unlocked, when the vehicle speed exceeds 16 km/h (10 mph).



Drive-away locking can be selected, deselected or re configured for individual remote controls, by a Land Rover Dealer/Authorised Repairer.

Automatic relock

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



Automatic relock can be selected or deselected by a Land Rover Dealer/ Authorised Repairer.

Panic alarm

If the tailgate unlock button on the remote control (see **Remote control buttons, 39**) is pressed and held, the alarm will sound and the hazard warning lamps will flash (market permitting). This feature is to draw attention to the vehicle and driver, and to deter potential thieves/attackers.



The panic alarm facility can be selected or deselected by a Land Rover Dealer/ Authorised Repairer.

Lazy locking/unlocking

WARNING

Ensure that no children, pets, or obstructions are in any open aperture before operating lazy locking. Safety mechanisms are in place to prevent serious injury, however, injuries can still occur.

Note: 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 when using the remote control. The key must be used.

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

Lazy locking:

1. Ensure that all doors, bonnet and tailgate are properly closed.
2. Press and hold the lock button on the remote control (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.

Locks and Alarm

Lazy unlocking:

1. Press and hold the unlock button on the remote control (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/ Authorised Repairer.

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 remote control key is inserted into the starter switch. Engine immobilisation is automatic whenever any of the following conditions occur.

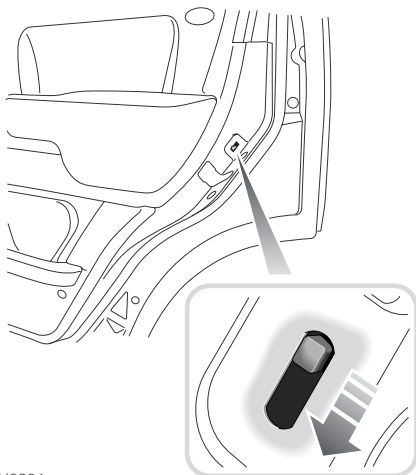
- The vehicle is locked using the remote control or key.
- Three seconds after the starter switch has been turned off and the driver's door opened.
- If the key is removed from the starter switch.

Note: *The engine will be re-mobilised automatically whenever the genuine remote control key is inserted into the starter switch and turned to the first position.*

CHILD-PROOF LOCKS

WARNING

Never leave children unsupervised in the vehicle. Doing so increases the risk of death or serious injury.



H3804

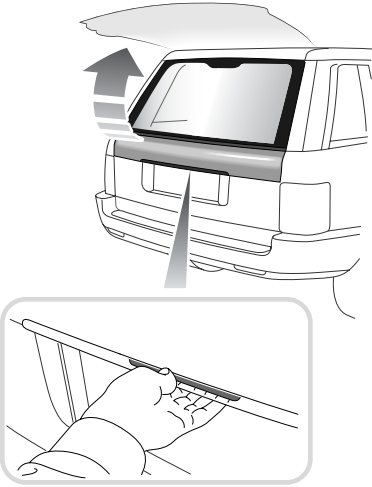
Move the locking levers on the rear doors down to engage the child locks.

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.

Locks and Alarm

TAILGATE

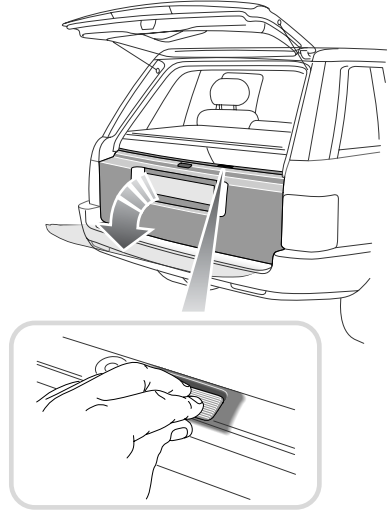
Opening the upper tailgate



H3929

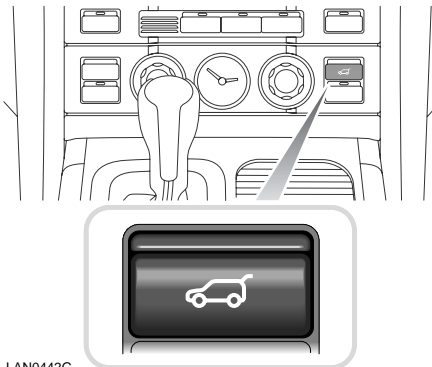
With all doors unlocked, press the switch on the bottom edge of the upper tailgate and lift to open.

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.



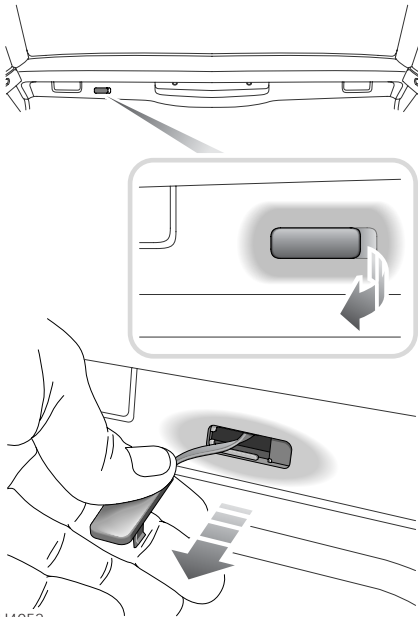
LAN0442G

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

Locks and Alarm

Emergency manual operation

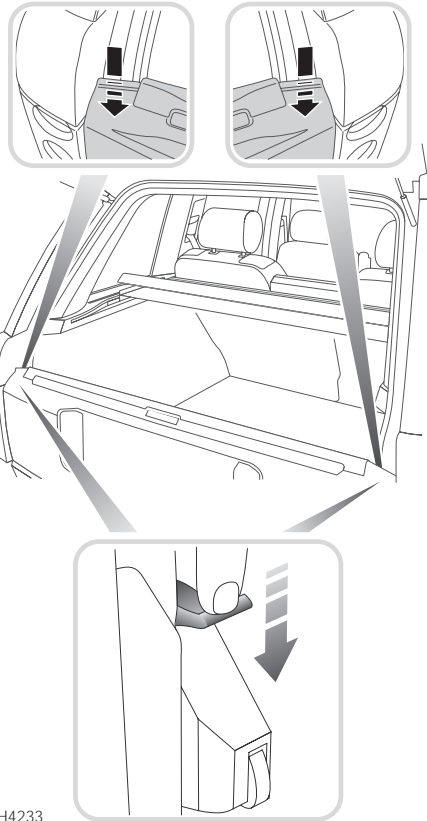
Upper tailgate:



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, 165**.
- 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 insets), either side of the tailgate. The catches can be operated either one at a time, or simultaneously.

Seats

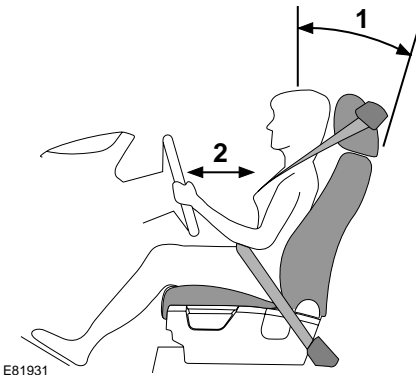
FRONT SEATS

WARNING

Do not adjust the seat while the vehicle is moving. Doing so could cause loss of vehicle control and personal injury.

An inflating airbag can cause facial abrasions and other injuries. Injuries caused by airbag inflation can be minimised by ensuring that the driver and front passenger are seated correctly (seat back upright, seat positioned as far back as practical, and seat belt worn correctly).

Sitting in the correct position



The seat, head restraint, seat belt and airbags, all contribute to the protection of the user. Correct use of these components will give you greater protection, therefore observe the following points:

1. Sit in an upright position with the base of your spine as far back as possible and the seatback reclined no more than 30 degrees.

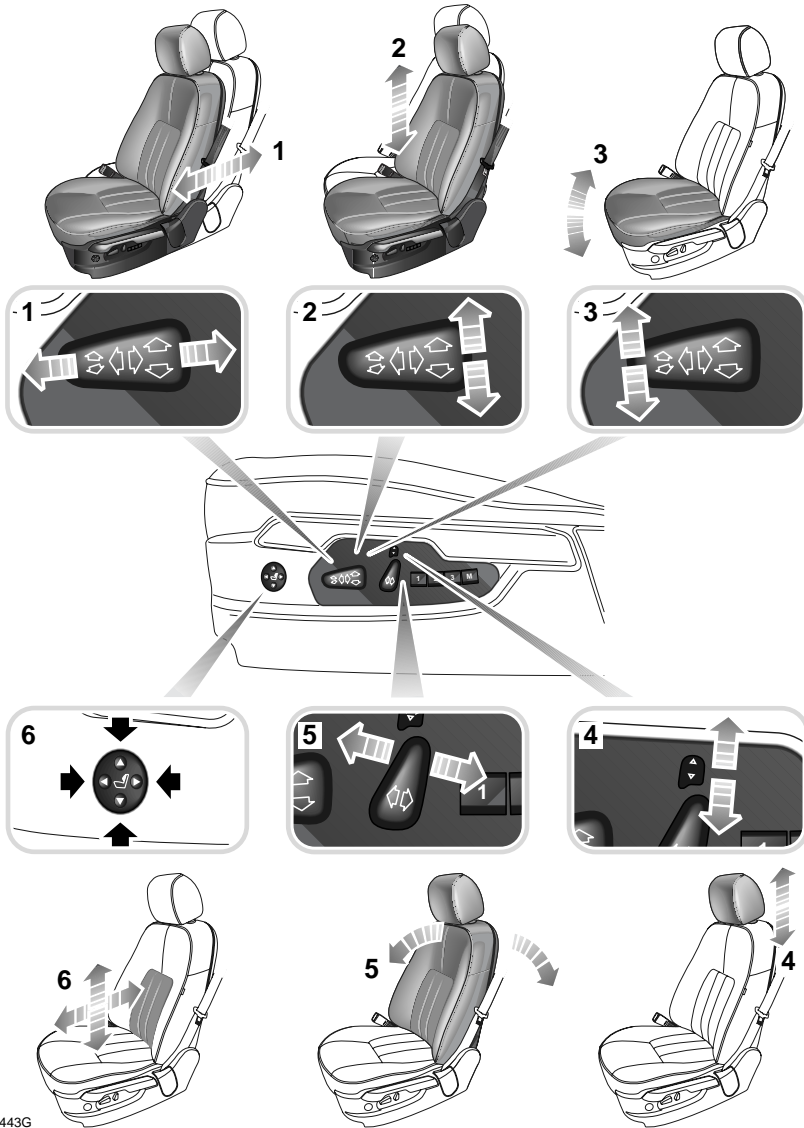
2. Do not move the driver's seat too close to the steering wheel. Ideally, a minimum distance of 254 mm (10 inches) is recommended between the breastbone and the steering wheel airbag cover. Hold the steering wheel in the correct position with your arms slightly bent. Bend your legs slightly so that the pedals can be pressed fully to the floor.

- Adjust the head restraint so that its highest point is level with the top of your head.
- Position the seat belt so that it is mid-way between your neck and your shoulder. Fit the strap tightly across your hips, not across your stomach.
- Ensure that your driving position is comfortable and enables you to maintain full control of the vehicle.

Note: For information on adjusting the steering column, see **STEERING WHEEL ADJUSTMENT, 82**.

Seats

FRONT SEAT ADJUSTMENT



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

Seats

Note: In order to change the position of any part of the power-operated seats, the starter switch must be in the first or second position. The memory driver's seat also has a 10 minute active period initiated when:

- The driver's door is opened/closed.
- The starter switch is turned off.

WARNING

Do not adjust any part of a seat while the vehicle is in motion.

Vehicle movement may cause the seat to suddenly shift, potentially causing injury.

1. Forward/backward adjustment

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

2. Seat cushion height adjustment (Driver's seat only)

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

3. Seat cushion angle adjustment

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.

4. Head restraint adjustment

Push the switch up or down to adjust the head restraint. The top of the head restraint should be level with the top of the head.

Note: The front seat head restraints are not designed to be removed.

WARNING

Head restraints are designed to support the head, not the back of the neck. The restraint must be positioned correctly to restrain rearward movement of the head in a collision. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Adjust the head restraint so that the top of the head restraint is above the centre line of the head. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision. See *Sitting in the correct position*, page 49.

Do not drive, or carry passengers with the head restraints removed from occupied seats. The absence of a correctly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Never adjust the head restraints while the vehicle is in motion. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

5. Seat back adjustment

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).

Failure to maintain the correct seat back angle will reduce the effectiveness of the seat belts and increase the risk of serious injury or death in a crash.

Seats

6. Lumbar support adjustment

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.

Manual head restraint adjustment

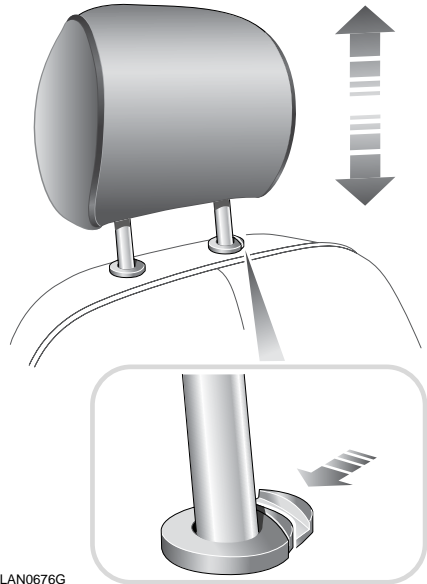
WARNING

Head restraints are designed to support the head, not the back of the neck. The restraint must be positioned correctly to restrain rearward movement of the head in a collision. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Adjust the head restraint so that the top of the head restraint is above the centre line of the head. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision. See *Sitting in the correct position*, page 49.

Do not drive, or carry passengers with the head restraints removed from occupied seats. The absence of a correctly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Never adjust the head restraints while the vehicle is in motion. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.



LAN0676G

To raise the head restraint, pull the restraint upwards.

To lower the head restraint, depress the locking button as shown (see inset) and push down on the restraint.

To remove the head restraint, depress the locking button as shown, while lifting the restraint clear of the seat.

Caution:

Do not attempt to remove a front head restraint when a video display screen is fitted. This may damage electrical connections.

Seats

REAR SEAT ENTERTAINMENT

Caution: When rear seat passengers are entering or leaving the vehicle it is important that they do not hold the head restraint to ease entry/exit. This may damage the display screens.

The video display screens fitted to the rear of the front seat head restraints are not touch-screens. Avoid contact with the screen wherever possible.

Do not attempt to remove a front head restraint when a video display screen is fitted. This may damage electrical connections.

Only clean the screens using the Land Rover approved cleaning materials available from your Land Rover Dealer/Authorised Repairer.

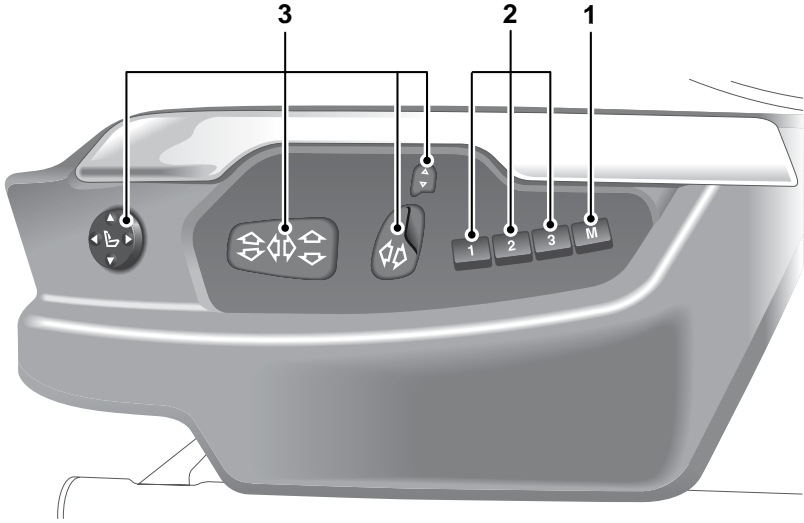
WARNING

The display screens contain toxic substances including mercury. These substances can cause severe illness and possibly death.

In the event that a display screen is damaged, avoid all contact with it, and contact your Dealer/Authorised Repairer as soon as possible.

Seats

DRIVER'S SEAT MEMORY FACILITY



LAN0602G

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 **FRONT SEAT ADJUSTMENT, 50**.

Note: For information on adjusting the mirrors and steering wheel, see **EXTERIOR MIRRORS, 83**, or **STEERING WHEEL ADJUSTMENT, 82**.

Your vehicle can memorise up to three different driver's seat positions and the associated mirror and steering wheel positions. This enables three different drivers 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 positions. To store the settings to memory:

1. Press the memory store button. The indicator will illuminate.
2. Press the desired memory pre-set button to store a setting.

If a pre-set is not pressed within seven seconds of the memory store (M) button being activated, the memory store function will cancel.

Seats

Recalling a stored seat position

1. With the driver's door open, press the desired pre-set button. The seat, mirrors and steering column will automatically move to the position stored in that pre-set.
2. With the driver's door closed, turn the starter switch to the first position, then press the desired memory pre-set button. The seat, mirrors and steering column will move to the stored position.

Note: *If the starter switch is in the second position, the pre-set buttons still function, but will have to be continuously pressed until the seat, mirrors and steering column have reached their set positions.*

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

Lazy entry

Each remote control can be used to memorise the user's preferred seating position. When the vehicle is unlocked using the remote control, the seat will automatically adjust to the position previously selected with that remote control. This feature can also be programmed to adjust the driver's seat when the driver's door is opened.



Lazy entry and associated options can be selected or deselected by a Land Rover Dealer/Authorised Repairer.

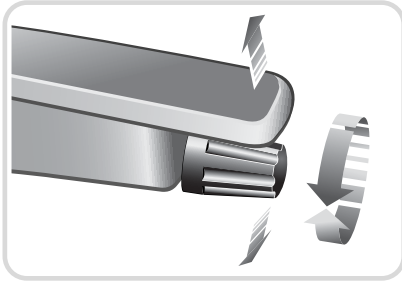
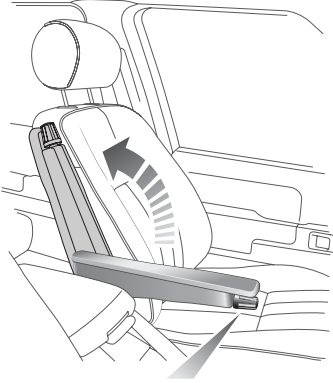
HEATED AND CLIMATIC SEATS

For information on operating the front and rear seat heaters, or the climatic seats, see **SEAT HEATERS, 142** or **CLIMATIC SEATS, 143**.

Seats

FOLDING ARMRESTS

Front

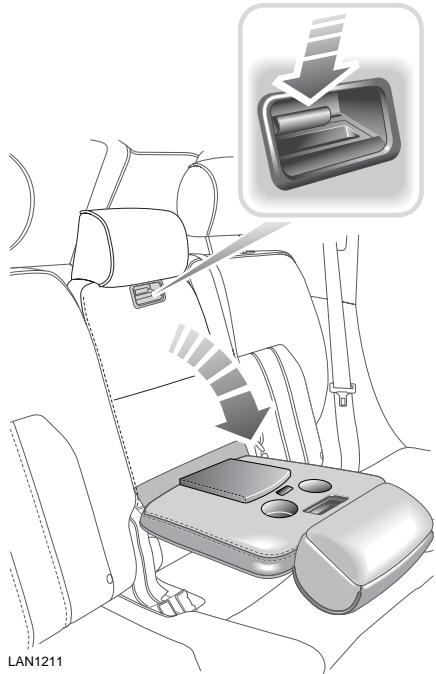


H6550R

The adjustable front seat armrests can either be 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 anticlockwise to lower (see inset).

Rear



To fold down the armrest, press the catch beneath the centre rear seat head restraint.

Note: *The rear armrest cannot be used if a passenger is seated in the centre rear seat.*

Seats

REAR HEAD RESTRAINTS

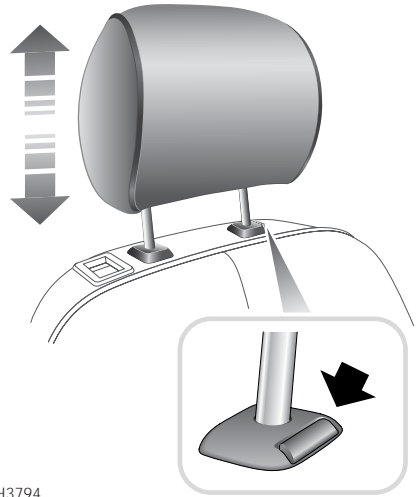
WARNING

Head restraints are designed to support the head, not the back of the neck. The restraint must be positioned correctly to restrain rearward movement of the head in a collision. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Adjust the head restraint so that the top of the head restraint is above the centre line of the head. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision. See *Sitting in the correct position*, page 49.

Do not drive, or carry passengers with the head restraints removed from occupied seats. The absence of a correctly adjusted head restraint increases the risk of death or serious injury in the event of a collision.

Never adjust the head restraints while the vehicle is in motion. An incorrectly adjusted head restraint increases the risk of death or serious injury in the event of a collision.



H3794

Adjustment

Adjust the head restraint correctly, up or down, by pressing the collar button as indicated. The top of the head restraint should be level with the top of the head.

Removal

Remove the head restraint by pressing the collar button as indicated, whilst lifting the restraint clear of the seat.

To replace the head restraint, engage the guide posts into the collars and press the restraint downwards until a click is heard.

Seats

REAR SEATS

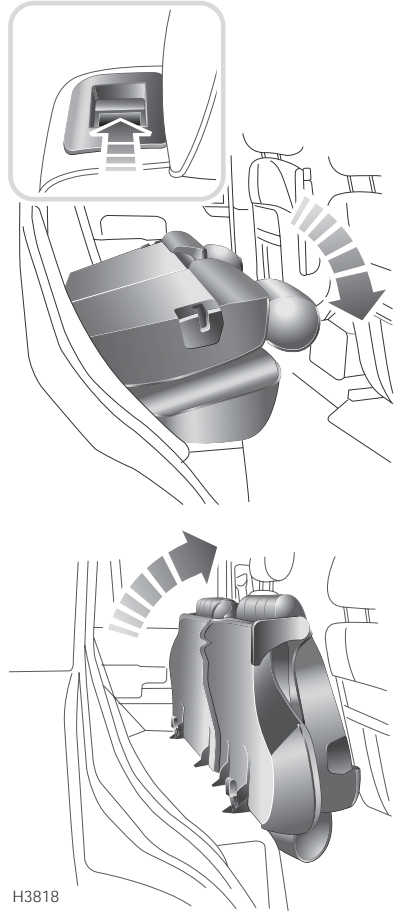
WARNING

Always ensure that objects carried within the vehicle are secured properly. Unsecured items can cause death or serious injury in the event of an impact or sudden manoeuvre.

Never allow passengers to travel in the load space under any circumstances. All vehicle occupants should be seated correctly, and wear a seat belt at all times when the vehicle is in motion. Failure to do so will greatly increase the risk of death and serious injury in the event of an accident or heavy braking.

Do not adjust any part of a seat while the vehicle is in motion. Vehicle movement may cause the unlatched seat to suddenly shift, and may cause injuries.

Folding down the seats



H3818

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.

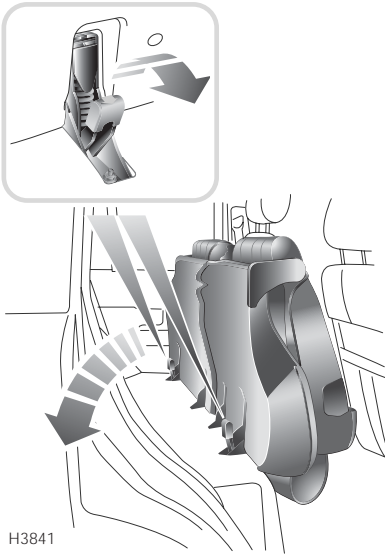
Seats

- To fold the whole assembly forward, lift the rear of the seat base upwards, the assembly can be folded forward as shown.

WARNING

It is extremely dangerous to ride in the cargo area. In a collision, people riding in this area are more likely to be injured or killed. Do not allow people to ride any area of your vehicle that is not equipped with seats and safety belts. Be sure that everyone in your vehicle is in a seat and using a safety belt properly.

Returning the seat to the upright position



H3841

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 panels on the release levers should be visible when the backrest is correctly latched).

WARNING

Ensure that when the seat back is raised the locking mechanism is fully engaged. Failure to do so can increase the risk of death or serious injury in the event of an accident or sudden manoeuvre or heavy braking.

Ensure that the head restraint is adjusted correctly for each passenger (the top of the head restraint should be level with the top of the head).

Seat Belts

SEAT BELTS

The use of front and rear seat belts is mandatory in most countries. Using seat belts saves lives. They should be worn by all occupants whenever the vehicle is in use, for maximum protection.

Lap/shoulder inertia reel seat belts are provided for both front seat occupants and all rear seat positions. The inertia reel operating mechanism of the seat belts, allow the wearers to move their upper bodies to reach various controls. The seat belt locks automatically with accelerated body movement or in the event of emergency braking.

The front seatbelts include a buckle sensor to detect when the buckle is latched.

The front seat belt assemblies are fitted with pre-tensioners. The pre-tensioners operate with the airbags as part of the Airbag Supplementary Restraint System (SRS). See **HOW THE AIRBAG SRS WORKS, 74**.

Seat belt warning indicator



Driver and front seat passenger Beltminder commences when the starter switch is turned to the second position and either the driver's or an occupied front passenger's seat belt is unbuckled.

The visual and audible warnings applicable to Beltminder, are market dependent to meet individual market requirements. The warning signals given may also change, depending on whether the vehicle is stationary or when the vehicle speed exceeds a pre-determined threshold. See **AUDIBLE WARNINGS, 113**.

Note: *Objects placed on the front passenger seat may activate the seat belt reminder warning chime and indicator. Any objects placed on the front passenger seat must be secured by use of the seat belt.*

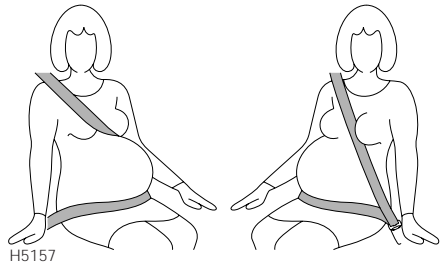


Although not advisable, it is possible to disable the Beltminder function. Please see a Land Rover Dealer/Authorised Repairer to disable or reinstate the function.

SEAT BELT USE DURING PREGNANCY

WARNING

Position the seat belt correctly for the safety of the mother and unborn child. Never wear just the lap strap and never sit on the lap strap while using just the shoulder strap. Both of these actions are extremely dangerous and may increase your risk of serious injury in the event of an accident or during emergency braking.



Position the lap strap comfortably across the hips, beneath the abdomen. Place the diagonal part of the seat belt between the breasts and to the side of the abdomen. Ensure that the seat belt is not slack or twisted.

WARNING

Never place anything between you and the seat belt in an attempt to cushion the impact in the event of an accident. It can be dangerous and reduce the effectiveness of the seat belt in preventing injury.

Seat Belts

SEAT BELT SAFETY

WARNING

Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water.

The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.

Belts should not be worn with the straps twisted.

Do not carry hard, fragile, or sharp items between your person and the seat belt. In an impact the pressure from the seat belt on such items can cause them to break, which in turn may cause death or serious injury.

Each belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

The occupants of the front seats should not travel with the seat back at more than 30 degrees from upright. Doing so will reduce the protection afforded by the seat belt.

WARNING

Seat belts should be worn by all vehicle occupants, for every journey no matter how short. Failure to do so will greatly increase the risk of death or serious injury in the event of an accident.

Never wear just the lap belt or just the shoulder belt of a lap/shoulder diagonal seat belt. Both of these actions are extremely dangerous and may increase your risk of injury.

No modifications or additions should be made which prevent the seat belt mechanism from taking up slack, or prevent the seat belt being adjusted to remove slack. A slack seat belt offers a greatly reduced level of occupant protection in an impact.

If any damage, wear, cuts, defects, or impaired operation are noted with the seat belts, the vehicle should be taken to your Dealer/Authorised Repairer for immediate attention. Do not use the vehicle if the seat belts cannot be operated correctly.

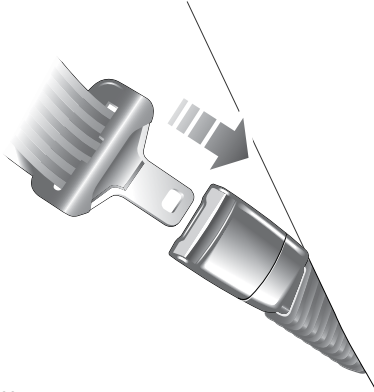
When using seat belts to restrain items other than occupants, take care to ensure that the belts are not damaged or exposed to sharp edges.

Care must be taken to avoid contaminating the seat belt webbing, and seat belt mechanisms with any chemicals, liquids, grit, dirt or cleaning products. If the seat belts do become contaminated they should be replaced immediately. Contaminated seat belts may not operate correctly in an impact and cannot be relied upon.

Seat Belts

FRONT SEAT BELTS

Fastening the seat belts



H3900

1. Draw the belt out smoothly, ensuring that the belt height, the seat position and your position on the seat are correct. The belt should lay flat across the pelvis, chest and mid-point of the collar bone between the neck and shoulder.
2. With the belt correctly positioned, place the metal tongue into the buckle nearest to you. Press it in until a click is heard.

WARNING

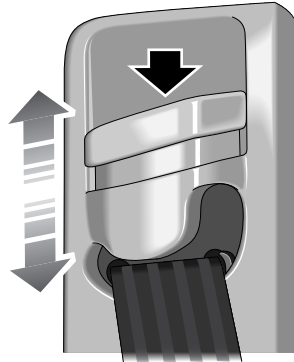
Never wear just the lap strap of a lap/shoulder diagonal seat belt and never sit on the lap strap using just the shoulder strap. Both of these actions are extremely dangerous and may increase your risk of serious injury.

Releasing the belt

Note: When releasing the belt it is advisable to hold it near the buckle before pressing the release button. This will prevent the belt from retracting too quickly.

To release the seat belt, press the red button.

Upper anchorage adjustment



H3803

The height of the seat belt upper anchorage can be adjusted for comfort and safety on both front 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, 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.

WARNING

Correct seat belt adjustment is essential for safety and comfort. Ensure that the height is correctly adjusted and the mechanism is locked in place before driving the vehicle. Do not attempt to adjust the seat belt height once the vehicle is in motion. Doing so may cause you to lose control of the vehicle, or incorrectly adjust the seat belt.

Seat Belts

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, 74**. 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 indicator on the instrument pack 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 be activated in major side and frontal impacts and in roll-overs.*

WARNING

The seat belt pre-tensioners will only be activated once and then must be replaced by a Land Rover Dealer/Authorised Repairer. Failure to replace the pre-tensioners will reduce the efficiency of the vehicle's front restraint systems.

After any impact, always have the seat belts and pre-tensioners checked and, if necessary, replaced by a Land Rover Dealer/Authorised Repairer.

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/Authorised Repairer.

SEAT BELT LOCKING MECHANISM

All passenger seat belts have a special locking mechanism which aids the securing of child restraints. The mechanism is used to secure a child restraint as follows:

1. Attach the seat belt to the child restraint, in accordance with the manufacturer's instructions.
2. Insert the metal tongue of the seat belt into the lock, ensuring that it engages with a click.
3. Pull on the shoulder section of the belt until it is fully extended.
4. Allow the belt to retract. A clicking sound will confirm that the mechanism has engaged.
5. Remove all slack from the mechanism, by pulling upwards on the shoulder belt, immediately above the child restraint.
6. Evaluate the tightness of the installation, by rocking the child seat back and forth to ensure it is tight and stable.
7. If the child seat needs to be tightened further, remove the metal tongue of the seat belt from the buckle and feed some of the shoulder belt webbing back into the reel (thereby shortening the belt). Then, re-attach the metal tongue into the buckle (if the belt has been tightened correctly, this will take some effort).
8. Re-evaluate the tightness of the installation. If the child seat is still too loose, repeat the above procedure, making the belt incrementally shorter (and therefore tighter). It may be necessary to put your weight onto the seat (to compress the seat cushion), in order to fasten the belt.

To deactivate the locking mechanism, unlatch the seat belt and allow it to fully retract.

Seat Belts

CARING FOR SEAT BELTS

The seat belts should be inspected regularly to check for fraying, cuts, wear to the webbing and the condition and security of the mechanism, buckles, adjusters and mounting points.

Do not bleach or dye the webbing and avoid contaminating the webbing with polish, oil or chemicals. See **CLEANING THE INTERIOR, 258**.

Seat belt checks

- 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 seat belt to the limit of its travel. Check that it unreels smoothly with no snatches or snags. Allow the belt to fully retract, again checking for smooth operation.
- Partially unreel the seat belt, then hold the tongue plate and give a quick forward pull. The mechanism must lock and prevent any further unreeling.

If any of the seat belts fail to meet those criteria, immediately contact your Dealer/Authorised Repairer.

Note: *If the vehicle is parked on an incline, the seat belt mechanism may lock. This is not a fault and the belt should be gently eased out from the upper anchorage.*

WARNING

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

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.

In addition, always contact your Land Rover Dealer/Authorised Repairer 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.

Child Restraints

CHILD SAFETY SEATS

WARNING

Do not use a child restraint on a seat with an operational airbag in front of it. There is a risk of death or serious injury when the airbag deploys.

Crash statistics show that children are safest when properly restrained in a child or infant restraint system that is secured in a rear seating position.

Do not use a forward facing child seat until the child using it is above the minimum weight of 9 kg (20 lb.) and able to sit up unaided. Up to the age of 18 months, a child's spine and neck are not sufficiently developed to avoid injury in a frontal impact.

Do not allow a baby or infant to be held or carried on the lap. The force of a crash can increase effective body weight by as much as thirty times, making it impossible to hold onto the child. Children typically require the use of a booster seat appropriate to their age and size, thereby enabling the seat belts to be properly fitted, reducing the risk of injury in a crash. Children could be endangered in a crash if their child restraints are not properly secured in the vehicle.

Do not use a child seat that hooks over the seat back. This type of seat cannot be satisfactorily secured and is unlikely to be safe for your child.

The seat belts fitted to your vehicle are designed for adults and larger children. It is very important for all infants and children under 12 years of age to be restrained in a suitable child safety seat appropriate to their age and size.

Only fit a child safety seat of a type approved for the specific seating positions in your vehicle (see table), and ensure the seat manufacturer's fitting instructions are followed exactly.

For optimum safety, children should travel in the rear of the vehicle at all times, front passenger seat travel is not recommended. However, if it is essential that a child travel in the front, set the seat fully rearward.

Note: *In some countries legislation prohibits children travelling in the front of a vehicle. Ensure that you are familiar with the legislation in force where the vehicle is being used and are in full compliance.*

Holding a baby or child in a person's arms is not a substitute for a child restraint system.

In an accident, a baby or a child held in a person's arms can be crushed between the vehicle's interior and a restrained person.



This symbol is affixed to the end of the fascia on the passenger side. Its purpose is to warn against the use of a rear facing child seat when the front passenger airbag is fitted and operational.

WARNING

Original text according to ECE R94.01.

Extreme Hazard! Do not use a rearward facing child restraint on a seat protected by an airbag in front of it!

Child Restraints

Child safety seating and positions (Europe only)

Note:

The information contained in the following table may not be applicable to all countries. If you are in any doubt regarding the type and fitment of child seats seek advice from a qualified source.

The following table shows the suitability of each passenger seat position for the carriage of children up to 12 years of age or 1.5 metres (5 feet) tall and the installation of suitable child restraint systems.

Mass Group As indicated on child restraint packaging.	Seating Positions		
	Front Passenger	Rear Outboard	Rear Centre
0 = Up to 10 kg (22.05 lb) (0-9 months)	U [†]	U	X
0+ = Up to 13 kg (28.66 lb) (0-18 months)	U [†]	U	X
I = 9 to 18 kg (20 to 40 lb) (9 months - 4 years)	UF	U	X
II III = 15 to 36 kg (33 to 79 lb) (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. † = Never install a child restraint, approved for this mass group, in the front passenger seating position, unless the airbag has been disabled. See PASSENGER AIRBAG DISABLING SWITCH, 78 .			

Caution: Information given in the table is correct at the time of going to press. However, availability of child restraints may change. Please refer to your Land Rover Dealer/Authorised Repairer for the latest recommendation.

Note: The legislation which governs how and where children should be carried when travelling in a vehicle is subject to change. It is the responsibility of the driver to comply with all regulations in force.

Booster seats

In a situation where a child is too large to fit into a child safety seat but is still too small to safely use just the three point belt, a booster seat is recommended for maximum safety. Follow the manufacturer's instructions for fitting and use, and then adjust the seat belt to suit.

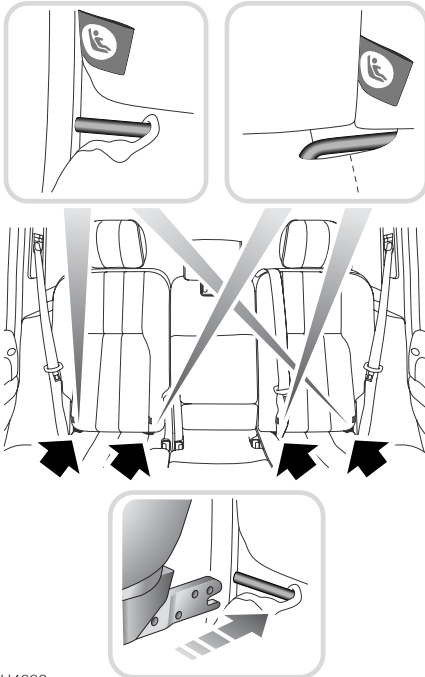
Child Restraints

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.



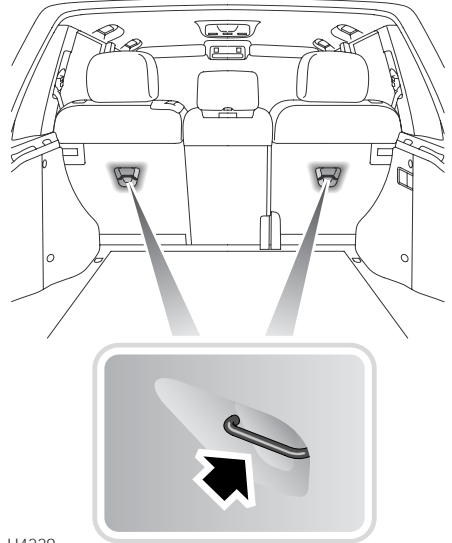
This symbol on the label sewn into the seats indicates the location of the ISOFIX lower anchorages.



H4228

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

Two lower (first illustration) and one upper tether anchorages (second illustration) are provided at each seating position equipped to accept Isofix child restraints.



H4229

Note: Always ensure that if an upper tether is provided, it is fitted and tightened correctly.

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.

If removing a head restraint in order to fit a child restraint, always secure the head restraint when storing it. If left loose in the vehicle it may cause death or serious injury during sudden braking or an impact.

Child Restraints

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 first illustration on previous page), enable the ISOFIX restraints to be securely attached to the vehicle seat in these positions only.

In addition, two tether anchor bars are fitted to the back of the rear seats (see second illustration on previous page), 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.

Note:

The information contained in the following table may not be applicable to all countries. If you are in any doubt regarding the type and fitment of child seats seek advice from your Dealer/Authorised Repairer.

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.

Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts, harnesses or for attaching other items or equipment to the vehicle.

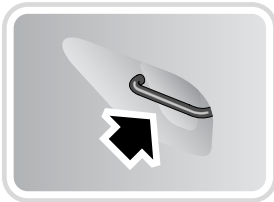
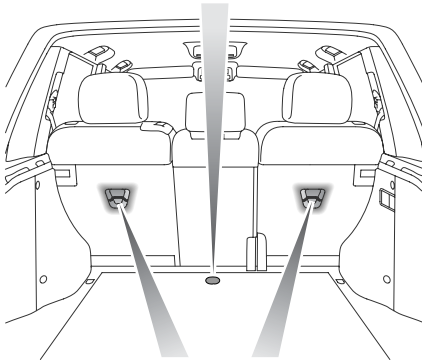
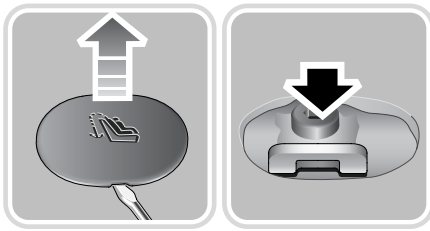
Mass Group As indicated on child safety seat packaging.	Seating Positions		
	Front Passenger	Rear Outboard	Rear Centre
0 = Up to 10 kg (22.05 lb) (0-9 months)	X	ISO	X
I = 9 to 18 kg (20 to 40 lb) (9 months - 4 years)	X	ISO	X
ISO = Suitable for ISOFIX category restraints approved for this mass group. X = Seat position not suitable for ISOFIX category restraints. Group 0 - Britax Cosy-Tot Isofix/Römer Babysafe Isofix child safety seat. Group I - Britax/Römer Duo Plus Isofix child safety seat.			

Child Restraints

TETHER STRAP ANCHORAGES (Australia only)

WARNING

Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts, harnesses or for attaching other items or equipment to the vehicle.



H4621

Provision is made in the rear seats for the fitting of up to three child seats, of the type that requires tether strap anchorage points.

There are three tether strap anchorage points. These should be used to attach tether straps from child seats or restraint systems.

Two anchorage points are fitted to the back of the second row seat, these should be used for the two outer seating positions.

A third, single anchorage point is located in the floor panel behind the centre rear seat, for attaching a tether strap from the centre seat position.

Using a small flat-bladed screwdriver, remove the circular cover to reveal the child seat anchorage point (see left inset).

Child Restraints

Attaching tether straps

1. Install the child restraint securely in one of the rear seating positions.
2. Pass the tether strap over the back of the vehicle seat and under the head restraint.
3. Attach the tether strap hook to the tether anchor on the back of the vehicle seat. Ensure that the tether strap hook is facing the correct direction. See illustration.
4. Tighten the tether strap according to the manufacturer's instructions to remove any slack in the webbing.

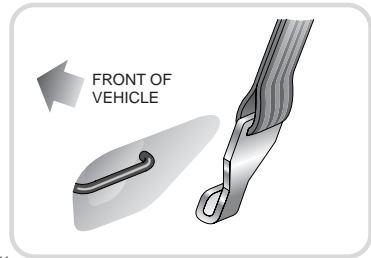
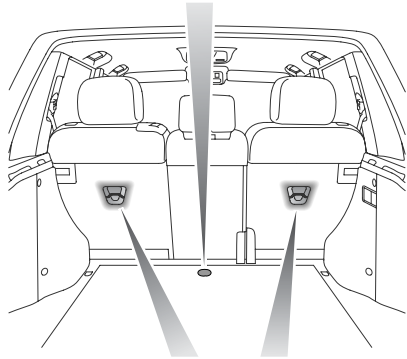
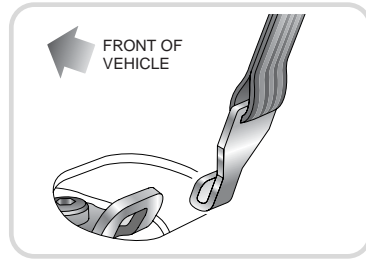
WARNING

Always follow the child seat or restraint system manufacturer's instructions when fitting tether straps.

When fitting a child seat or restraint system, always pass the tether strap over the top of the seat back and under the head restraint.

If a child seat or restraint system is to be fitted to the centre seating position, the centre armrest must be in the stowed position (folded into the seat).

Note: A tether anchorage is provided for the centre seat position. Do not use this anchor position with an ISOFIX child seat.



H6702K

Child Restraints

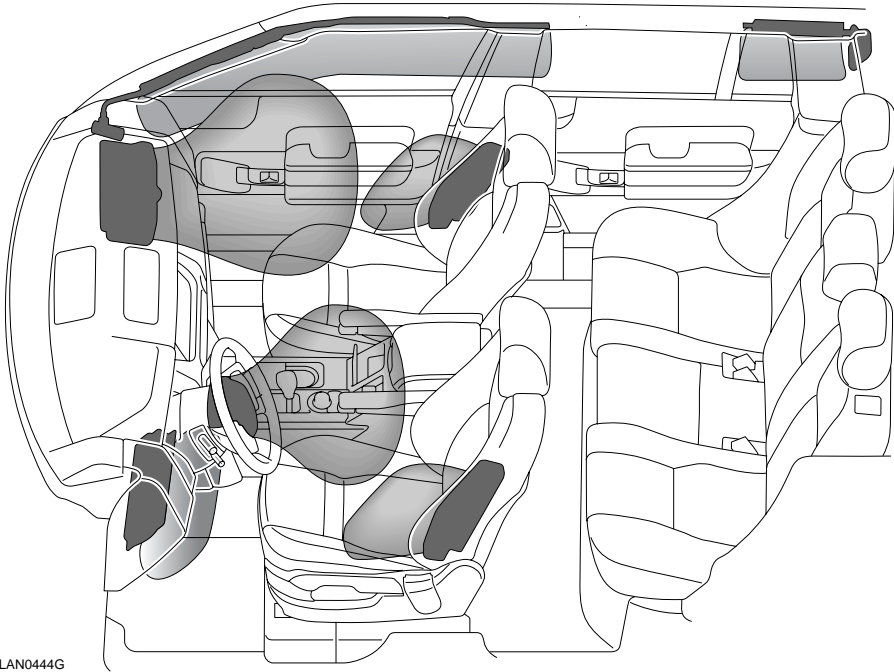
CHILD RESTRAINT CHECK LISTS

Every time a child travels in the vehicle observe the following:

- Always use the appropriate child restraints and adjust harnesses for every child, every trip.
- Make sure that a child falls into the correct weight range for the seat.
- Carefully follow the instructions provided by the manufacturer of the restraint system.
- Ensure that all slack is removed from the adult seatbelt.
- When installing an ISOFIX seat, always attach the top tether. Always give the ISOFIX seat a final pull to ensure that the lower anchors are secure.
- Regularly check the fit of a child seat and replace seats or harnesses that show signs of wear.
- Avoid dressing a child in bulky clothing and do not place any objects between the child and the restraint system.
- No child seat is completely child-proof. Encourage a child not to play with the buckle or harness.
- Never leave a child unsupervised in the vehicle.
- Activate the rear door child safety locks. See **CHILD-PROOF LOCKS, 46**.
- Ensure that a child does not exit the vehicle from the side where there is traffic.
- Set a good example - always wear your seat belt.

Airbags

INTRODUCTION



LAN0444G

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. To reduce the risk of severe injury or death in the event of a crash, all occupants in all seating positions, including the driver, should always wear their seat belt, whether or not an airbag is present at that seating position.

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.

WARNING

Ensure that a gap is maintained between the side of the vehicle and the head and torso, to enable unobstructed inflation of the head and seat-mounted side airbags.

Do not lean out of the window.

The airbag supplementary restraint system (SRS) incorporates a knee-bolster airbag for the driver, front airbags, seat-mounted side airbags and head airbags for the front seat occupants, and head airbags for the outer rear passengers (see illustration for airbag locations). These are indicated by the word **AIRBAG** on the trim.

Airbags

Provided the occupants are correctly seated, with seat belts properly worn; in the event of a severe frontal impact, the airbags will provide additional protection to the legs, chest and face of the driver and the chest and face of the front seat passenger.

In the event of a severe side collision, airbags provide additional protection to the side of the head and body facing the impact for front seat occupants and to the side of the head facing the impact for outer rear seat occupants.

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

Airbag SRS warning indicator



A warning indicator in the instrument panel will alert you to any malfunction of the airbag SRS.

The airbag SRS should always be checked by a Land Rover Dealer/Authorised Repairer if any of the following symptoms occur:

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

WARNING

If the warning indicator signals that a fault is present in the system, do not use a child restraint on the front passenger seat. Doing so will increase the risk of death or serious injury to the child.

When the starter switch is turned to the second position, the diagnostic control unit monitors the readiness of the system's electrical circuits.

Airbags

HOW THE AIRBAG SRS WORKS

In the event of a collision, the airbag control unit monitors the rate of deceleration caused by the collision. This information is then used to determine whether airbags should be deployed.

Airbag deployment is dependent on the rate at which the passenger compartment changes speed following the collision. The circumstances affecting different collisions (vehicle speed, angle of impact, type and size of object hit, etc) vary considerably, and will affect the rate of deceleration accordingly.

The Supplementary Restraint System (SRS) components include

- SRS warning light.
- Rotary coupler.
- Airbag modules.
- Seat belt pre-tensioners.
- Airbag diagnostic control unit.
- Crash sensors.
- Airbag wiring harnesses.
- Seat occupancy sensor.

Note: The airbag SRS is not designed to operate as a result of:

- Rear impacts.
- Minor front impacts.
- Minor side Impacts.
- Roll-over accidents.
- Heavy braking.
- Driving over bumps and pot holes.

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.

WARNING

High speed impacts may cause serious injury or death irrespective of safety features fitted to a vehicle. Always drive with caution and consideration for the vehicle's characteristics, road and weather conditions, and do not exceed any speed limits in force.

Seat belts should be worn at all times, by the driver and passengers in all seating positions. The airbag SRS cannot provide protection in some types of impact. Under these circumstances the only protection will be provided by a correctly worn seat belt.

Airbags inflate at high speeds, and can cause injuries. To minimise the risk of injury, ensure that all vehicle occupants wear correctly positioned seat belts, sit correctly in the seats, and position the seats as far back as practical.

Ensure that a gap is maintained between the side of the vehicle, and the head and torso. This will enable unobstructed inflation of the curtain, and seat mounted side airbags.

Airbags

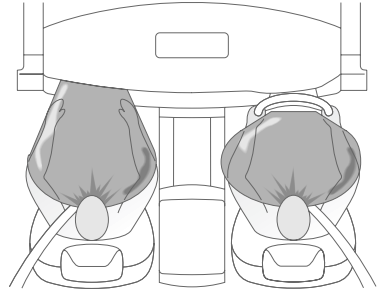
Airbag inflation takes place instantaneously and cannot protect against the effects of secondary impacts. Under these circumstances the only protection will be provided by a correctly worn seat belt.

Phone systems should only be installed by qualified persons familiar with the operation of, and requirements for, vehicles fitted with SRS. If you are in any doubt, seek advice from your Dealer/Authorised Repairer.

For the airbags to operate correctly the roof lining and door post trims must be in good condition, correctly fitted, and free from obstruction. Any damage, wear or incorrect fitment should be referred to your Dealer/Authorised repairer as soon as possible for examination and repair.

Do not allow passengers to obstruct the operation of the airbags by placing any part of their person, or any objects, in contact with, or close to, an airbag module. Airbags deploy at very high speeds and can cause death or serious injury if objects or occupants are within the area of deployment.

Front airbag deployment



H3985

Depending on the severity of the frontal collision, the unit will deploy the front airbags in two stages:

- In a moderately severe frontal impact, the airbags inflate sufficiently to protect the front seat passengers and reduce the risk of injury.
- In a severe frontal impact, the airbags will fully inflate thereby providing maximum protection.

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.

In the case of a severe frontal collision, both front airbags and the driver's knee bolster airbag will be deployed. In the case of a severe side collision, only the side and head airbags on the impacted side of the vehicle will inflate.

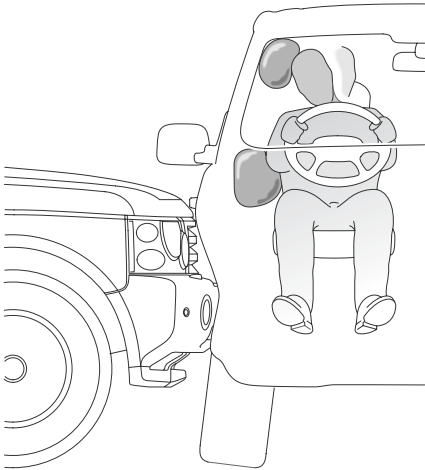
However, there may also be impact conditions whereby one set of side and all front airbags deploy at the same time, or where front and side airbags respond separately as a result of a secondary impact occurring after the initial collision has taken place.

Airbags

Seat-mounted side airbags

WARNING

Ensure that a gap is maintained between the side of the vehicle and the head and torso, to enable unobstructed inflation of the head and seat-mounted side airbags.



H6684R

Side airbags are designed to protect the side of the body 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 side of the seat-back, 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.

Head airbags

WARNING

For the head airbags to deploy correctly, the roof lining and A post trim must be undamaged and fitted correctly. Any damage or suspect fitting should be referred to a Land Rover Dealer/Authorised Repairer for examination.

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

Deployment effects

WARNING

When an airbag inflates, a fine powder is released. This is normal and not an indication of a malfunction. However, the powder may cause irritation to the skin and should be thoroughly flushed from eyes and any cuts or abrasions.

The fine powder may cause breathing difficulties for asthma sufferers or other people with respiratory problems. If an airbag is activated, any occupant who suffers from breathing difficulties should; either leave the vehicle as quickly as possible, or obtain fresh air by fully opening the windows or doors.

After inflation some airbag components are at high temperatures. To prevent injury, do not touch the airbag components until they have cooled.

Airbags

In order to react with sufficient speed, airbags are deployed by an explosive charge. Consequently airbag deployment is accompanied by a very loud noise which may cause discomfort and temporary loss of hearing.

Even with airbag SRS equipment fitted, seat belts must always be worn because:

- An airbag will only provide additional protection in certain types of frontal or side collisions. No protection is afforded against the effects of rear impacts, or minor frontal impacts.
- Inflation and deflation take place instantaneously and will not provide protection against the effects of secondary impacts that can occur during multiple vehicle collisions.

After inflation, front and side airbags deflate immediately (head airbags deflate slowly). This provides a gradual cushioning effect for the occupant and also ensures that the driver's forward vision is not obscured.

Disability modifications

Occupants with disabilities that may require the vehicle to be modified must contact a Land Rover Dealer/Authorised Repairer before any modifications are made.

Obstruction of airbags

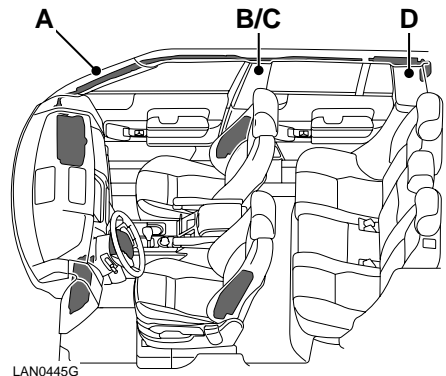
WARNING

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 (including accessory items) on or in close proximity to any airbag module, these could interfere with the inflation of the airbag or, if the airbag inflates, be propelled inside the vehicle causing injury to the occupants.

Never place your arm over an airbag cover as a deploying airbag can cause serious fractures or other injuries.

The front passenger's seating position is equipped with a knee bolster, to provide knee protection in the event of an impact. Do not modify the bolster, or mount after-market equipment on or behind it.



LAN0445G

Note: The illustration shows the location of the airbags relative to the A, B/C and D posts.

Airbags

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, A and B/C post finishers, the front seat backrests and the lower fascia on the driver's side.
- 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 seat-mounted side airbag.
- Items of clothing hanging from the grab handle attached to the roof.
- Items of clothing or cushions, draped over the part of the front seat containing the airbag.
- Non-approved seat covers/accessory seat covers over a front seat; in particular, seat covers that have not been designed for use with seat-mounted side airbags. If in doubt, consult your Land Rover Dealer/Authorised Retailer.

Caution: If a non-approved phone system is to be fitted, ensure that the installer is aware of the SRS system.

Note: Unauthorised modification of the vehicle or parts may invalidate the vehicle's warranty.

PASSENGER AIRBAG DISABLING SWITCH

Note: The passenger airbag should be disabled only when a rearward facing child restraint is fitted to the front passenger seat.



If it becomes necessary to fit a child restraint on the front passenger seat, the airbag must be disabled using the switch located on the end of the instrument panel, on the passenger's side. Access to the switch can only be obtained with the passenger's door open.

This switch is operated using the starter key.

When using a child restraint in the front, make sure that the switch is turned to the OFF position.

Airbags

WARNING

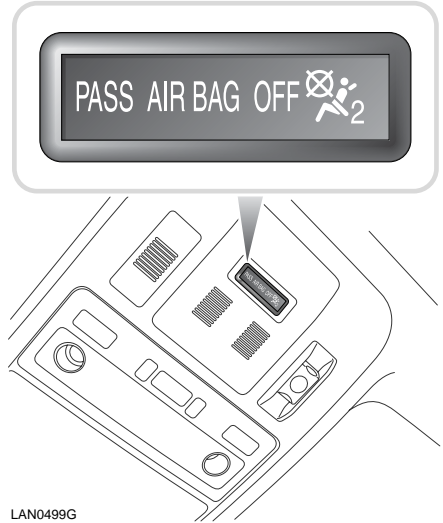
Crash test data and statistics show that the safest place for a child to be restrained is in a child seat correctly fitted to the vehicle's rear seat.

Do not use a child restraint on a seat protected by an operational airbag in front of it. Doing so presents a high risk of death or serious injury to the child in the event of an accident.

Do not fit a child restraint to the front passenger seat if the SRS warning light illuminates continuously with the ignition on.

As soon as a child seat is removed from the front passenger seat the airbag must be turned on. Failure to do so will put a front seat passenger at greater risk of death or serious injury in the event of a frontal impact.

Operational status indicator



LAN0499G

The passenger airbag operational status indicator, located in the overhead control panel, illuminates when the passenger airbag disabling switch has been turned to the **OFF** position, to disable the passenger airbag.

After the airbag has been disabled, the indicator does not illuminate until the starter switch has been turned to the second position.

WARNING

When checking the operational status of the front passenger airbag, ensure that the ignition is switched on.

Airbags

Airbag switched off



H6037G

In order to fit a child restraint to the front passenger seat, use the starter key to turn the airbag disabling switch to the **OFF** position.

Check that when the starter switch is turned to the second position, the operational status indicator on the overhead control panel is illuminated, indicating that the passenger airbag is not operational.

If the airbag SRS warning indicator in the instrument cluster illuminates continuously, it means that there is a malfunction of the system. See **Warning Indicators, 109**. Remove the child restraint from the front seat and consult your Land Rover Dealer/Authorised Repairer.

WARNING

When checking the status of the airbag using the operational status indicator, always ensure that the starter key is in the second position.

To avoid the risk of injury, never use a child restraint in the front of the vehicle, unless the passenger airbag has been switched off.

Airbag switched on



H6038G

When an adult is seated in the front passenger seat of your vehicle, ensure that the airbag disabling switch is turned to the **ON** position.

This will ensure that the airbag will perform as intended in the event of a crash.

Check that when the starter switch is turned to the second position, the operational status indicator on the overhead control panel is not illuminated, indicating that the passenger airbag is operational.

WARNING

To ensure that the adult restraint system performs as intended, make sure that the passenger airbag is switched on.

The safest place in your vehicle for a child, is in a rear seating position.

Airbags

SERVICE INFORMATION

WARNING

Do not attempt to service, repair, replace, modify, or tamper with, any part of the SRS. This includes wiring or components in the vicinity of SRS components. Doing so may cause the system to trigger, or render the system inoperative, either of which may result in death or serious injury.

Do not use any electrical test equipment or devices in the vicinity of SRS components or wiring. Doing so may cause the system to trigger, or render the system inoperative, either of which may result in death or serious injury.

Any notable damage to SRS components or covers, e.g. tears, burns, holes, chemical/detergent damage or previous accidental damage, etc., however produced, may cause the SRS module(s) to fail. Ensure that any damaged components are repaired or replaced by a Land Rover Dealer/Authorised Repairer.

Always contact your Land Rover Dealer/Authorised Repairer 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.

Caution: 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.

WARNING

For your safety it is recommended that you seek the assistance of a Land Rover Dealer/Authorised Repairer 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, front seats, roof lining, instrument and facia 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.

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.

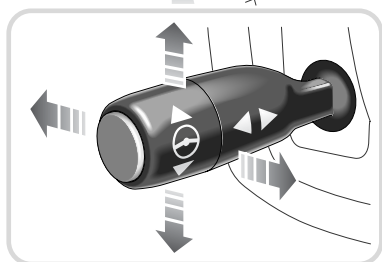
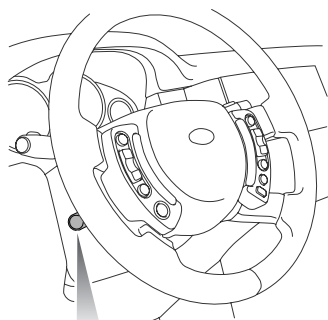
Steering Column

STEERING WHEEL ADJUSTMENT

WARNING

Never adjust the steering wheel position whilst the vehicle is in motion. Doing so will reduce control of the vehicle, and may cause unpredictable steering movements.

After adjusting the steering wheel position, ensure that the locking lever is returned to the fully up position. Failure to do so will reduce control of the vehicle and may cause unpredictable steering movements.



LAN1128

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 can be 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.

Note: Up to three different sets of steering column positions can be stored and recalled. See **DRIVER'S SEAT MEMORY FACILITY, 54**.

When the starter switch is turned off, the steering column will move up to its highest position. This gives greater room for movement when exiting and entering the vehicle.

If the steering column is subsequently adjusted, you can store the new position along with your current seat and mirror positions, in place of your previously stored settings.

1. Press the memory store button (M) on the side of the seat switch pack.
2. Within seven seconds, press the memory pre-set button (1, 2 or 3), corresponding to your current seating position.

The new settings are now stored on the chosen memory pre-set button.

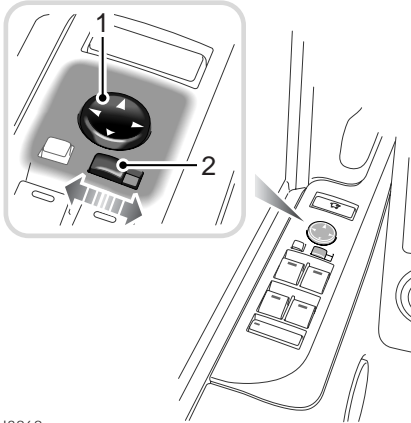
See **DRIVER'S SEAT MEMORY FACILITY, 54**.

Door Mirrors

EXTERIOR MIRRORS

Caution: 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 the second position, 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 the second position, depending on external temperature.

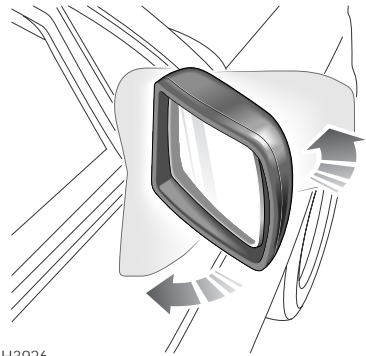
Note: Up to three different sets of exterior mirror positions can be stored and recalled. See **DRIVER'S SEAT MEMORY FACILITY, 54**.

If the mirrors are subsequently adjusted, you can store the new positions along with your current seat and steering column positions, in place of your previously stored settings.

1. Press the memory store button (M) on the side of the seat switch pack.
2. Within seven seconds, press the memory pre-set button (1, 2 or 3), corresponding to your current seating position.

The new settings are now stored on the chosen memory pre-set button.

Folding the mirror body

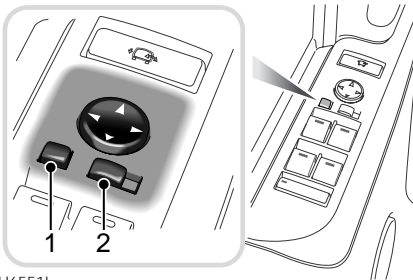
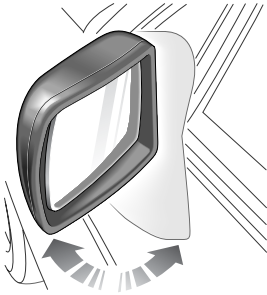


H3926

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.

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



H6551L

Electric operation: Press the mirror-fold button (1) once to fold the mirrors into the side windows. Press again to return the mirrors to the driving position.

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.

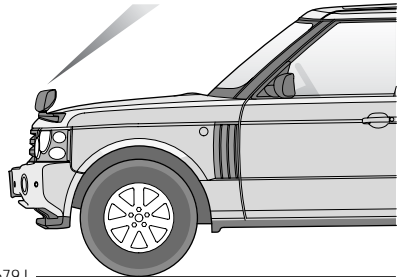
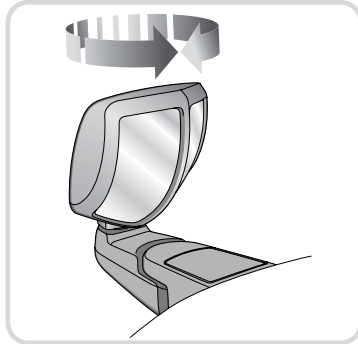
Automatic mirror dipping

The driver's seat memory has a pre-stored function, which causes the nearside mirror to dip whenever reverse gear is selected, giving the driver a view of the kerbside. This facility is only available if the mirror select button (2), is set to the driver's side.

Automatic dimming

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

PROXIMITY MIRROR (Japan only)



H6679J

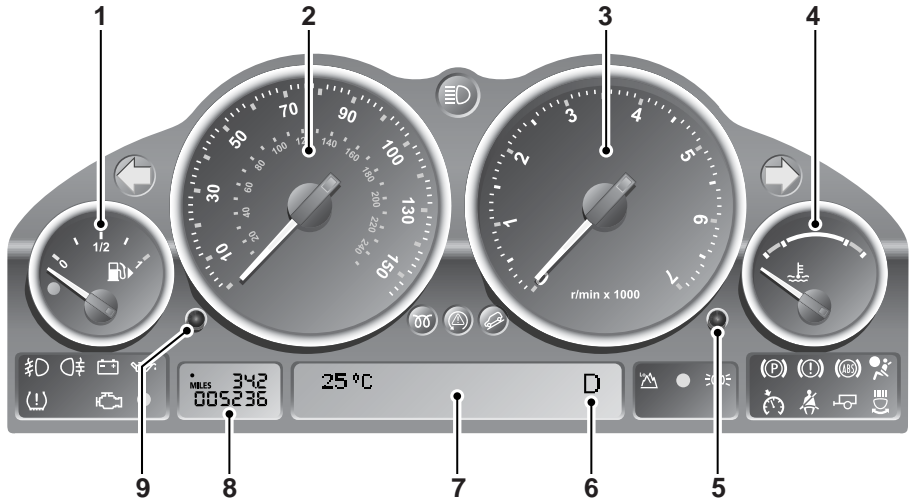
The proximity mirror has a split lens, providing views along the left side and immediately ahead of the vehicle. Correct adjustment of the mirror will reduce blind spots.

Adjust the mirror by rotating the head to the left or right. The mirror should be adjusted a few degrees at a time and the view checked from the driver's seat, before making further adjustments.

Note: Alignment marks on the mirror head and arm indicate the initial position the mirror was set to during manufacture.

Instruments

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 the second position.

When the fuel remaining in the tank is a minimum of 12 litres (3 gallons) on petrol vehicles, or 16 litres (3.5 gallons) on diesel vehicles, the Amber low fuel warning indicator in the fuel gauge illuminates. If the indicator 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.

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

2. Speedometer

Indicates road speed in miles and/or 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.

Instruments

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 message **COOLANT TEMPERATURE** is displayed, 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 allow the engine to idle until the pointer returns to the normal operating position. If the problem persists, seek qualified assistance before continuing.

5. Check control button

At first press, the message **CHECK CONTROL OK** appears if there are no current messages. If there are current messages, these will scroll through with each press of the button.

6. Gear selector position display

This shows the current gear lever position. See **GEAR SELECTOR DISPLAY, 108**.

7. Main message centre

Displays all warning and information messages submitted by the vehicle systems. See **MAIN MESSAGE CENTRE, 97**.

8. Trip distance recorder

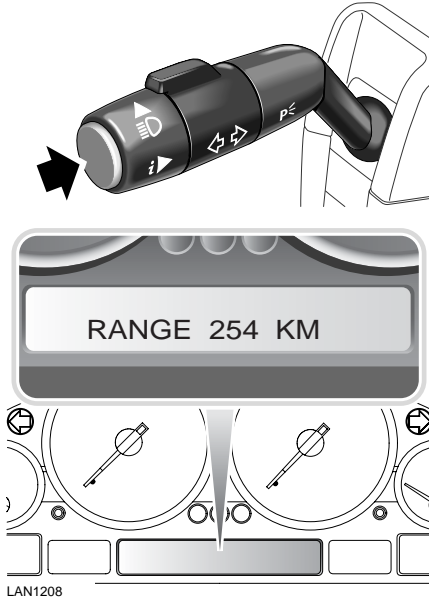
Displays the total distance travelled by the vehicle, and also shows the most recent individual journey distance. See **TRIP/DISTANCE RECORDER, 108**.

9. Reset button

Resets the trip/distance recorder display. See **TRIP/DISTANCE RECORDER, 108**.

Trip Computer

TRIP COMPUTER - FUNCTION SELECTION



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 the second position, 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:

- Speed limit.
- Distance (to destination).
- Range (distance to empty).
- Estimated time of arrival.
- Date.
- The current time.
- Fuel consumption 1.
- Fuel consumption 2.
- Average speed.

Note: Distance (to destination) and estimated time of arrival are only available on the trip computer if Navigation is not fitted.

The driver has the option to select which of the above functions are displayed and also in which order.

On Board Computer (OBC)

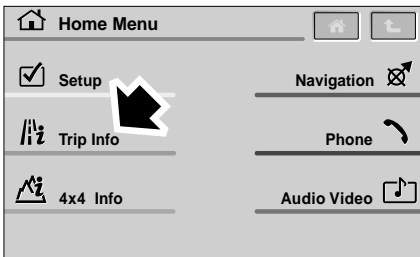
ON BOARD COMPUTER

The On Board Computer (OBC) settings are made using the Infotainment touch screen. However, the functions are accessed via the button on the end of the lights and indicator stalk and the feedback is displayed via the message centre on the instrument pack.

COMPUTER SETTINGS



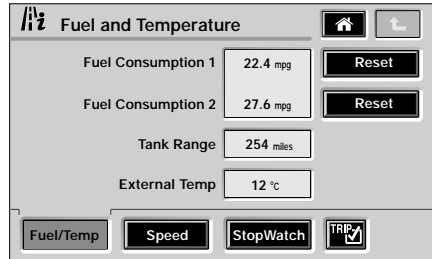
LAN1116



LAN1117 ENG

To access the OBC settings menu, either press the **On Road Info** button, or touch the **On Road Info** icon.

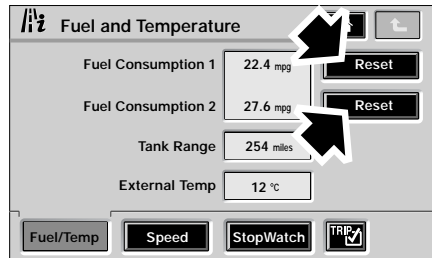
Main settings screen



ICE1801 ENG

The main OBC settings screen is displayed and offers four groups of settings, via the icons at the bottom of the screen.

Fuel and temperature settings



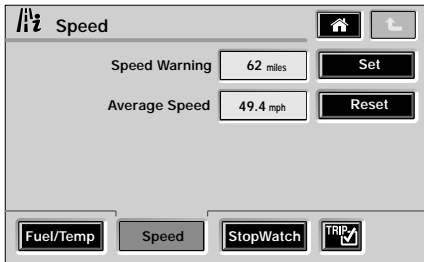
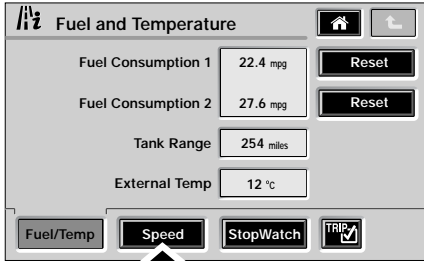
ICE1802 ENG

To reset the average fuel consumption figures prior to starting a new journey, touch the **Reset** icon for either, or both, fuel consumption displays.

Note: The figures for Tank Range and External Temperature are not user set, and will give a current status reading.

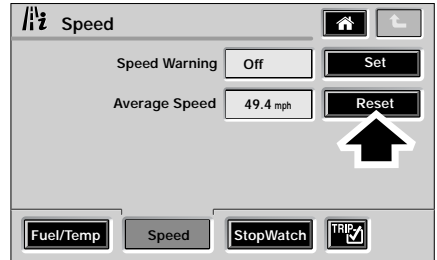
On Board Computer (OBC)

Speed settings (with navigation)



ICE1803 ENG

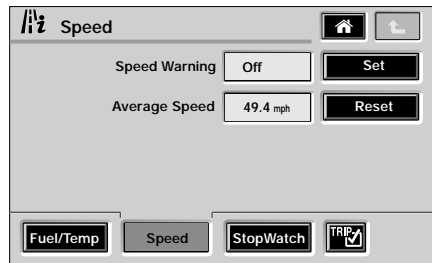
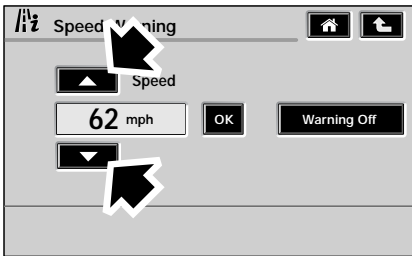
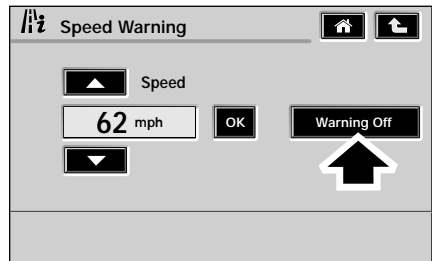
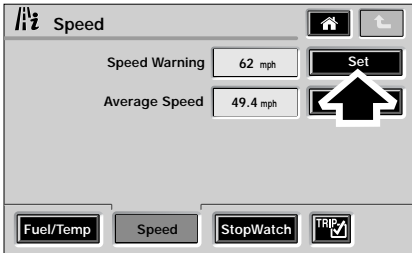
From the main OBC settings screen, touch the **Speed** icon.



ICE1806 ENG

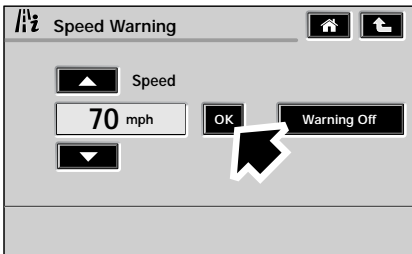
To reset the average speed (the current reading will be from a previous journey), touch the **Reset** icon.

On Board Computer (OBC)



ICE2361 ENG

To turn the speed warning feature off, touch the **Warning Off** icon.

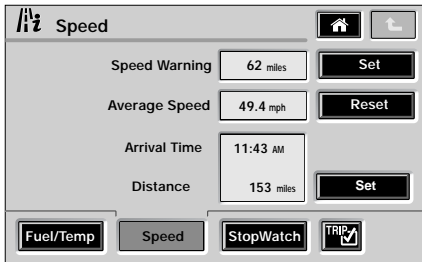
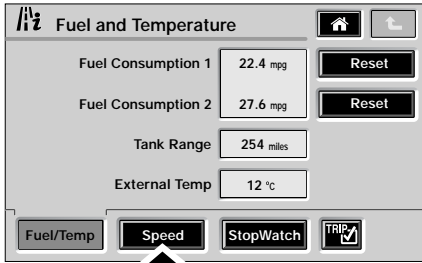


ICE2360 ENG

To adjust the speed at which the warning chime is heard, use the up and down arrows. Once the display shows the correct speed, touch the **OK** icon to accept the changes and turn on the speed warning feature.

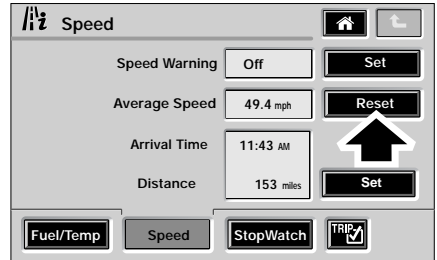
On Board Computer (OBC)

Speed settings (without navigation)



ICE1940 ENG

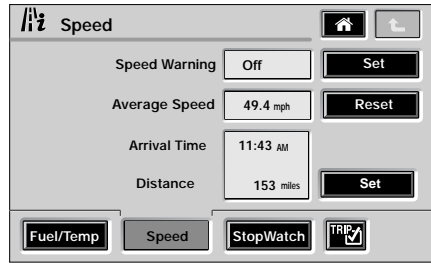
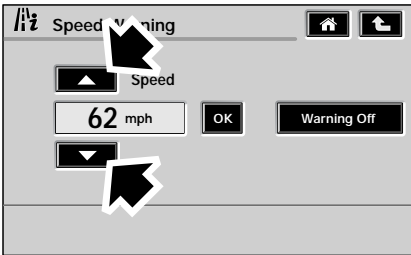
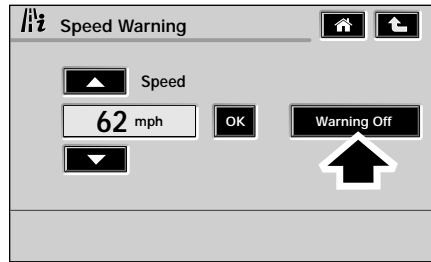
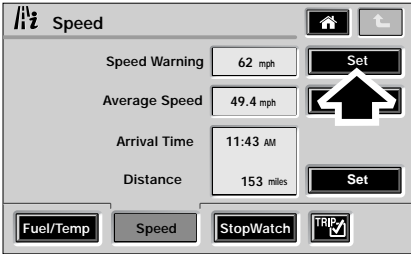
From the main OBC settings screen, touch the **Speed** icon.



ICE1943 ENG

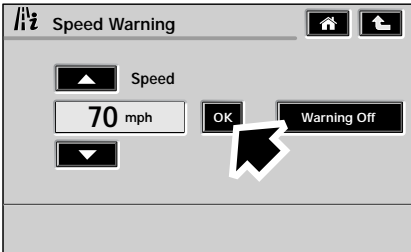
To reset the average speed (the current reading will be from a previous journey), touch the **Reset** icon.

On Board Computer (OBC)



ICE2367 ENG

To turn the speed warning feature off, touch the **Warning Off** icon.

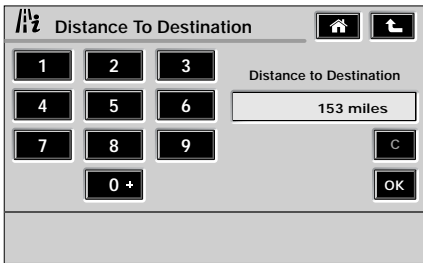
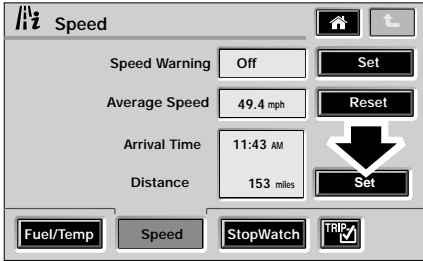


ICE2366 ENG

To adjust the speed warning (the speed at which the warning chime is heard), use the up and down arrows to set the desired speed. Once the display shows the correct speed, touch the **OK** icon to accept the changes and turn on the speed warning feature.

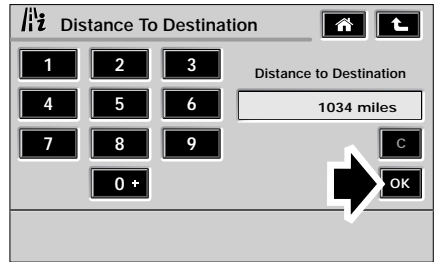
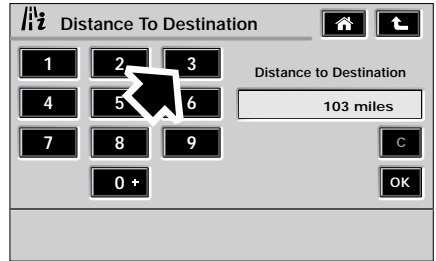
On Board Computer (OBC)

Distance to destination (without navigation)



ICE1946 ENG

To set distance, press the **Set** icon alongside the Distance entry, which takes you to the Distance To Destination screen.

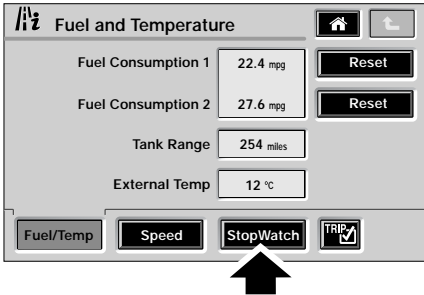


ICE1947 ENG

On the Distance To Destination screen, press the **C** icon to backspace/clear the existing distance. Enter the new distance to destination by pressing the number icons. Press the **OK** icon to set the value entered and return to previous screen.

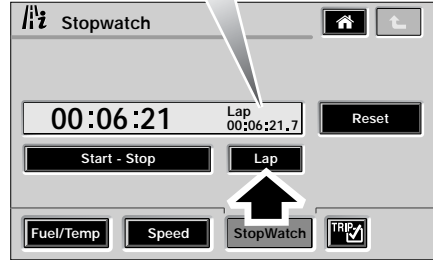
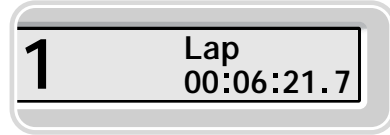
On Board Computer (OBC)

Stopwatch settings



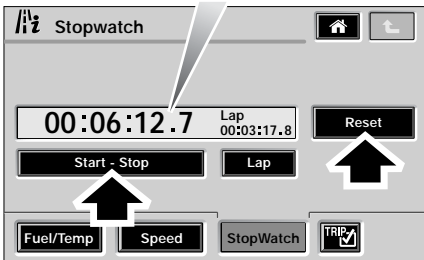
ICE2362 ENG

To access the Stopwatch settings menu, touch the **StopWatch** icon.



ICE2365 ENG

To time an individual lap, or event within a series, touch the **Lap** icon.

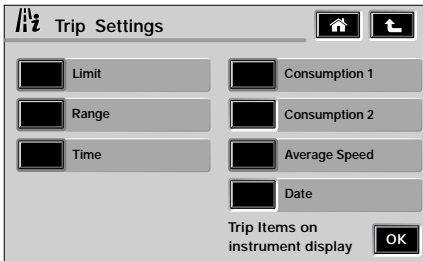
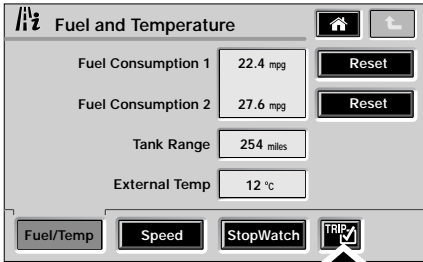


ICE2364 ENG

To start or stop the stopwatch, touch the **Start-Stop** icon and to reset the stop watch to zero, touch the **Reset** icon.

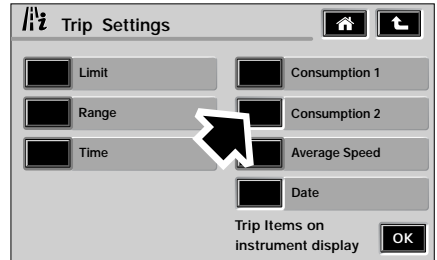
On Board Computer (OBC)

Trip display settings (with navigation)



ICE1811 ENG

To access the trip computer settings, touch the **Trip** icon.



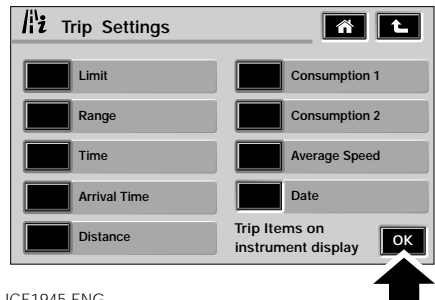
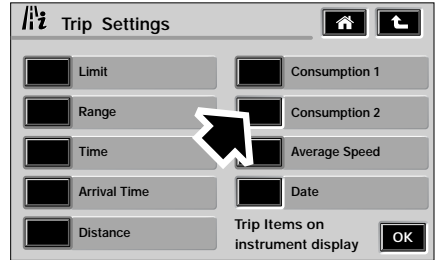
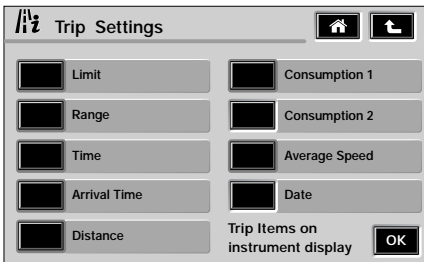
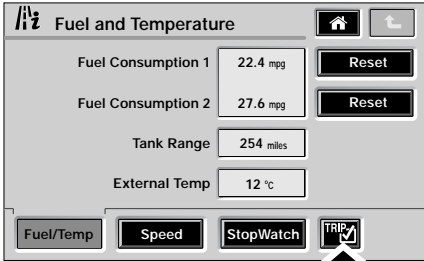
ICE1812 ENG

The information centre on the instrument pack is able to display individual values chosen from a list.

To select which items make up the list, touch the square icon adjacent to each of your choices. Once you have made your selections, touch the **OK** icon.

On Board Computer (OBC)

Trip display settings (without navigation)



ICE1944 ENG

To access the trip computer settings, touch the **Trip** icon.

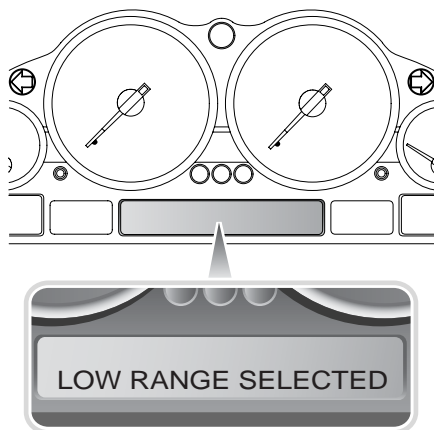
ICE1945 ENG

The main message centre on the instrument pack, is able to display individual values chosen from a list.

To select which items make up the list, touch the square icon adjacent to each of your choices. Once you have made your selections, touch the **OK** icon.

Message Centre

MAIN MESSAGE CENTRE



LAN0575 ENG

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

Some critical warning messages are accompanied by an audible warning. 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. See **WARNING INFORMATION MESSAGES, 98**.

Warnings and information messages

Warning messages are non-critical, but must be treated with some urgency. They may 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. See **WARNING INFORMATION MESSAGES, 98**.

External temperature

The main message centre also displays the current external temperature.

Gear selector display

The main message centre also displays the current gear lever position. See **GEAR SELECTOR DISPLAY, 108**.

Message Centre

WARNING INFORMATION MESSAGES

Warnings and information messages appear in order of importance, with critical warnings taking priority.

Message	Meaning	What to do?
CAUTION! PARK BRAKE APPLIED	A switch apply request has been made while the vehicle is moving.	This function should only be used in an emergency.
CAUTION! RISK OF GROUNDING WITH SUSPENSION AT NORMAL HEIGHT	Displayed when the Terrain Response system would normally have provided Off-road height, but the driver has manually lowered the vehicle (or the system cannot raise the vehicle).	Manually raise suspension to Off-road height if possible and appropriate.
CHECK ALL TYRE PRESSURES	One or more of your tyres is significantly under-inflated.	You should stop as soon as possible, check your tyres and inflate them to the recommended pressure.
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 Land Rover Dealer/Authorised Repairer.
CHECK BRAKE PADS	The brake pads are reaching their wear limit.	Drive cautiously and consult your Land Rover Dealer/Authorised Repairer 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.	You should stop the vehicle at the earliest opportunity, check the coolant level and top-up with the correct mixture of antifreeze and water. If the problem persists, consult your Land Rover Dealer/Authorised Repairer.

Message Centre

Message	Meaning	What to do?
CHECK DIP BEAM LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
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 Land Rover Dealer/Authorised Repairer.
CHECK FRONT LIGHT	More than one front lamp is defective.	Check which lamps are defective and replace any failed bulb. If a lamp is still defective, have the fault rectified by a Land Rover Dealer/Authorised Repairer.
CHECK FUEL TANK CAP (only in some markets)	The fuel filler cap is not fitted correctly.	Check the cap and tighten/fit correctly.
CHECK MAIN BEAM LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CHECK NUMPLATE LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CHECK REAR FOGLIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CHECK REAR LIGHT	More than one rear lamp is defective.	Check which lamps are defective and replace any failed bulb. If the lamp is still defective, have the fault rectified by a Land Rover Dealer/Authorised Repairer.
CHECK SIDE LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CHECK SPARE TYRE PRESSURE	Your spare tyre is significantly under-inflated.	You should inflate the spare tyre to the recommended pressure.

Message Centre

Message	Meaning	What to do?
CHECK TAIL LIGHT	A bulb has failed or there is a fault in the electrical circuit.	Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CHECK TRAILER LIGHT	A bulb has failed, there is a bad connection or there is a fault in the electrical circuit.	Check the trailer connection. Check/replace the bulb or consult your Land Rover Dealer/Authorised Repairer.
CLOSE DOORS TO CHANGE HEIGHT	Air suspension height change is restricted because a door is open.	Close any open door. Re-select height if door was open for more than 90 seconds.
COOLANT TEMPERATURE	Coolant temperature is too high.	Stop the vehicle as soon as safety permits and allow the engine to idle until the temperature gauge pointer returns to midway between the red and blue segments. Consult your Land Rover Dealer/Authorised Repairer 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 SWITCHED OFF	Dynamic Stability Control system not available - switched off by driver.	To reselect, press DSC switch.
EEPROM LCMC	The lamp master switch has a fault.	Consult your Land Rover Dealer/Authorised Repairer at the earliest opportunity.
ENGINE SYSTEM FAULT	Engine management system registers a serious fault - reduced performance may be experienced.	Avoid high speeds and consult your Land Rover Dealer/Authorised Repairer.
EXTENDED MODE	Vehicle body has become trapped on an obstacle and will raise automatically.	Nothing.

Message Centre

Message	Meaning	What to do?
EXTERNAL TEMP X°C/F	The exterior temperature is equal to or less than 4°C (39°F).	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.
FOR MAX AC SELECT NEUTRAL	Maximum air conditioning requires the availability of maximum idle engine power.	With the vehicle stationary, select neutral.
FRONT (REAR) LEFT (RIGHT) TYRE PRESSURE NOT MONITORED	You have a temporary spare tyre fitted at the corresponding position. or	You should limit your vehicle speed to 80 km/h (50 mph) and replace the temporary spare tyre with a correctly inflated full-size tyre as soon as possible.
	The TPM system sensor at the corresponding position has become defective, an unapproved accessory is interfering with the TPM system or you have fitted a wheel and tyre which does not have a sensor.	You should seek assistance from your Land Rover Dealer/ Authorised Repairer as soon as possible.
FUEL TANK CAP LOOSE OR MISSING	System detects that the fuel tank cap is not fitted correctly.	Check fuel tank cap.
GRASS GRAVEL SNOW	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
HDC FAULT SYSTEM NOT AVAILABLE	Hill Descent Control system fault.	Drive with care and do not attempt to descend steep slopes. Seek assistance immediately.

Message Centre

Message	Meaning	What to do?
HDC NOT AVAILABLE IN THIS GEAR	HDC not operative because of incorrect gear selection. HDC is fully functional in 1 , R and D in High range. It operates in all gears in Low range.	Select correct gear if HDC is required. In Low range, HDC operates in all gears.
HDC NOT AVAILABLE SPEED TOO HIGH	HDC unavailable, speed threshold exceeded. Max HDC operating speed is 50 km/h (30 mph), max speed for HDC selection is 80 km/h (50 mph).	Reduce vehicle speed.
HDC NOT AVAILABLE SYSTEM COOLING	HDC switched off while brake system is cooling.	Wait until message disappears before attempting to descend steep slopes.
HDC SWITCHED OFF	HDC switched off by driver or speed threshold exceeded.	Nothing.
HEADLAMP DELAY	You have selected headlamp delay - headlamps will switch off automatically.	No action required.
HIGH ENGINE SPEED FOR COOLING	Engine idle speed increasing to improve cooling and/or air conditioning performance.	Nothing.
KEY BATTERY LOW	The battery in the remote control key is low on charge.	Insert the key into the starter switch and start the engine. This will start to recharge the remote control 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 lamps have been left on.	Turn the lamps master switch to the Off position, if the lamps are no longer required.
LOW SCREENWASH	Fluid level is too low.	Top-up the washer reservoir at the earliest opportunity.
MUD RUTS	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.

Message Centre

Message	Meaning	What to do?
PARK BRAKE AUTO RELEASE UNAVAILABLE	Drive-away release function is not available.	Use manual release.
PARK BRAKE BEDDING CYCLE ACTIVE	A garage technician has requested a bedding cycle.	If not required, an ignition reset will cancel the function.
PARK BRAKE FAULT	Supports the yellow warning indicator - electronic parking brake functions may not be available.	Seek qualified assistance.
PARK BRAKE FAULT SYSTEM NOT FUNCTIONAL	Supports the red warning indicator - electronic parking brake functions are not available.	Seek qualified assistance immediately.
PARK BRAKE OFF LIFT SWITCH TO APPLY	An emergency release operation is detected.	Once original faults have been corrected, apply the switch to reinstate electronic parking brake.
PARK LOCK FAILURE APPLY HANDBRAKE	Automatic transmission park lock function ineffective due to transfer box being out of High or Low range.	Seek qualified assistance immediately.
PRESS FOOTBRAKE AND PARK BRAKE SWITCH	A switch release has been detected without brake pedal contact.	Follow the instructions to achieve a manual release.
REDUCED ENGINE PERFORMANCE	Engine management system registers a serious fault - reduced engine performance may be experienced.	Avoid high engine speeds and consult your Land Rover Dealer/Authorised Repairer.
RESET HEIGHT IF CLEAR OF OBSTACLE	Suspension still in extended mode.	Check if vehicle is clear of obstacle. If clear, press down switch to exit extended mode.
ROCK CRAWL	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
SAND	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.

Message Centre

Message	Meaning	What to do?
SELECT NEUTRAL FOR RANGE CHANGE	Alerts driver that range change will not occur until neutral is selected on the transmission.	Select neutral.
SLOW DOWN OR VEHICLE WILL RAISE (LOWER)	Vehicle will automatically rise to Normal height from Crawl (lower to Normal height from Off-road height) if vehicle speed increases.	Choose to slow down or accept height change.
SPECIAL PROGRAMS OFF	You have deselected a Terrain Response special program and the general program has now been activated.	Nothing.
SPEED LIMIT	You are exceeding the set maximum speed limit.	Slow down to conform with the speed limit.
SPEED TOO HIGH TO CHANGE HEIGHT	A height change has been selected that is not allowed, e.g. speed too high to select Off-road height.	Slow down to allow height change.
SPEED TOO HIGH FOR RANGE CHANGE	Driver has requested range change when vehicle speed is too high.	Reduce speed to 40 km/h (25 mph).
STOP! ENGINE OIL PRESS	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 oil level is correct, consult your Land Rover Dealer/Authorised Repairer before driving.
SUSPENSION FAULT	A fault has been detected in the air suspension system.	Seek assistance from a Land Rover Dealer/Authorised Repairer as soon as convenient.
SUSPENSION FAULT MAX SPEED 30 MPH (50 KM/H)	A major fault has been detected in the air suspension system and it is unable to control the height correctly.	Drive slowly until it is repaired.
SUSPENSION FAULT NORMAL HEIGHT ONLY	A fault has been detected in the air suspension system and only Normal height is available.	Seek assistance from a Land Rover Dealer/Authorised Repairer as soon as convenient.

Message Centre

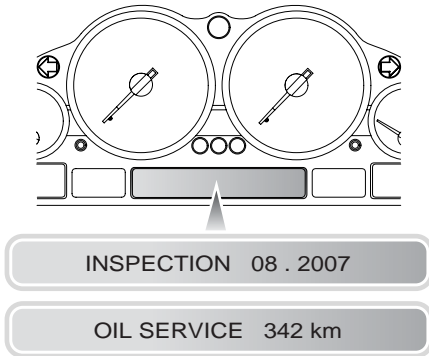
Message	Meaning	What to do?
SUSPENSION LOCKED AT ACCESS HEIGHT	Crawl mode selected and suspension locked.	Nothing.
SUSPENSION LOWERED	Vehicle has lowered to Access height because of failure of another vehicle system.	Check for a system failure and rectify/react appropriately.
SUSPENSION WILL LIFT WHEN SYSTEM COOLED	Air suspension compressor is cooling. Lifting will resume when compressor has cooled.	Wait for suspension to carry out lifting sequence.
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.
TRANSMISSION FAULT	Advises driver that automatic transmission has a fault.	Seek assistance from a Land Rover Dealer/Authorised Repairer as soon as convenient.
TRANSMISSION FAULT AND OVERHEAT	Advises driver that an automatic transmission fault has occurred and the temperature is too high.	Reduce speed and seek assistance from a Land Rover Dealer/Authorised Repairer as soon as convenient.
TRANSMISSION FAULT LIMITED GEARS ONLY	Advises driver that automatic transmission has a fault and performance may be affected.	Reduce speed and seek assistance from a Land Rover Dealer/Authorised Repairer as soon as convenient.
TRANSMISSION FAULT TRACTION REDUCED	Advises driver that a fault has occurred with the transfer box control system.	Reduce speed and seek assistance as soon as possible. <i>Note: Off-road performance will be reduced.</i>
TRANSMISSION OVERHEAT SLOW DOWN	Advises driver that the central differential is overheating.	Reduce speed and allow the differential to cool.
TRANSMISSION RANGE CHANGE NOT AVAILABLE	Advises driver that a fault has occurred which prevents the transfer box from changing range.	Reduce speed and seek assistance as soon as possible.

Message Centre

Message	Meaning	What to do?
TYRE MONITORING SYSTEM FAULT	You have fitted wheels and tyres which do not have TPM system sensors.	You should have TPM system sensors fitted to the wheels and tyres as soon as possible.
	TPM system sensors have become defective, an unapproved accessory is interfering with the TPM system or a general fault has been detected in the TPM system.	You should seek assistance from your Land Rover Dealer/ Authorised Repairer as soon as possible.
TYRE PRESSURES LOW FOR SPEED	The tyre pressures are not suitable for high speed driving.	You should reduce vehicle speed. Inflate tyre to recommended pressures, prior to high speed driving.
VEHICLE LIFTING SLOWLY	Vehicle is lifting slowly from compressor only because reservoir is empty.	Nothing.
WATER IN FUEL SEE HANDBOOK	An excessive amount of water has collected in the fuel filter bowl.	The filter needs to be drained. You should seek assistance from a Land Rover Dealer/ Authorised Repairer as soon as possible.

Message Centre

SERVICE INTERVAL INDICATOR



LAN0573

The service interval message will appear when a pre-determined distance or time before service is reached.

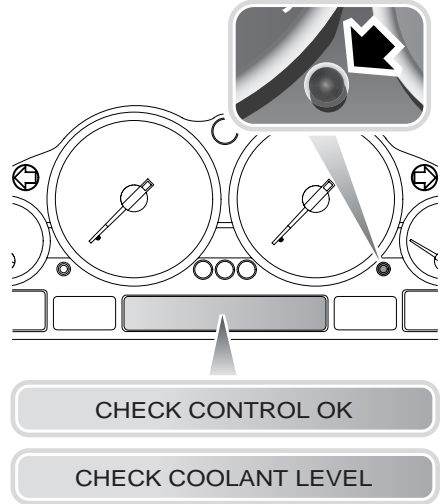
When the starter switch position is turned to position II, and the pre-determined value is reached, a distance countdown to the next service appears in the message centre display. A minus sign preceding the distance indicates that the service interval point has been exceeded by that distance.

The mileage 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.

Note: After the completion of each service, the Land Rover Dealer/Authorised Repairer will reset the distance display to commence the countdown to the next service.

If the service/inspection date is passed before the countdown feature has reached zero, a warning message will be displayed for five seconds at the start of every ignition sequence to make the driver aware of the need to check the vehicle's service requirements.

Check control button

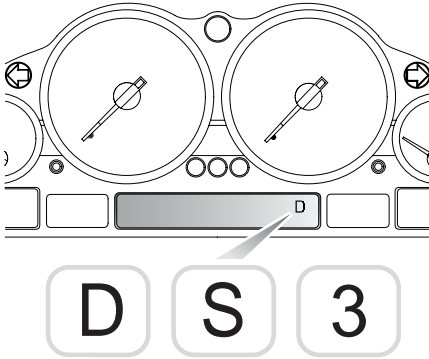


LAN0572 ENG

After the first press of the check control button, the message **CHECK CONTROL OK** appears if there are no current messages. If there are current messages, these will scroll through with each press of the button.

Message Centre

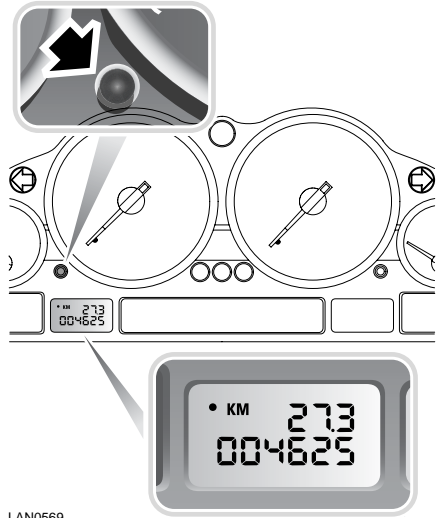
GEAR SELECTOR DISPLAY



LAN0571G

This shows the current gear lever position (P, R, N, D or S). In addition, the display indicates which gear has been selected when the gearbox is in manual mode (6, 5, 4, 3, 2 or 1).

TRIP/DISTANCE RECORDER



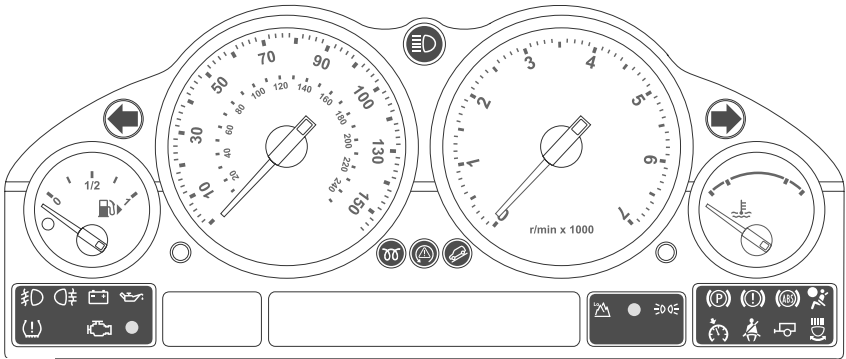
LAN0569

With the starter switch turned to the second position, 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, using the touch screen. See **Changing measurement units**, 321.

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

Warning Indicators

WARNING INDICATORS



Caution: Red warning indicators are of particular importance; their illumination indicates that a fault exists. If a Red warning indicator illuminates, stop the vehicle safely and review the specific instructions given in this section.

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

Headlamp main beam - BLUE



Illuminates when the headlamps are switched to main beam.

Direction indicators - GREEN



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

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

Glow plug - AMBER (diesel only)



Illuminates when the starter switch is turned to the second position. Wait for the indicator to extinguish before starting the engine.

Dynamic stability control (DSC) - AMBER



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

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

If the indicator flashes constantly 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.

Warning Indicators

Hill descent control (HDC) information - GREEN



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

If HDC is selected and the vehicle is within the operating speed range of up to 50 km/h (30 mph), the indicator will illuminate continuously.

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

The indicator will also flash during HDC fade-out.

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 indicator will extinguish and the message **HDC INACTIVE** will appear in the message centre.

Front fog lamps - GREEN



Illuminates when the front fog lamps are switched on.

Rear fog lamps - AMBER



Illuminates when the rear fog lamps are switched on.

Battery charging - RED



Illuminates as a bulb check when the starter switch is turned to the second position 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



Illuminates as a bulb check when the starter switch is turned to the second position and extinguishes when the engine is started. If the indicator 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 indicator illuminates.

Tyre pressure monitoring- YELLOW



Illuminates as a bulb check when the starter switch is turned to the second position. If the indicator stays on or illuminates during driving, one or more of your tyres is significantly under-inflated. You should stop and check your tyres as soon as it is safely possible and inflate them to the recommended pressure.

Check engine - AMBER



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

Low gear range - GREEN



Illuminates when Low range has been selected; flashes during range change.

Side lamps on - GREEN



Illuminates when the side lamps are turned on, either manually or by the automatic lighting control.

Warning Indicators

Parking brake system - RED or YELLOW



illuminates red when the parking brake is applied with the starter switch in the second position. If the indicator flashes red or illuminates yellow, a fault with the Electronic Parking Brake (EPB) system is indicated, seek qualified assistance before continuing.

When parking the vehicle in this condition, ensure that the vehicle is secured stationary without reliance on the parking brake.

Brake system - RED



This indicator 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 indicator follows a amber-red-amber sequence).

The indicator should extinguish shortly after the starter switch is turned to the second position. If the indicator 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 indicator 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 indicator remains illuminated after the fluid is at the correct level, seek qualified assistance before continuing.

Emergency brake assist - AMBER



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

If the indicator 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



Illuminates as a bulb check when the starter switch is turned to the second position. If the indicator 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



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

Cruise control active - GREEN



Illuminates when cruise control is operating.

Warning Indicators

Seat belt - RED



Illuminates when the starter switch is turned to the second position and extinguishes after

approximately six seconds, even if the driver's or occupied front seat passenger's seat belt remains unfastened. In some markets illumination of the indicator will be accompanied by a warning chime. See

AUDIBLE WARNINGS, 113.

Note: In certain markets, the indicator will illuminate until the driver's or occupied front seat passenger's seat belt is fastened correctly.

Trailer - GREEN



Illuminates as a bulb check when the starter switch is turned to the second position and extinguishes

when the engine is started.

If a trailer is attached to the vehicle and the direction indicators are used, this indicator will flash in synchronisation with the direction indicator lamps. If it does not flash, this indicates that a trailer bulb is defective.

Adaptive Front Lighting System (AFS) - AMBER



Illuminates when a fault occurs with the Adaptive Front Lighting System. Seek qualified assistance.

Audible Warnings

AUDIBLE WARNINGS

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

Lamps on reminder

If the exterior lamps 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

Automatic height changes are inhibited whilst in Crawl mode, provided the vehicle does not exceed 40 km/h (25 mph). If vehicle speed exceeds 30 km/h (20 mph), a warning chime will sound. See **Crawl (locked at Access height), 205**.

Dynamic stability control (DSC) warning

If a fault with the DSC system is detected, a warning chime will sound once and the DSC warning indicator 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/ Authorised Repairer.

Seat belt reminder

In some markets, a warning chime will sound (one second frequency):

- If the driver's seat belt has not been fastened when the starter switch is turned on. The chime operates in conjunction with the seat belt warning indicator and sounds for 6 seconds, or until the seat belt is fastened (whichever occurs first).

If the seat belt remains unfastened, the chime will sound at intervals of 15 seconds.

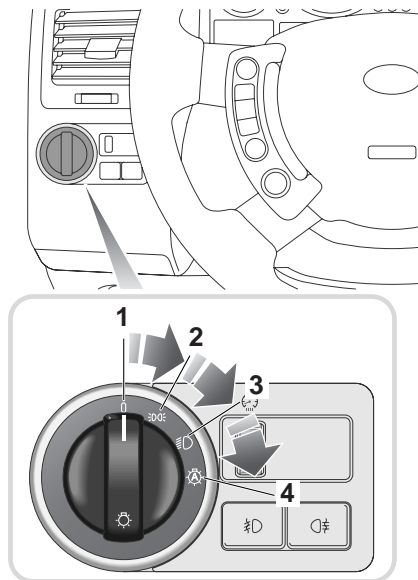
External temperature warning

If the external temperature drops to 4°C (39°F) 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.

Lamps and Indicators

EXTERIOR LAMPS

Lamps master switch



LAN0448G

1. Side lamps and headlamps off.
2. Side lamps on.
3. Headlamps on.
4. Automatic control on.

Side lamps

The front and rear side lamps, along with licence plate lamps, illuminate when the lamps master switch is turned to positions 2 or 3, regardless of the position of the starter switch.

Note: A warning indicator on the instrument panel illuminates when the lamps are turned on, either manually or by automatic control.

Automatic control lamps

With the lamps master switch in position 4 and starter switch in the second position, the side lamps, low beam headlamps and license plate lamps will illuminate automatically when the ambient light falls below a pre-defined level.

All of the lamps will go out when the ambient light rises above that level.

Parking lamps

If required, the side and tail lamps on the left or right can be left illuminated at a reduced output, when the vehicle is parked.

With the starter switch turned off, move the indicator stalk fully up (to illuminate the right hand side lamp and tail lamp) or fully down (to illuminate the left). Remove the starter key and lock the vehicle in the normal way - the lamps will remain illuminated.

Note: The lamps remain on with a reduced power output, to help prevent inadvertently discharging the battery.

Daytime running lamps

If daytime running lamps are enabled, the headlamp low beams will illuminate when the engine is running and the lamps master switch is turned off. Depending on market requirements, side lamps and license plate lamps may also illuminate.

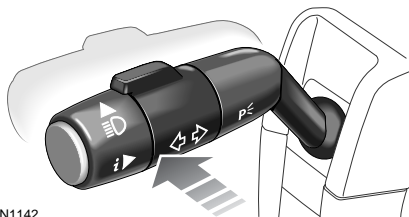
The instrument pack illumination remains off.



Unless they are required or prohibited by law, daytime running lamps can be disabled or enabled by your Dealer.

Lamps and Indicators

Headlamp high and low beams



LAN1142

Push the stalk away from the steering wheel to change headlamps to high beam (Blue warning indicator illuminates). Pull the stalk back towards the steering wheel to change back to low beam headlamps.

To flash the headlamps, pull the stalk part way towards the steering wheel and release.

Note: Do not use main beam where it may dazzle other road users.

Headlamp courtesy delay

The headlamps can be set to remain on for a short period after the vehicle is parked. This feature can be used to illuminate your way when you leave the vehicle.

Vehicles not fitted with automatic control lamps:

- With the headlamps illuminated, turn the starter switch off. **HEADLAMP DELAY** will appear in the message centre.
- Turn the lamp master switch to the Off position.
- Remove the starter key.

Vehicles fitted with automatic control lamps:

- With the lamps master switch in the off or automatic control lamps position, turn the starter switch off.
- Use the stalk control to flash the headlamps. **HEADLAMP DELAY** will appear in the message centre.
- Remove the starter key.

The headlamps and tail lamps will now remain illuminated for approximately 40 seconds after closing the driver's door, before turning off automatically.

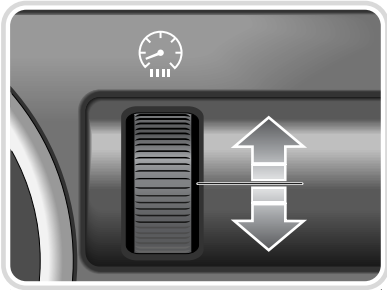
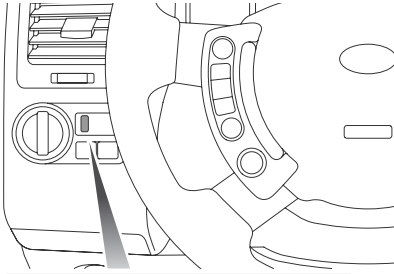
If necessary, the courtesy delay can be cancelled at any time by turning the starter switch or rotary light switch on and then off again.



Headlamp courtesy delay can be disabled by a Land Rover Dealer/Authorised Repairer, if required. The headlamp courtesy time delay period can also be adjusted by a Land Rover Dealer/Authorised Repairer, to suit your requirements.

Lamps and Indicators

Instrument illumination control



LAN0449G

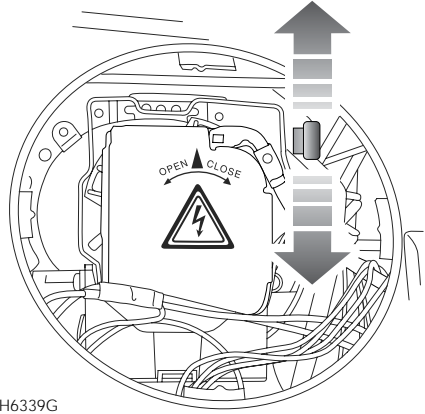
Rotate the control upwards to increase, or down to decrease, the intensity of the instrument panel illumination.

The illumination control also adjusts the intensity of all switch illumination forward of the driver.

HEADLAMP TOURING ADJUSTMENT

When touring in a country where traffic drives on the opposite side of the road to where you normally drive, use the tourist lever mechanism within each headlamp unit to alter the beam pattern. This enables the vehicle to be driven without having to stick blanking decals onto the headlamp lens.

Position of the lever illustrated will vary depending on type of headlamps and side of vehicle. It may be on either side of the headlamp bulb aperture.



H6339G

Bi-Xenon headlamp illustrated, Halogen similar.

Remove the headlamp rear access cover. See **Bulb access, 280**. Move the lever to adjust the beam.

Repeat the process for the other headlamp unit.

Note: Remember to switch the headlamp beams back over when you return from your journey.

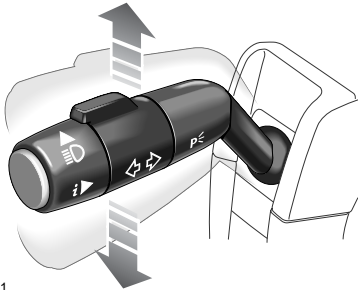
Default lever positions

Xenon headlamps	
Right-hand headlamp	Up
Left-hand headlamp	Up

Halogen headlamps	
Right-hand headlamp	Down
Left-hand headlamp	Up

Lamps and Indicators

DIRECTION INDICATORS



LAN1141

Move the stalk down to indicate a left turn and up to indicate a right turn. The appropriate green warning indicator in the instrument pack will flash.

When the stalk is held against spring pressure the relevant indicator flashes until the stalk is released.

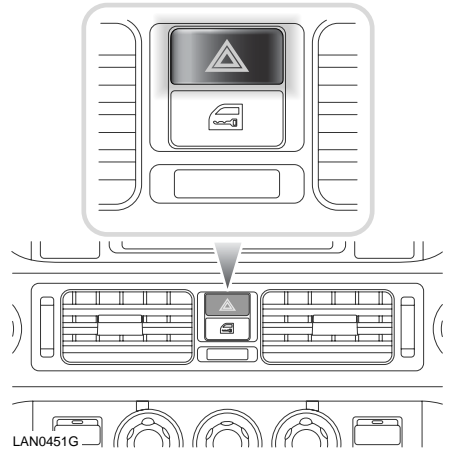
Lane change flash

If the stalk is briefly pushed up or down then released, the relevant indicator will flash three times.



Lane change flash can be disabled/ enabled by a Land Rover Dealer/ Authorised Repairer.

HAZARD WARNING LAMPS



LAN0451G

Press the switch to turn the hazard warning lamps on. When the hazard warning lamps are operating, the indicator warning lamps will flash in time with the hazard warning lamps.

Note: *Hazard warning lamps can be used when the ignition is on or off.*

Lamps and Indicators

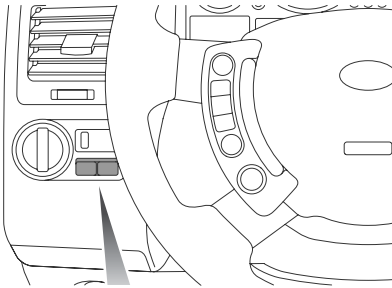
FOG LAMPS

WARNING

Use fog lamps only when visibility is severely restricted. As soon as conditions clear, switch off fog lamps to prevent dazzling of other road users.

Note: If the Automatic control lamps have been selected and the ambient light falls below a pre-defined level, then the front and rear fog lamps can be activated.

If the ambient light rises above that level, then the fog lamps will extinguish, along with the other external lamps. If the ambient light then falls below this level again, the external lamps will illuminate, but the fog lamps will need to be reselected.



LAN0450G

Front fog lamps



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

The fog lamps can only be operated when the starter switch is in the second position and the side or headlamps are also switched on.

The fog lamps extinguish automatically when the side lamps or the starter switch is turned off and need to be reselected when the starter switch is turned back on.

Always remember to switch the fog lamps off as soon as visibility permits.

Rear fog lamps



Press to operate, press a second time to switch off (an indicator in the switch illuminates when the lamps are switched on). The rear fog lamps illuminate only when the starter switch is in the second position and the headlamps (or front fog lamps) are also switched on. Switching off the headlamps, or front fog lamps, or turning the starter switch off will automatically extinguish the rear fog lamps (the lamps will not illuminate again unless switched on).

Always remember to switch the fog lamps off as soon as visibility permits.

Wipers and Washers

OPERATING

The wipers and washers will only operate when the starter switch is turned to the first or second position.

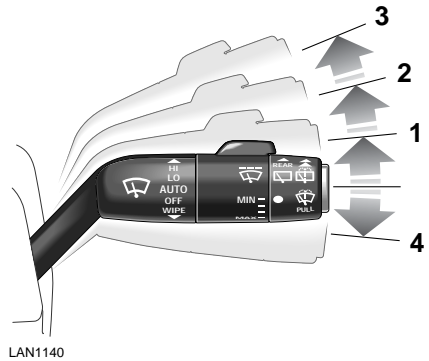
Caution: Do not operate the wipers on a dry screen. The drag on the wiper mechanism may cause damage.

Before operating in freezing or very hot conditions, ensure that the wipers have not stuck to the glass. The drag on the wiper mechanism may cause damage.

Remove any snow, ice or frost, from the screen, around the wiper arms, the wiper blades and from the screen scuttle before operating the wipers. Snow and ice can cause damage to the wiper mechanism if left unclear.

Note: If the wiper blades do become stuck or jammed, an electronic cut-out may temporarily halt operation of the wipers. If this happens, switch off the wipers and the ignition. Clear any obstructions and free the wiper blades before attempting to switch on the ignition.

WINDSCREEN WIPERS



Rain sensor variable delay or intermittent variable delay

Push the stalk up to position 1.

Normal speed wipe

Push the stalk up to position 2.

Fast speed wipe

Push the stalk up to position 3.

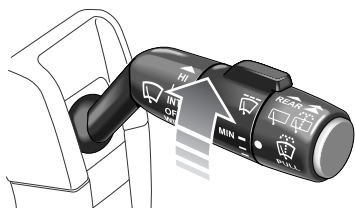
Single wipe

Pull the stalk down to position 4 and release immediately.

Note: With the stalk held down, the wipers will operate at normal speed until the stalk is released.

Wipers and Washers

Intermittent variable delay



LAN1139

With the stalk in position 1, rotate the switch clockwise to increase and anticlockwise 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.



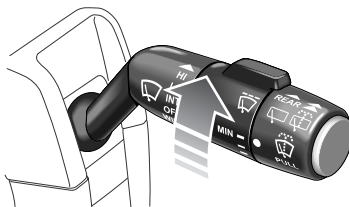
Speed sensitive wiper operation can be disabled by a Land Rover Dealer/ Authorised Repairer.

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

Caution: Ensure that the wipers are switched off before entering a car wash. If the rain sensitive wipers operate during the car washing process damage may occur to the wiper mechanism.



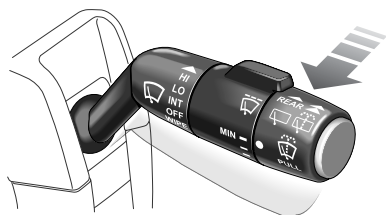
LAN1139

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 anticlockwise to decrease sensitivity.

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

Wipers and Washers

WINDSCREEN WASHER



LAN1137

Pull the stalk towards the steering wheel (for at least 5 seconds). The windscreen wipers will operate in conjunction with the washers for as long as the stalk is held in this position, the wipers continuing for a further 3 wipes after the stalk is released.



LAN1138

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

WARNING

Some screen wash products are flammable: do not allow screen wash to come into contact with sources of ignition.

Caution: Only screen wash products which are approved for automotive use should be used and then only in accordance with the manufacturers instructions.

HEADLAMP POWER WASH

If the headlamps are on, and there is sufficient liquid in the washer reservoir, operating the screen washer will also power-wash the headlamps.

The headlamp power wash will operate on every fifth operation of the screen washer, provided the headlamps are still switched on and 10 minutes have elapsed since the headlamp wash.

Switching the headlamps off and back on again will reset the cycle.

Note: If the fluid level sensor in the screen washer reservoir detects a low level, the headlamp power wash is inhibited.

Heated washer jets

If the ambient temperature falls to a point where icing of the washer jets could occur, power is applied to heat the jets provided that the starter switch is in the second position.

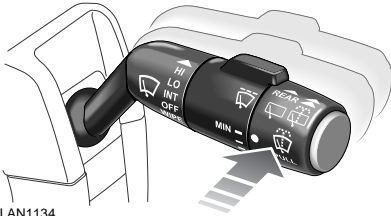
An approved screenwash is necessary to prevent freezing in very cold weather. See **LUBRICANTS AND FLUIDS, 294**.

Wipers and Washers

REAR WINDOW WIPER AND WASHER

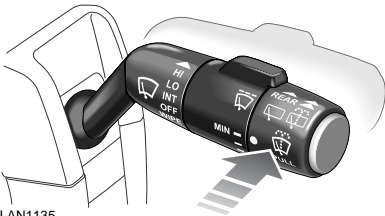
Rear window wiper - variable delay operation

Rear window wash/wipe



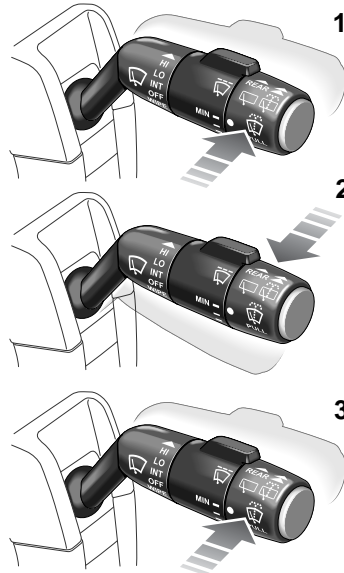
Push the stalk forward to the first position, then forward again and hold against spring pressure for the required duration of window washing. The wiper operates automatically during washing and continues for a further 3 wipes after the switch is released.

Rear window wiper - intermittent operation



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

Note: If the rear wiper is switched on, whenever reverse gear is selected, it will operate continuously rather than intermittently.

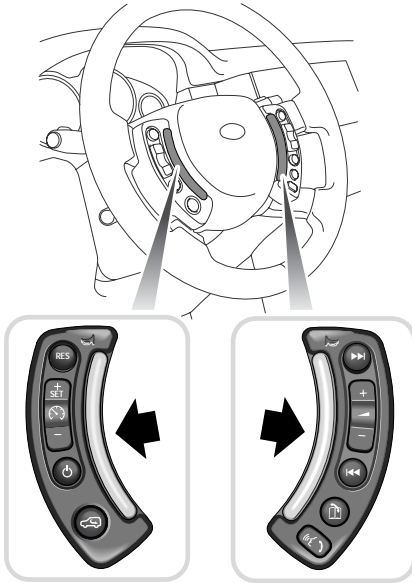


To set the variable wiper delay:

1. Push the stalk forward to operate the rear wiper.
2. Immediately pull the stalk back and wait for the desired delay period.
3. Push the stalk forward again. The delay period is now set and the wiper will operate accordingly.

Horn

HORN



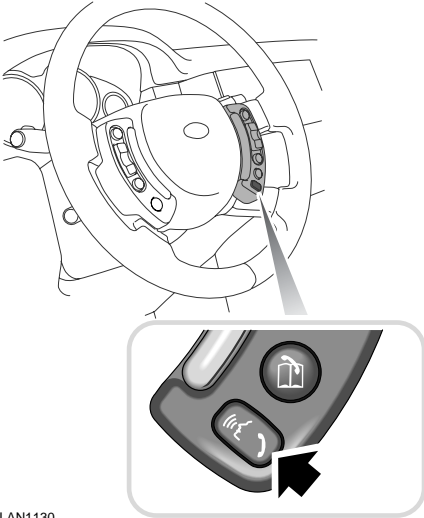
LAN1133

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

Notepad

USING NOTEPAD

Notepad is a feature for recording short messages as memory aids or reminders.



LAN1130

You can record up to 10 notes for up to 30 seconds each in length. Press and hold the voice button shown in the illustration until **LISTENING** appears in the message centre, then give the relevant command (see table below).

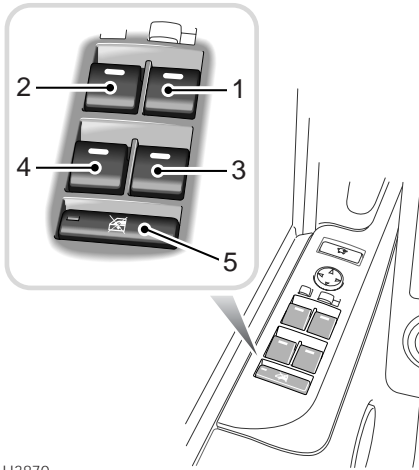
The voice recording will automatically be stopped if the note is longer than 30 seconds.

To stop voice recording at any time, press the voice button again.

COMMAND	SYSTEM RESPONSE	ACTION
Record note or Notepad record.	The system gives a beep to indicate the start of recording.	You may start your recording after the beep. To stop recording, press the steering wheel voice button
Play notepad or Read notepad.	Notepad audio will read out each note in turn. You can say Replay , Delete or Cancel after each beep, or remain silent to hear the next note.	Saying Replay will replay the previous message. Saying Delete will delete the previous message. Saying Cancel will end the notepad session.
Clear notepad or Notepad delete.	Do you want to clear the notepad?	Say Yes to delete all stored notes. Say No to cancel the command.
Notepad help.	The system will read out Notepad information and all the commonly used commands.	

Electric Windows

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 in the first or second position and for up to 16 minutes after the starter switch is turned off (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

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 that 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 be removed when leaving the vehicle.

Electric Windows

One-touch operation

WARNING

Ensure that you remove the remote control when leaving occupants in the vehicle. This will prevent unsupervised operation of the windows, which may result in injury.

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

WARNING

If children are carried in the rear seats, the isolator switch should be used to prevent operation of the windows. If the windows are operated by young children there is a risk of death or serious injury.

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

WARNING

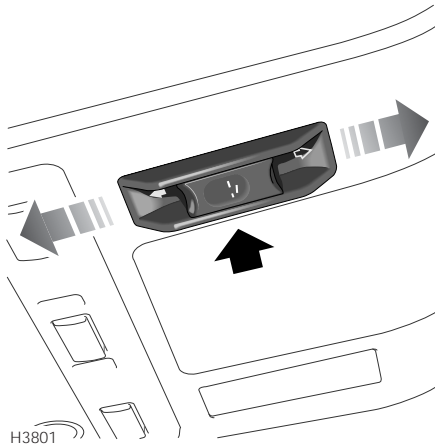
The windows have an anti-trap protection system. However, before closing a window care must be taken to ensure that none of the occupants have any part of their body in a position where it could be trapped. Even with an anti-trap system death or serious injury can occur.

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

SUNROOF OPERATION



The electric sunroof can be operated when the starter switch is in the first or second position 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.

Never leave children alone in the vehicle as this could result in serious injury or death.

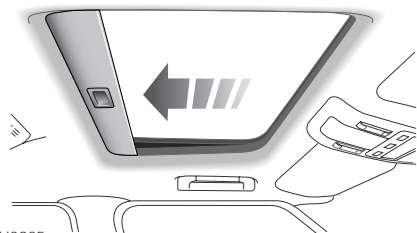
It is recommended that the starter key be removed when leaving the vehicle.

Driving with the sunroof open

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

Sunroof

Sunroof blind



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.*

Caution: *It is not possible to fully close the sunroof blind with the sunroof in the tilt position. Attempts to close the blind may damage the sunroof mechanism.*

Operation after power supply interruption

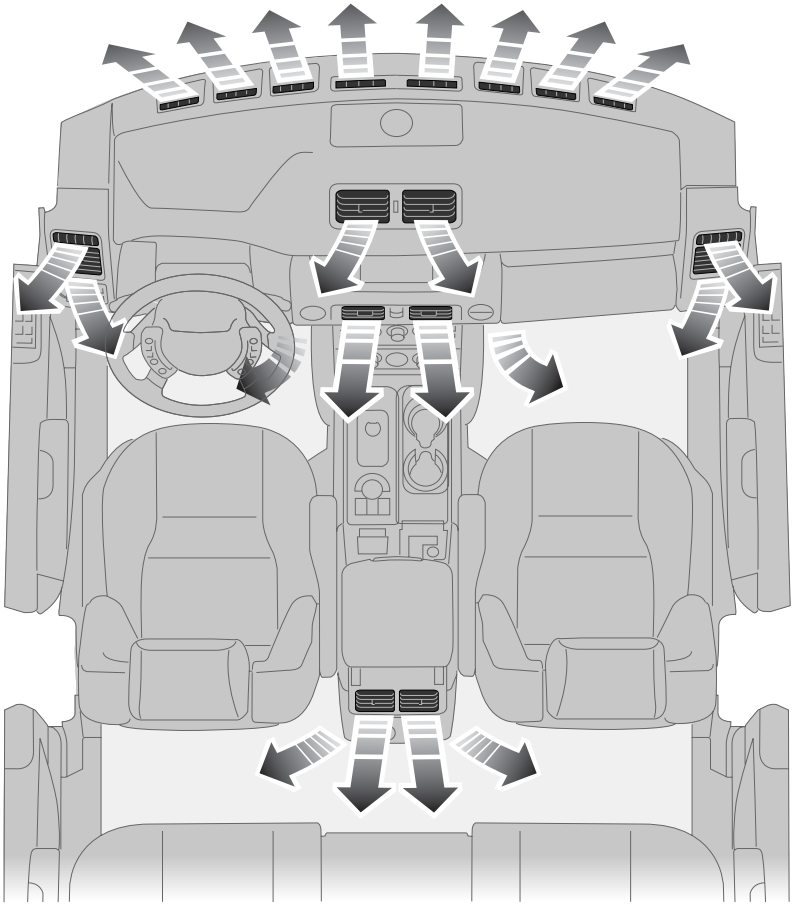
If the vehicle power supply is interrupted, the sunroof will need to be recalibrated as follows:

- 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.

Heating and Ventilation

VENTILATION



LAN0452G

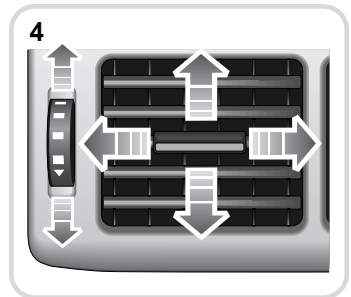
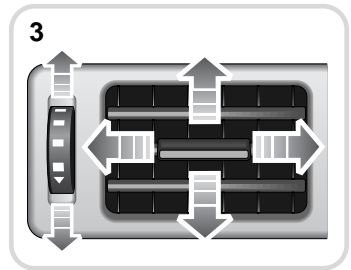
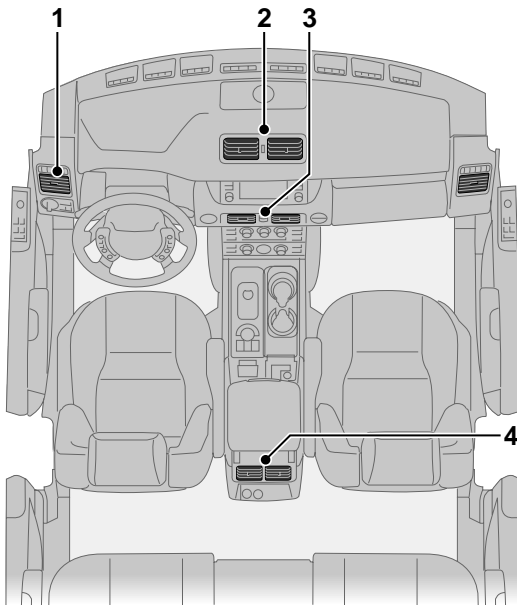
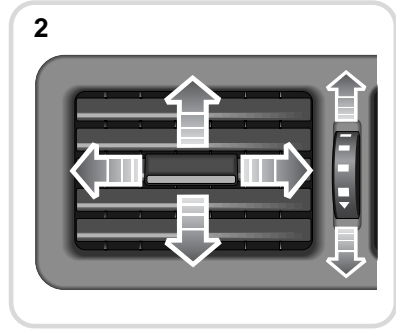
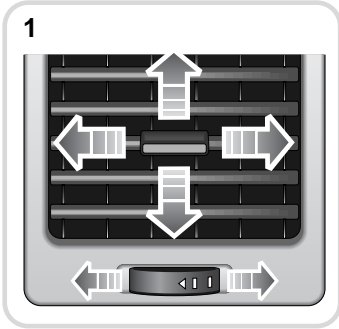
The ventilation system provides fresh or heated air to the interior of the vehicle from the air intake grille in front of the windshield.

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

Air outlets are provided to the windshield, 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.

Heating and Ventilation

Air vents



LAN0453G

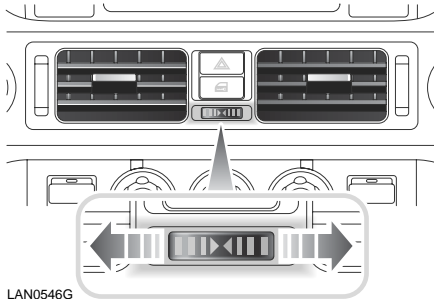
The temperature of the air from all vents is controlled by the temperature settings of the heater.

On the side vents (1), rotate the thumbwheel to the right to fully open, or to the left to fully close the vents.

On the centre vents (2 and 3) and rear vents (4), rotate the thumbwheel upwards to open, or downwards to close. 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 distribution control is set to face level.

Heating and Ventilation

Face level vent temperature control

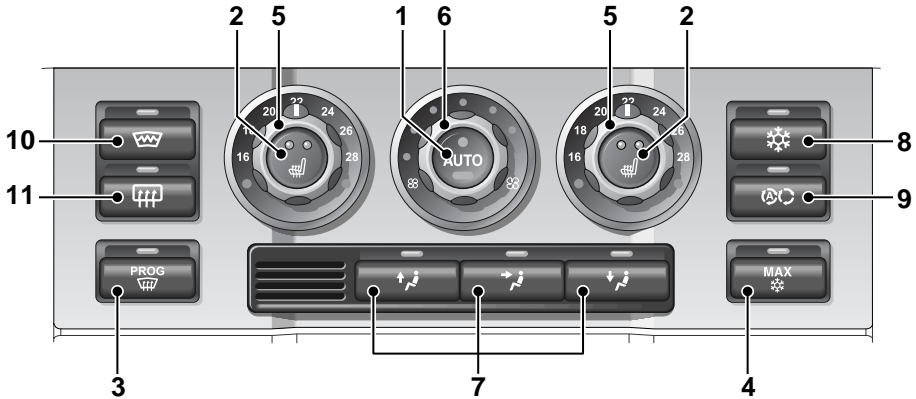


LAN0546G

When the air distribution control is set to either Auto, Face or Foot outlets, the temperature of the air emitted through the upper and lower centre vents and the driver's side face level vent, can be finely adjusted to differentiate between foot and face temperature. Rotate the thumbwheel (1), towards the left (red markings) for warm air and to the right (blue markings) for cooler air.

Heating and Ventilation

CLIMATE CONTROL SYSTEM



LAN0454G

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

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

- 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.

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

For improved initial heater warm-up, ensure the face level vent temperature control thumbwheel is rotated fully to the left (red markings).

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, see **SEAT HEATERS, 142**. For further information concerning the operation of front climatic seats, see **CLIMATIC SEATS, 143**.

Heating and Ventilation

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. Residual heating



After driving, it is possible to provide heat to the cabin by using residual heat from the engine - with the engine turned off. By pressing the **MAX** button, continued heating is available for up to 15 minutes.

If you wish to heat the cabin prior to entering the vehicle, use the timed climate control facility. See **TIMED CLIMATE CONTROL, 137**.

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 (82°F) and below 16°C (61°F) 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.

For improved initial heater warm-up, ensure the face level vent temperature control thumbwheel is rotated fully to the left (red markings).

***Note:** The system will not achieve temperatures on the passenger side of the vehicle that are more than 5°C (9°F) greater or less than the temperature set for the driver's side.*

6. Blower control

Rotate clockwise to increase and anticlockwise 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.

Heating and Ventilation

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, 143.***

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 in the switch will illuminate whenever the screen heater is on.

11. Heated rear screen

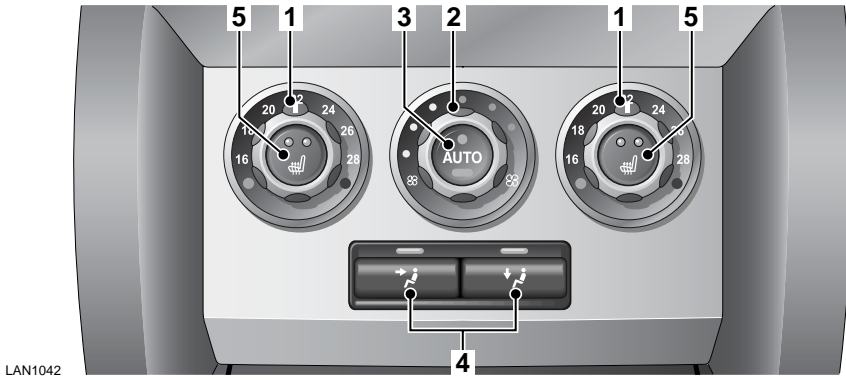


Press to operate; the indicator in the switch illuminates whenever the screen heater is on.

Caution: **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.**

Heating and Ventilation

REAR CONTROLS



LAN1042

Note: The temperature set by the front occupants, restricts the maximum level of warm air a rear passenger can select.

Note:

The system will not achieve temperatures on the passenger side of the vehicle that are more than 5°C (9°F) greater or less than the temperature set for the driver's side.

1. 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 (82°F) and below 16°C (61°F) 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.

2. Blower control

Rotate clockwise to increase and anticlockwise to decrease airflow from the vents.

3. Auto mode

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

- 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.

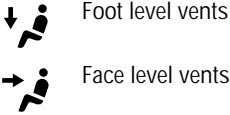
Both the air distribution and blower controls can be operated independently to override the automatic setting. In this case, the appropriate indicator in the **AUTO** switch extinguishes (the circular indicator represents the blower, the rectangular indicator represents air distribution). Press **AUTO**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

Heating and Ventilation

4. Air distribution control

Press the appropriate button to select the desired distribution setting:



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

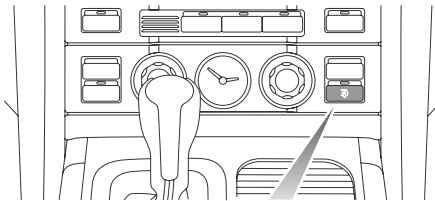
5. Seat heaters



Press once to operate at a high level, press twice to heat the seats at a lower level. For further

information concerning the operation seat heaters, see **SEAT HEATERS, 142**.

Rear control isolation switch



LAN0547G

Press the isolation switch, located in the centre console, to prevent operation of the rear climate controls.

The switch indicator illuminates when the rear controls are active and extinguishes when the controls are isolated.

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 to the left (red markings).

Demisting/defrosting

Switch on the air conditioning and the windscreen heaters, then set the temperature and blower controls to maximum. Set the air conditioning air distribution control to windscreen and side window vents, 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.

Heating and Ventilation

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 to face level 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.

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.

TIMED CLIMATE CONTROL

The timed climate system provides a way of obtaining a more comfortable temperature in the passenger compartment at a pre-set time. If the external temperature is 16°C (60°F) or lower, then the passenger compartment is heated using the engine's auxiliary heater. If the temperature is greater than 16°C (60°F), then the cabin is ventilated by blowing in air from outside the vehicle. The timed climate system operates without the engine running.

The touch-screen can be used to operate the system manually and to program pre-set activation times. Alternatively, the system can be activated by use of the remote control.

The system will automatically shut down after 30 minutes. The system also protects the vehicle by not operating if the low fuel warning indicator is illuminated or if the vehicle's battery charge state is low.

You can set the timed climate to come on once or twice during any 24-hour period. If the vehicle is driven every day, then this pattern will be repeated every day until cancelled. If the vehicle is not driven, then the function will be suspended.

Setting a pre-set timed climate

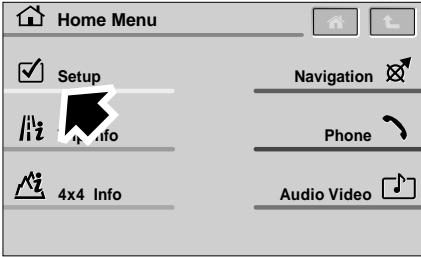


LAN1160

Navigate to the screen settings, by pressing the **SETUP** hard key.

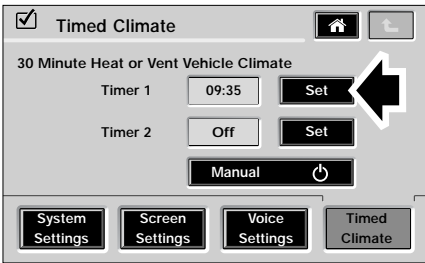
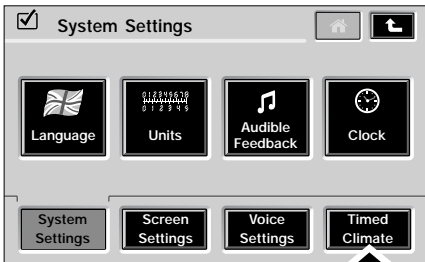
Note: The term *soft key* refers to buttons on the touch screen. All other buttons are hard keys.

Heating and Ventilation



LAN1059 ENG

Touch the **Setup** soft key.

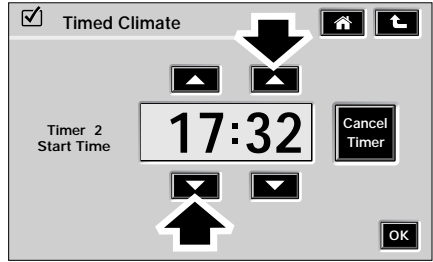


H6673R

Touch the **Timed Climate** soft key.

Note: If the starter switch is not turned on within 24 hours, the timed climate function will be suspended. The function will resume when the starter switch is next turned on. This is to protect the vehicle battery.

Touch the **Timer 1 Set** soft key.



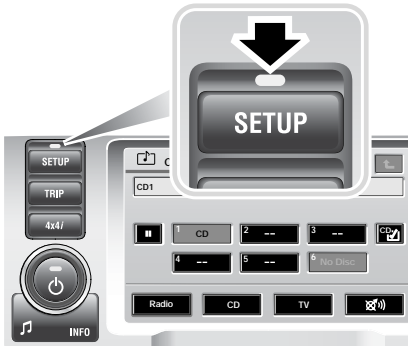
ICE1762 ENG

Scroll up/down to select the time you want the timed climate to start then touch **OK**.

If required, touch the **Timer 2 Set** soft key and use the same process to select the time you want the second timed climate to begin.

Note: The time displays in 12/24 hour clock format, depending on what has been selected in the system settings menu. See **CLOCK**, 146.

Heating and Ventilation



LAN1118

The timed climate LED illuminates to indicate one or both pre-sets have been set.

Note: When the starter key is removed and you exit the vehicle, the timed climate LED remains illuminated for up to 2 minutes while the system powers down.

Pre-set timed climate operation

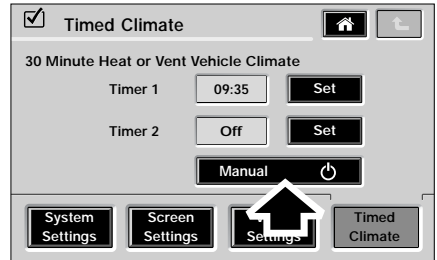
When a pre-set time is reached, the timed climate operation begins and adjusts the temperature in the passenger compartment up or down to more comfortable temperature, based on the exterior ambient temperature. This will operate for 30 minutes before switching off.

During this period the timed climate LED will flash on and off to indicate it is operating.

During this period, exhaust fumes from the heater may be seen coming from under the bonnet. This is normal and no cause for concern.

Note: If the starter switch is turned on during the 30 minute operation time, the timed climate operation is switched off.

Manual operation



ICE1760 ENG

It is possible to manually select or deselect the auxiliary heating or ventilation at any time, by touching the **Manual** on/off soft key. The system will automatically operate the heater if the external ambient temperature is 16°C (60°F) or lower. If higher than 16°C (60°F), then ventilation will be selected.

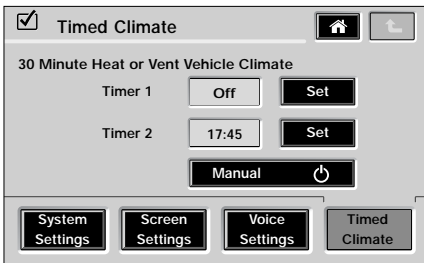
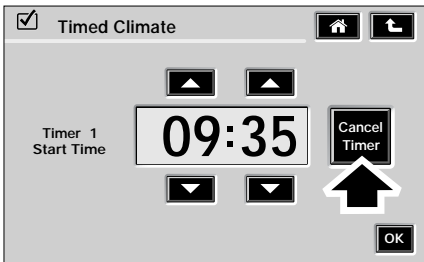
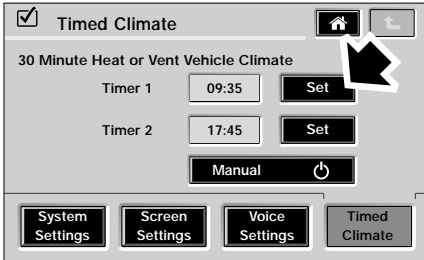
WARNING

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

Always ensure that the fuel burning heater is not operating when refuelling the vehicle.

Heating and Ventilation

Cancelling a timed climate pre-set



ICE2358 ENG

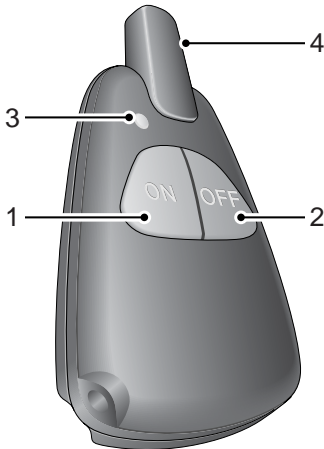
To cancel a timed climate pre-set, touch the **Set** soft key for the timer you want to cancel, then touch **Cancel Timer**. The display updates to **Off**.

The timed climate LED will be extinguished when both timer pre-sets are cancelled.

Heating and Ventilation

Using the remote control

The remote control has a range of approximately 100 m (328 ft) and, for optimum performance, should be held vertically when operated. There is no need to point the antenna at the vehicle. Avoid touching the antenna when operating the **ON** or **OFF** button.



H4983

1. **ON** button
2. **OFF** button
3. Operation indicator LED
4. Antenna

Press the **ON** button (1) for one to three seconds. The indicator LED (3) will illuminate for 3 seconds to confirm that an automatic heating program has been initiated. If the system fails to start, the indicator LED rapidly flashes 3 times then extinguishes. When the system is running, the timed climate LED flashes for a short period to indicate the system's operation.

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 control, it will be switched off automatically to prevent the vehicle battery from discharging.

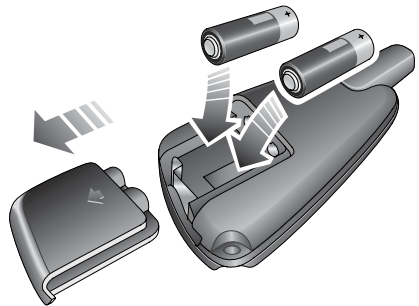
WARNING

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

Always ensure that the fuel burning heater IS NOT operational when refuelling the vehicle.

Note: The distance at which the remote control can operate the heater can be considerably more than 100 m (328 ft) provided that there are no obstacles, such as buildings, between the antenna and the vehicle.

Replacing the remote control batteries

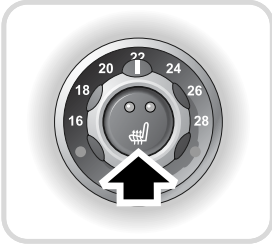
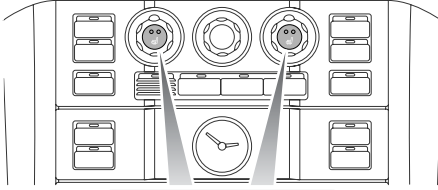


H4982

With the back of the remote control facing upwards, 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.

Heating and Ventilation

SEAT HEATERS



LAN0497G

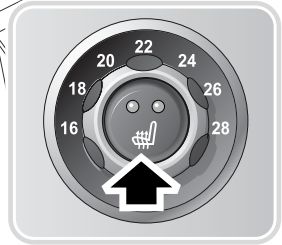
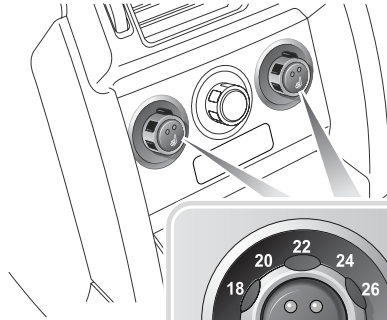
Front seat heaters

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

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

Caution: The seat heaters consume considerable power from the battery. For this reason, they should only be operated while the engine is running.

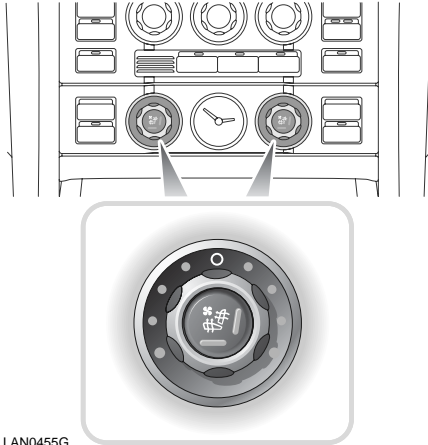


LAN1043

Rear seat heaters

Heating and Ventilation

CLIMATIC SEATS



LAN0455G

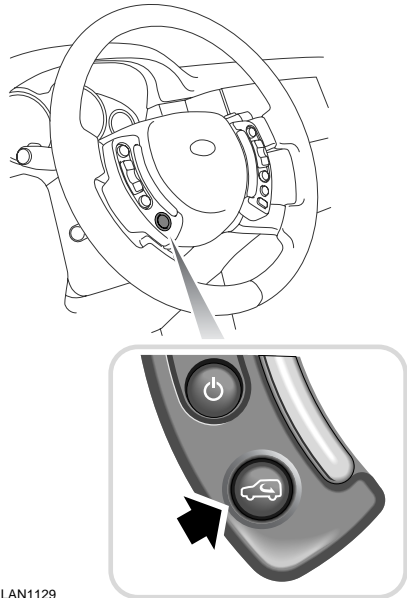
With the starter switch turned on, the seat back, or seat back and seat cushion of the front seats can be ventilated as follows:

- Press the relevant switch once to ventilate both the seat back and seat cushion (both indicators in the switch illuminate).
- Press twice to ventilate just the seat back (right hand indicator extinguishes).
- Rotate the control from the 0 (off) position clockwise, to progressively increase the temperature of the ventilating air (red indicators around the control illuminate). Rotate the control anticlockwise to ventilate the seats with progressively cooler air (blue indicators illuminate).

The indicators in the switches will remain illuminated until the heaters are either manually turned off, or the starter switch is turned off.

Caution: Climatic seats consume considerable power from the battery. For this reason, they should only be operated while the engine is running.

REMOTE AIR RECIRCULATION



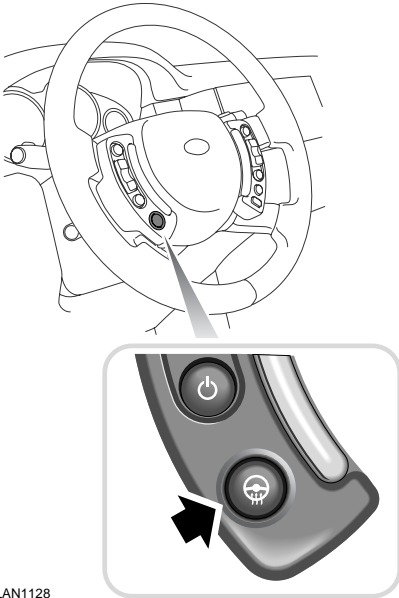
LAN1129

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.

Heating and Ventilation

HEATED STEERING WHEEL



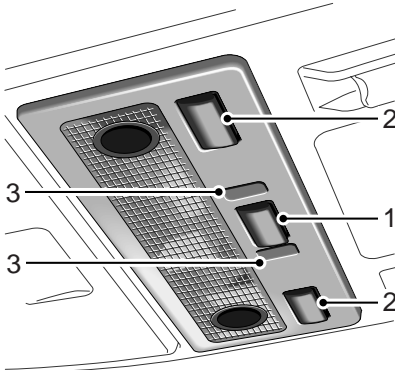
LAN1128

Press to activate the steering wheel heating elements. The heating elements are thermostatically controlled and operate as necessary (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 Equipment

INTERIOR COURTESY LAMPS AND MAP LAMPS



H3798

Front interior lamp and map lamps illustrated

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

After driving, the interior lamps 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 lamps will automatically extinguish after 16 minutes, to prevent battery drain.

To turn the lamp 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 three seconds. Repeat to restore the automatic illumination feature.

Vehicle finder

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

Map lamp operation

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

LOW LEVEL NIGHT TIME ILLUMINATION

With the lamp master switch turned to side lamps or headlamps, the interior lamps provide very low level illumination using the LEDs (3), in conjunction with the optional door bin and door handle lamps. The level of illumination can be adjusted using the instrument illumination dimmer switch. See **Instrument illumination control, 116**.

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.

GLOVE BOX LAMP

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

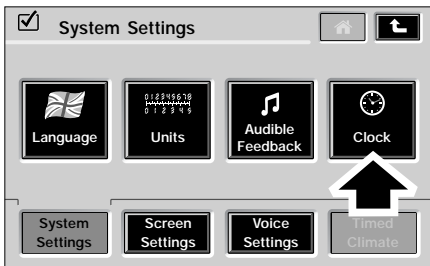
PUDDLE LAMPS/APPROACH LAMPS

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

Interior Equipment

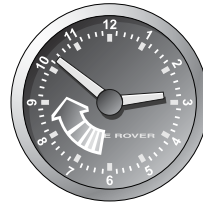
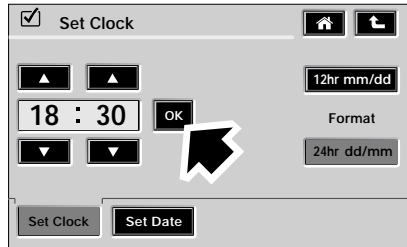
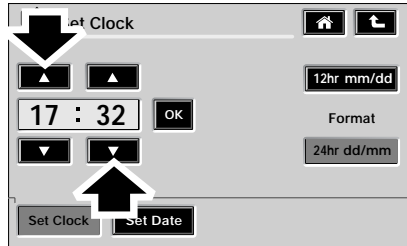
CLOCK

Setting the time



LAN1119 ENG

To set the time, firstly access the system settings menu on the display and then select the clock icon on the touch screen.



LAN0457ENG

Scroll up or down to select the correct time then press **OK**.

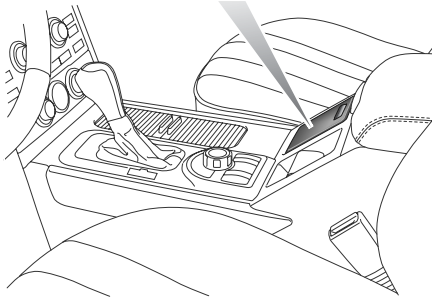
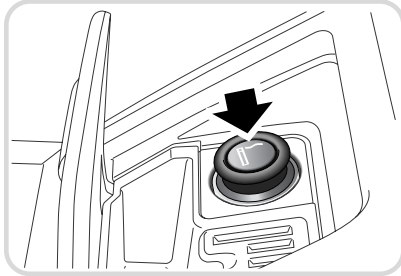
Using the clock

The analogue clock display illuminates constantly and dims automatically for night time viewing, when the side lamps are illuminated. The dimming level can be adjusted using the instrument panel illumination control. See **Instrument illumination control, 116**.

Note: To change between 24/12 hour clock display for non-analogue clock displays (e.g. for the timed heater), select the appropriate button on the right of the display.

Interior Equipment

CIGAR LIGHTER



LAN0458G

To access the cigar lighter, press the upper edge of the ashtray cover to open. With the starter switch turned on, press the lighter in (arrowed) 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.

Note: The cigar lighter socket remains powered with the starter switch turned off. Battery drain could occur if accessories are left plugged in when leaving the vehicle parked.

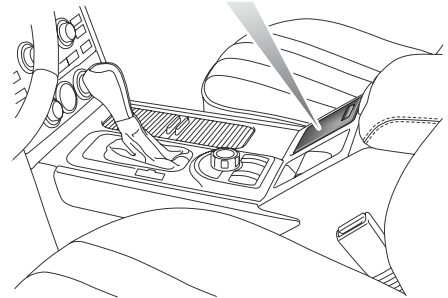
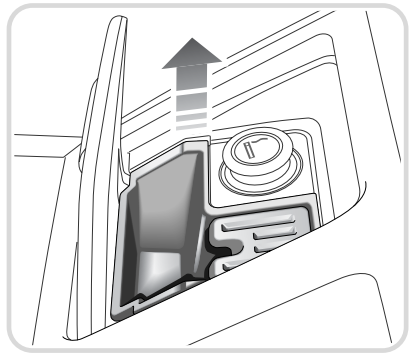
ASHTRAYS

WARNING

Do not use the ashtrays for disposing of waste paper or any other combustible items. The resulting fire may cause death or serious injury.

Front

To open the ashtray, press upper edge of the cover.

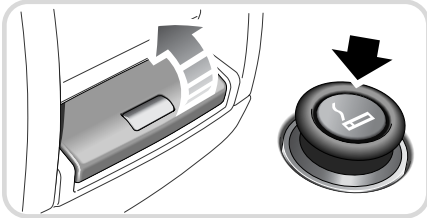
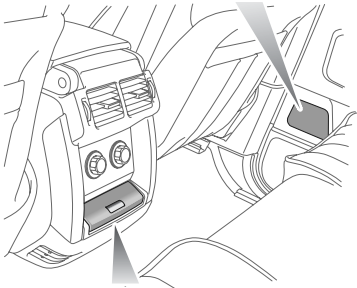
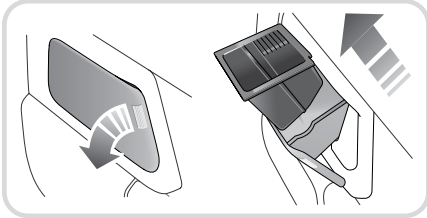


LAN0459G

To remove for emptying or cleaning, lift the ashtray upwards.

Interior Equipment

Rear

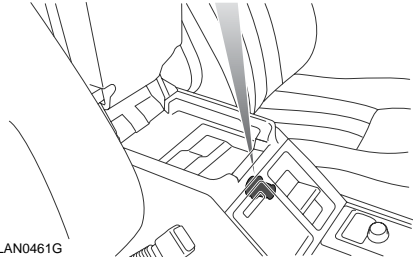
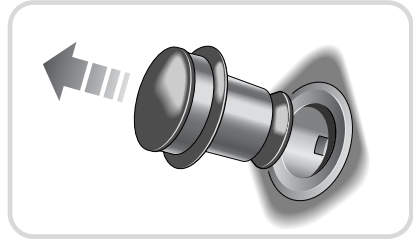
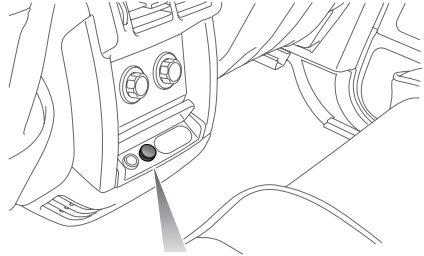


LAN0460G

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. To access the lighter, press the rearward edge of the cover. Operation of the rear cigar lighter is the same as that in the front.

AUXILIARY POWER SOCKETS



LAN0461G

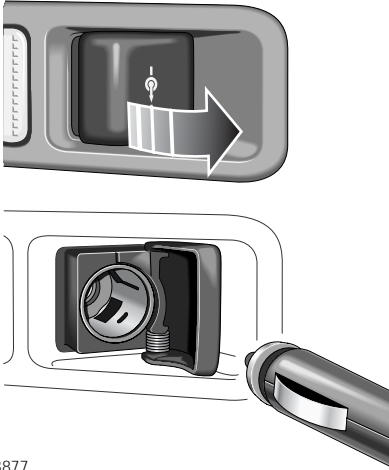
Passenger compartment power sockets

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

A second auxiliary power socket is located to the rear of the cubby box, adjacent to the rear cigar lighter. Press the rearward edge of the cover to access the socket.

Note: Before attempting to use an auxiliary power socket, remove the protective plug, as shown.

Interior Equipment



H3877

Rear loadspace power socket

A third 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.

When not in use, always refit the power socket protective plug, to prevent dirt or dust from entering the socket.

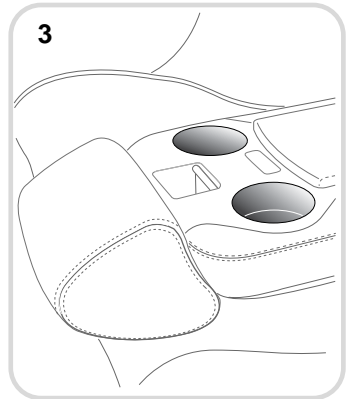
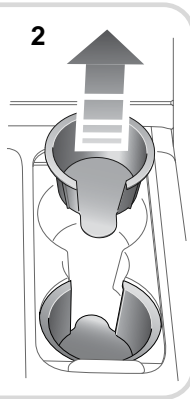
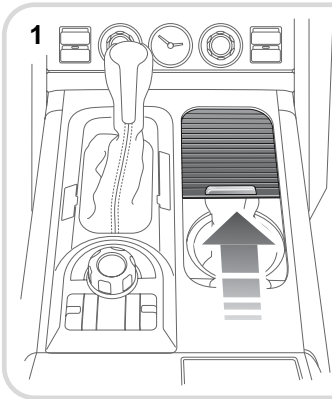
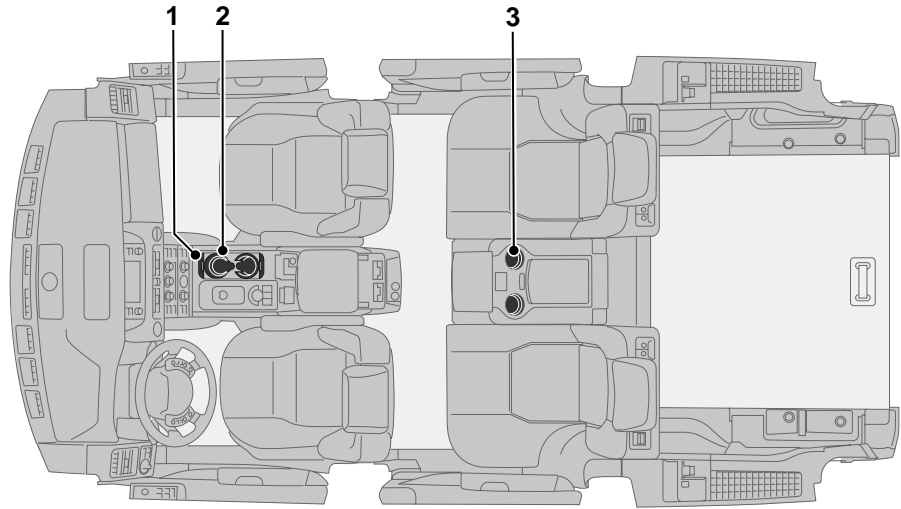
Note: *Auxiliary power sockets remain live with the starter switch turned off. Battery drain resulting in failure to start the engine may occur if accessories remain plugged in whilst the engine is switched off.*

Caution: **Only Land Rover approved accessories should be plugged into the power sockets. Using any other equipment may damage the vehicle's electrical system. If you are in any doubt contact your Dealer.**

The engine should be running when using accessories for long periods. Failure to do so can discharge the battery.

Interior Equipment

CUP HOLDERS



LAN1212

Front

1. Open the roller covers to access the front cup holders.
2. Lift out the inner sleeve of the cup holder, to accommodate larger cups.

Rear

3. Fold the armrest down to access the rear cup holders.

Interior Equipment

WARNING

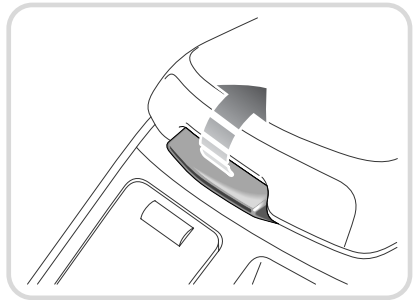
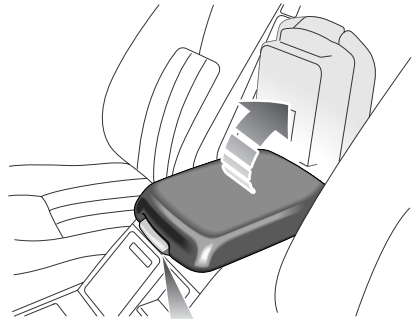
Do not drink or use the drinks holders when driving. Doing so can affect concentration, which may result in loss of control.

Do not place anything other than suitable drinks containers in the cup holder. Such items may be thrown about in the compartment in the event of an accident or emergency manoeuvre, which may cause injuries to the occupants.

The cup and bottle holders should only be used for soft containers. Containers which are hard (cans, metal, ceramic, hard plastic etc.) can cause serious injury or death if the vehicle is involved in an accident, or subject to sudden braking or direction change.

Do not carry open drinks containers. Hot liquids can cause serious injury when spilled and may damage the vehicle.

CUBBY BOX



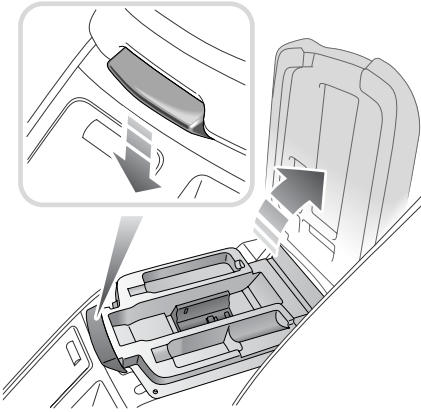
LAN0549G

WARNING

Ensure that any items stored in the vehicle are secure and cannot move. If the vehicle is involved in an accident, or subject to sudden braking or direction change, loose items can cause serious injury.

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

Interior Equipment



LAN0550G

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

REAR CUBBY BOX



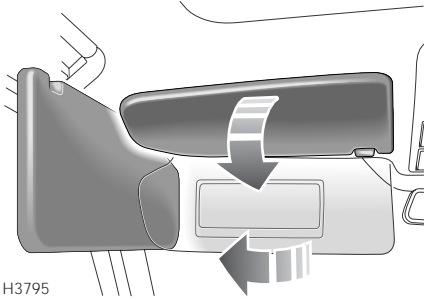
LAN1213

Fold the armrest down to access the rear cubby box.

Press the button to release the lid of the cubby box to access the trinket trays.

Interior Equipment

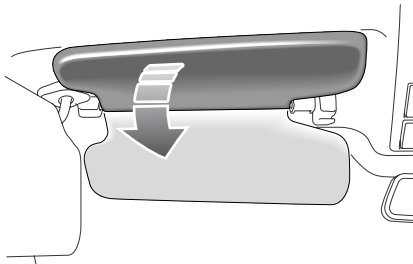
SUN VISOR



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.

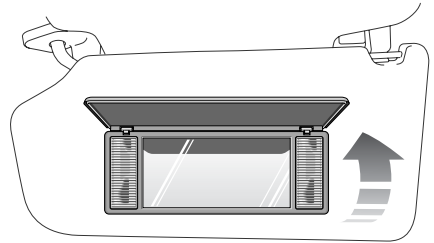
Double-blade sun visor



H3796

If the double-blade option is fitted, a secondary sun visor is located behind the main visor and can be used as required.

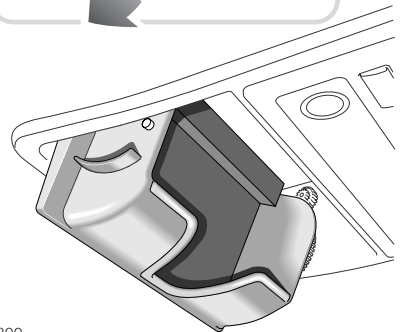
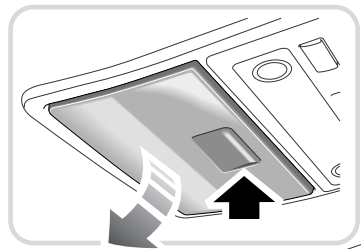
SUN VISOR VANITY MIRROR ILLUMINATION



H3797

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

SUNGLASSES HOLDER



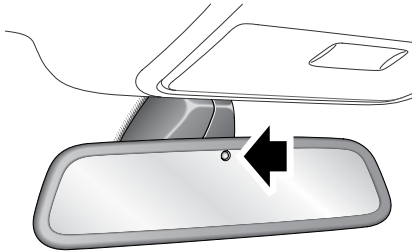
H3800

Press where arrowed (in inset) to open.

Interior Equipment

INTERIOR REAR VIEW MIRROR

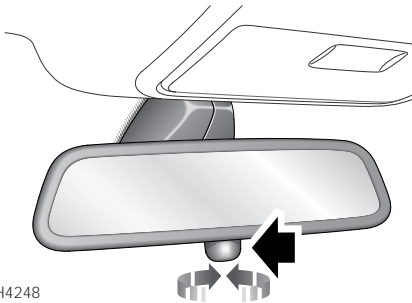
Automatic dipping mirror



H6478L

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

Manual dipping mirror



H4248

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

HOMELINK[®] TRANSMITTER

The Land Rover HomeLink[®] universal transmitter is built into the underside of the rear view mirror and provides a convenient way to replace up to three hand-held transmitters with a single built-in device. This innovative feature will learn the radio frequency codes of most current transmitters to operate garage doors and gates. With the available accessory package, the HomeLink[®] transmitter can also control home or office lighting and security systems. For reliability, the HomeLink[®] transmitter is powered by your vehicle's battery and charging system.

HomeLink[®] is a registered trademark owned by the Johnson Controls, Inc. Milwaukee, Wisconsin.

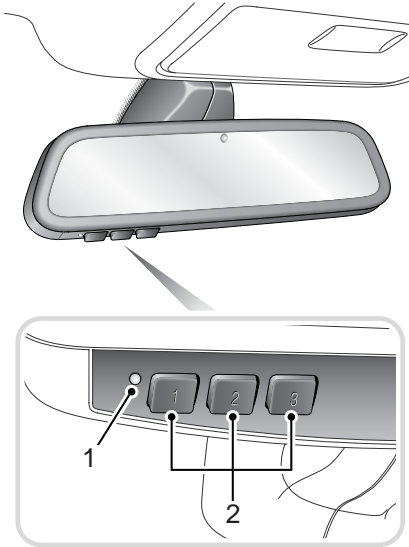
Precautions

When programming your HomeLink[®] transmitter, you will be operating the garage door or gate. Be sure that people and objects are out of the way, to prevent potential harm or damage.

WARNING

Do not use this HomeLink[®] transmitter with any garage door that lacks safety stop and reverse features. A garage door opener which cannot detect an object in the path of a closing door and then automatically stop and reverse the door, does not meet current safety standards. Using a garage door opener without these features increases the risk of serious injury or death.

Interior Equipment



H6480N

1. Status indicator light - red
2. Channel buttons

Before programming the HomeLink® transmitter

Caution: If you intend programming a door or gate that may require you to press and re-press the original hand held transmitter (cycle), disconnect the power supply to the device motor before using the 'cycling' process to prevent possible motor failure.

To achieve best results, fit a new battery to the original hand-held transmitter before starting the HomeLink® programming. If your opening device receiver is equipped with an antenna, ensure that the antenna is hanging straight down.

Programming

1. Turn the starter switch to the second position.
2. If you have previously programmed your HomeLink® transmitter, proceed to step 3. Otherwise, hold down the two outside buttons on the HomeLink® transmitter until the red light (1) begins to flash (approximately 20 seconds). Release both buttons.

This initializes the HomeLink® transmitter and erases previous settings from all three channels.

DO NOT perform this step when programming additional hand-held transmitters.

3. Decide which one of the three channels you want to program.
4. Hold the signal-emitting end of your original hand-held transmitter 5 - 14 cm (1 - 3 in.) away from the HomeLink® transmitter buttons so that you can still see the red status indicator light (1).
5. With one hand, push the hand-held transmitter button, and with the other, the desired button on the HomeLink® transmitter. Continue to press both buttons through step 6.
6. Hold down both buttons until you see the red light on the HomeLink® transmitter flash, first slowly and then rapidly (this could take up to a minute). It indicates that you have successfully programmed the HomeLink® transmitter to learn the new frequency signal. Release both buttons once the rapid flashing begins.
7. Turn the starter switch to the off position.

Interior Equipment

If after repeated attempts you do not successfully program the HomeLink[®] transmitter to learn the signal of the original hand-held transmitter, check that the operating frequency of your device is approved for use in your country. A table at the back of this supplement lists all approved frequencies.

If you still have a problem after checking frequency applicability, contact your Land Rover Dealer/Authorised Repairer or consult www.eurohomelink.com.

Operating the Land Rover HomeLink[®] transmitter

When programmed, the HomeLink[®] transmitter can be used in place of your original hand-held transmitter(s). To operate, simply press the appropriate button on the HomeLink[®] transmitter. The red light (1) comes on while the signal is being transmitted.

***Note:** If your hand-held transmitter appears to program the HomeLink[®] transmitter, but does not open your garage door and if your garage door was manufactured after 1995, your garage door opener may have a code protected or rolling code feature.*

A rolling code type of system will change the code of your garage door opener every time you open or close your garage door.

To determine if you have one of these systems, depress the button on your HomeLink[®] transmitter that you programmed. If the red light on the HomeLink[®] transmitter flashes rapidly for 1-2 seconds, then lights continuously, your garage door opener has a rolling code system.

Rolling code system programming

To train your rolling code device to operate from your HomeLink[®] transmitter:

1. Turn the starter switch to the second position.
2. Program your original hand-held transmitter to the HomeLink[®] transmitter as previously described.
3. Remove the cover panel from your garage door opener receiver (the receiver should be located by the garage door motor).
4. Locate the training button on the garage door opener receiver. The exact location and colour of the button may vary by garage door opener brand.
5. Press and release the training button on the garage door opener receiver then perform the next step within 30 seconds.
6. Return to the HomeLink[®] transmitter in the vehicle and press the programmed button for two seconds and release.
7. Repeat step 6 three times to complete the process.

Your HomeLink[®] transmitter should now open your garage door.

Erasing channels

To erase all three programmed channels, hold down the two outside buttons until the red light begins to flash, then release both buttons.

All memories in the HomeLink[®] transmitter have now been cleared. Channels cannot be erased individually.

Interior Equipment

Reprogramming a single button

To program a device to the HomeLink[®] transmitter using a previously trained button:

1. Turn the starter switch to the second position.
2. Press and hold the desired button. Do NOT release the button until step 5 has been completed.
3. When the indicator light begins to flash slowly (after 20 seconds), position the original hand-held transmitter 5 - 14 cm (1 - 3 in.) away from the HomeLink[®] transmitter surface.
4. Press and hold the hand-held transmitter button. The HomeLink[®] indicator light will flash, at first slowly and then rapidly.
5. When the indicator light begins to flash rapidly, release both buttons.

Note: *Be sure to retain your original transmitter for future programming procedures (i.e. new vehicle purchase).*

When selling your vehicle, be sure to erase all your personal channels from the HomeLink[®] transmitter.

Accessories and assistance

Accessories for your HomeLink[®] transmitter are available from the manufacturer of the device. If you would like additional information or would like to purchase other accessories such as home lighting or security products that can be operated by the HomeLink[®] transmitter, please call the toll-free from anywhere within Europe on; 0 0800 0466 354 65. If calling from within Germany, the first zero is not required. If difficulty is experienced with this telephone number, try the alternative 0049 6838 907227.

Contact can also be made via email to info@eurohomelink.com.

Interior Equipment

Approval numbers / dates for EuroHomeLink
radio transceiver

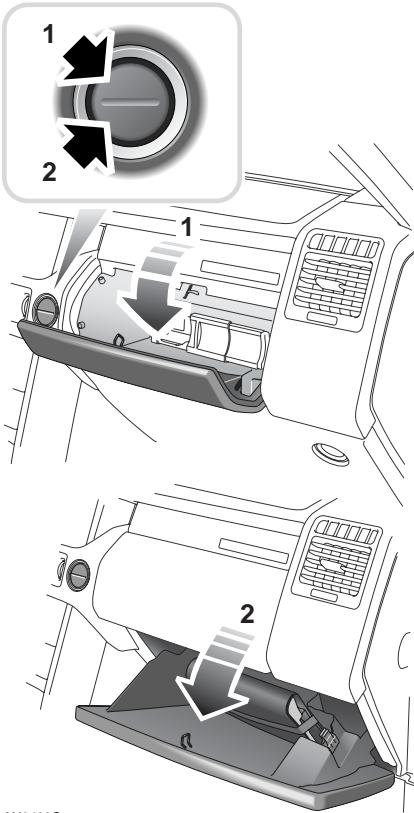
Country	Frequencies	Approval No. / Date
Austria	27, 40, 433, 868MHz	GZ104569-ZB/98
Belgium	27, 40, 433, 868MHz	RTT/D/X2064
Czech Republic	27, 40, 433, 868MHz	CTU 2000 3 R 1194
Cyprus	27, 40, 433, 868MHz	MCW129/95 12/2000
Denmark	27, 40, 433, 868MHz	98.3142-266
Finland	27, 40, 433, 868MHz	FI98080106
France	27,30,40,433, 868MHz	97619 RD
Germany	27, 40, 433, 868MHz	D800038K
Gibraltar	27,40,418,433, 868MHz	RTTE 20754/0087847
Greece	27, 40, 433, 868MHz	JCI 05JUL2000 RTTE
Hungary	27, 40, 433, 868MHz	BB-5793-1/2000
Ireland	27, 40, 433, 868MHz	TRA 24/5/109/5
Iceland	27, 40, 433, 868MHz	IS-3418-00
Italy	27, 30, 40, 433, 868MHz	DGPGF/4/341032/TB 0002573
Luxembourg	27, 40, 433, 868MHz	L2433/10510-03J
Malta	27, 40, 433, 868MHz	WT/122/98
Netherlands	27, 40, 433, 868MHz	NL99030970
Norway	40, 433, 868MHz	NO20000026
Poland	27, 40, 433, 868MHz	URT-GP-CLBT-431-66/2002/C
Martinique (DOM)	27, 40, 433, 868MHz	97619 RD
Reunion, La (DOM)	27, 40, 433, 868MHz	97619 RD
Portugal	27, 40, 433, 868MHz	JCI 03JUL2000 RTTE
Slovak Republic	27, 40, 433, 868MHz	R 267 2001 N
Spain	27, 40, 433, 868MHz	0416 00
Sweden	40, 433, 868MHz	Ue990195
Switzerland/ Fürstentum Lichtenstein	27, 40, 433, 868MHz	BAKOM 98.0746.K.P
Turkey	27, 40, 433MHz	0425/TGM-TR/JOCO-EURO
U.K.	27,40,418,433, 868MHz	RTTE 20754/0087847
SouthAfrica	27, 40, 433MHz	TA 598/2002
Australia	30, 40, 433MHz	27NOV2002
NewZealand	27, 30, 40, 433MHz	02DEC2002
Jordania	27, 30, 40, 433, 868MHz	TRC/LPD/2002/20

Interior Equipment

Country	Frequencies	Approval No. / Date
Kuwait	27, 30, 40, 418, 433, 868MHz	14JAN2002
SaudiArabia	27, 40, 418, 433MHz	SAP20554184
UA Emirates	433MHz	K8133510-CC
Monacco	27,30,40,433, 868MHz	PC/cp-CI.T55-03/04672
Andorra	27, 30, 40, 433, 868MHz	16SEP2003
Chile	40, 433MHz	12DEC2001
Croatia	27, 40, 433, 868MHz	SRD-156/03
Estonia	27, 40, 433, 868MHz	5-4796/04_1_2
Latvia	27, 40, 433, 868MHz	(27.4)-1B-2269
Slovenien	27, 40, 433, 868MHz	500-11/2004-146
Russia	433MHz	POCC DE.MJ05.H00016
Lithuania	27, 40, 433, 868MHz	TBC

Interior Equipment

GLOVE BOXES



LAN0463G

Press the upper portion of the release button (1) to open the upper glovebox.

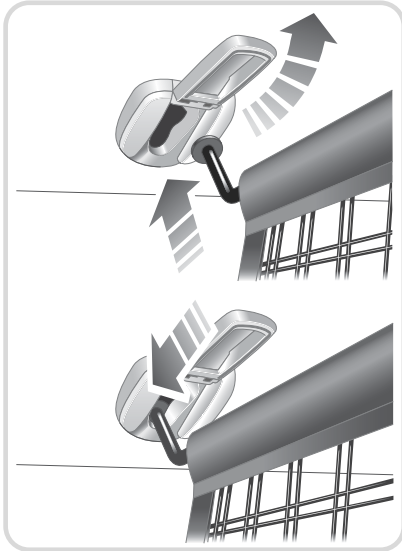
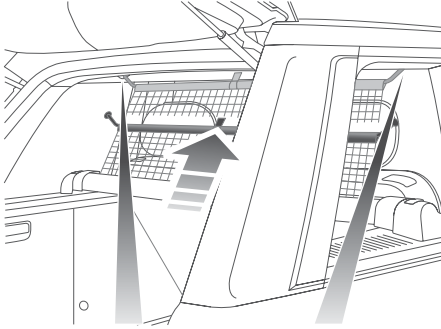
Press the lower portion of the release button (2) to open the lower glovebox.

For added security, the glove boxes are locked automatically when the vehicle is locked.

Interior Equipment

LOADSPACE SAFETY NET

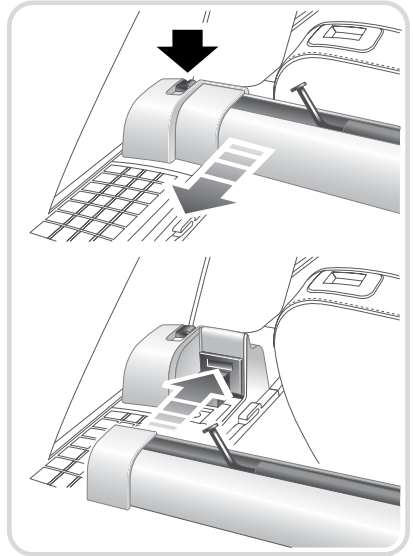
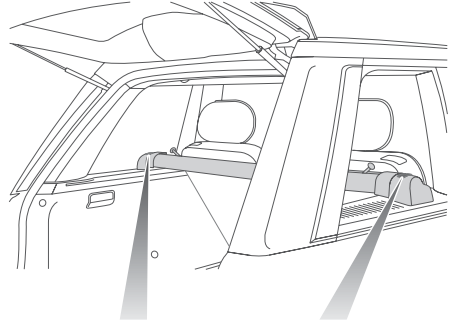
The loadspace safety net is designed to prevent loose loads and items of luggage from entering the passenger compartment in the event of an accident or emergency manoeuvre.



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.

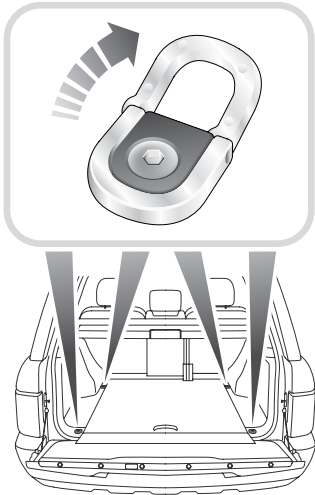
To refit, push the net cartridge firmly back into the mounting position.

Interior Equipment

LUGGAGE ANCHOR POINTS

WARNING

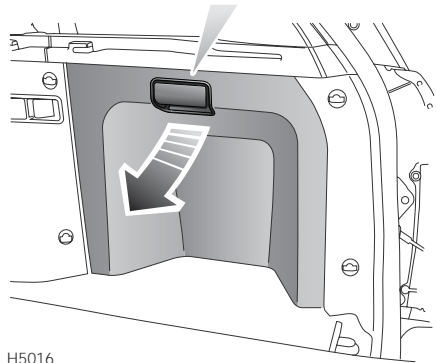
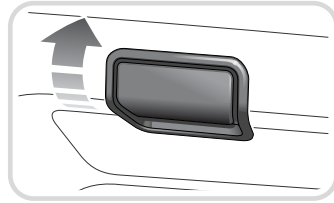
Do not carry unsecured equipment, tools or luggage, which could move and cause personal injury in the event of an accident or emergency manoeuvre either on or off-road.



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.

REAR LOADSPACE ACCESS HATCH



H5016

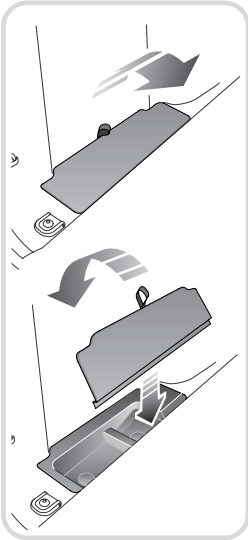
The access hatch is located on the right hand side of the rear loadspace and provides access to the warning triangle, the rear loadspace fuse box and the emergency fuel filler flap release.

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

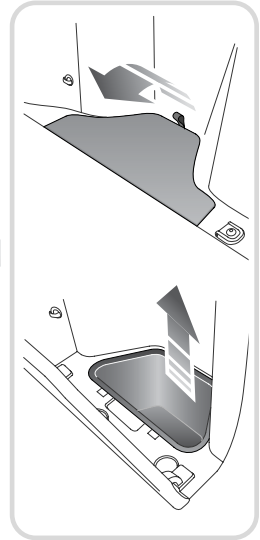
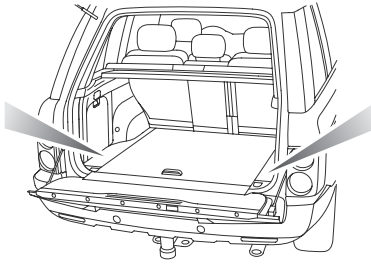
When refitting the hatch, ensure that it is securely and correctly fitted, before driving.

Interior Equipment

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 storage box

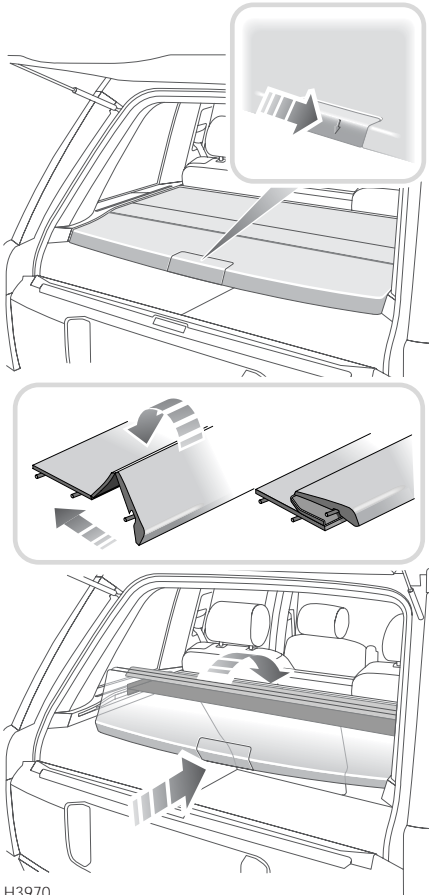
On the right-hand side of the loadspace, a removable box is fitted, beneath the loadspace floor. Pull up the tab to open the box cover. Pull the box out to remove.

Note: On vehicles fitted with a detachable tow bar, the removable storage box is not fitted and is replaced by the tow bar storage area.

Interior Equipment

LOADSPACE COVER

Operating the 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.

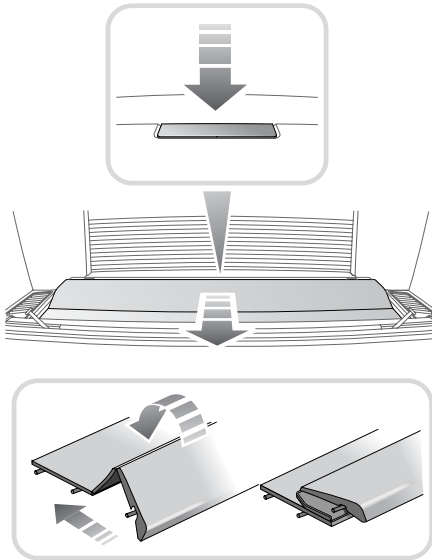
WARNING

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.

Interior Equipment

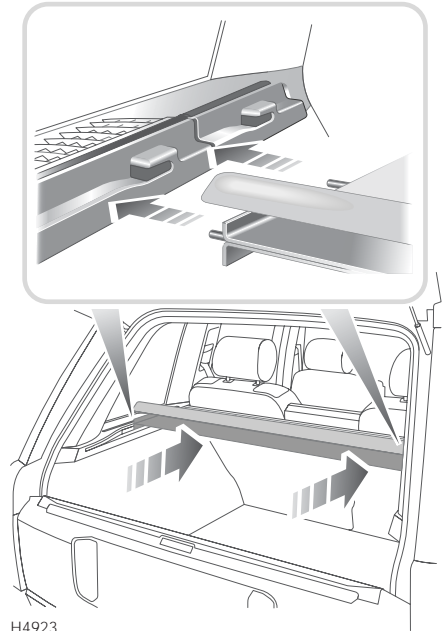
Folding the loadspace cover from inside the vehicle



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.

Fitting the loadspace cover



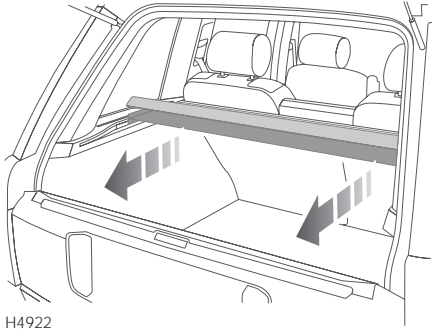
H4923

Place the loadspace cover in position, ensuring that the two locating pins on each side rest on the slides just rearwards of the sockets.

Press firmly forwards to engage and lock the pins in the sockets.

Interior Equipment

Removing the loadspace cover



H4922

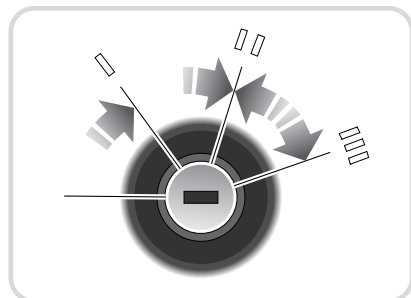
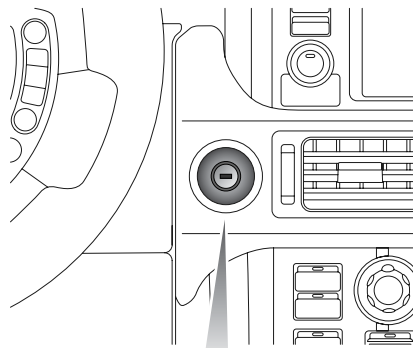
With the cover folded, pull the whole assembly rearwards to disconnect the locating pins and withdraw the loadspace cover carefully from the vehicle.

WARNING

Do not store the loadspace cover loose in the vehicle.

Starting and Driving

STEERING COLUMN LOCK



LAN0464G

If a steering lock is fitted, it is integral with the starter switch and is located as shown.

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:

Off position

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

First position

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

Second position

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

Third position

- The starting sequence is initiated. Note that operation of first position electrical functions will be interrupted during engine cranking.

Note: The gear selector must be in either **P** or **N** before the engine will start.

Starting and Driving

STARTING - Petrol models

WARNING

Never start the engine, or leave it running, when the vehicle is in an enclosed space. Exhaust gasses are poisonous and can cause unconsciousness and death if inhaled.

Before starting the engine and driving, ensure you are familiar with the precautions shown under **CATALYTIC CONVERTER, 175**.

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 parking brake 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 the second position, then on to the third position 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 the first position before attempting to restart; the engine will not start by turning the starter switch from the second position.

Caution: If the engine fails to start, do not continue cranking as this will discharge the battery. It may also damage the catalytic converter due to unburnt fuel passing through the exhaust.

Note: The battery charging and oil pressure warning indicators should extinguish as soon as the engine is running.

Cold climates

In very cold climates the oil pressure warning indicator may take several seconds to extinguish. Similarly, engine cranking times will also increase. At -25°C (-13°F) 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 to maximise the available battery effort for starting.

After starting

Ensure that the parking brake 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 and Driving

STARTING - Diesel models

WARNING

Never start the engine, or leave it running, when the vehicle is in an enclosed space. Exhaust gasses are poisonous and can cause unconsciousness and illness if inhaled.

Before starting the engine and driving, ensure you are familiar with the precautions shown under **CATALYTIC CONVERTER, 175**.

1. Check that the parking brake 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 the second position. Wait until the glow plug warning indicator extinguishes.

Note: The waiting time will vary according to the engine coolant temperature (when the engine is hot, the glow plug warning indicator will extinguish almost immediately, or may not illuminate at all).

4. Turn the key to the third position 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 the first position before attempting to restart; the engine will not start by turning the starter switch from the second position.

Caution: If the engine fails to start, do not continue cranking as this will discharge the battery.

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 indicators should extinguish as soon as the engine is running.

Caution: The diesel engine must not be run above idle speed until the oil pressure warning indicator 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 indicator may take several seconds to extinguish. Similarly, engine cranking times will also increase. At -25°C (-13°F) 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 parking brake 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 and Driving

GENERAL DRIVING ADVICE

Instruments and warning indicators

Before driving it is important to fully understand the function of the instruments and warning indicators. See **INSTRUMENT PANEL, 85**.

Caution: Red warning indicators are of particular importance, their illumination indicating that a fault exists. If a red indicator illuminates, always stop the vehicle and seek qualified assistance before continuing.

Power assisted steering

Note: Power assistance is dependent on the engine running. If the engine is not running, a much greater effort will be required to steer the vehicle.

Warming up

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

When the engine is cold, engine idle speeds will be faster than normal. Under these circumstances, use the foot brake to control the vehicle until the engine is warm and running at normal speed, and be aware of the need to take additional care when manoeuvring the vehicle.

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 (500 miles), 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 (70 mph) or 3 000 rev/min. Initially, drive the vehicle using light accelerator pressure and only increase engine speeds gradually once the running-in distance has been completed.
- Do not operate the vehicle with the accelerator fully depressed or allow the engine to labour in any gear.
- Avoid fast acceleration and heavy braking, except in emergencies.
- 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.

Servicing requirements

Vehicles which operate in arduous conditions, particularly on dusty, muddy or wet terrain and vehicles which undergo frequent or deep wading conditions, will require more frequent servicing. Contact a Land Rover Dealer/ Authorised Repairer for advice.

After wading in salt water or driving on sandy beaches, wash the underbody components and exposed panels with fresh water. This will help to protect the vehicle's cosmetic appearance and prevent impairment of parking brake efficiency.

Starting and Driving

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.
- Decelerate gently and avoid sudden and heavy braking.
- Anticipate obstructions and adjust your speed accordingly well in advance.
- When stationary in traffic, select **N** (Neutral) to improve fuel economy and air conditioning performance.
- Turn off air conditioning when not required.

Vehicle height

Caution: 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 a sunroof is open.

Vehicle stability

WARNING

Utility vehicles have a significantly higher roll-over rate than other types of vehicles. Since these vehicles are designed to be operated off-road, these vehicles have a higher ground clearance and hence a higher centre of gravity. Such a feature has been associated with an increased risk of vehicle roll-over. An advantage associated with higher ground clearance vehicles is a better view of the road, allowing the driver to anticipate problems. Another factor shown to significantly increase roll-over risk is unauthorized vehicle modifications such as fitting incorrect specification tyres, (see **WHEELS AND TYRES, 297**) oversize tyres, body lifting, incorrect springs/dampers, incorrect vehicle loading/trailer towing.

However, on-road crash data also indicates that driver behaviour is a greater factor than a high centre of gravity in determining a vehicle's overall roll-over rate. The single most effective driver behaviour that can reduce the risk of injury or death in all crashes including roll-over, is to always wear your seat belt and to properly restrain all child passengers in the rear seat in an appropriate child safety seat. In a roll-over crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

Starting and Driving

Other measures that can reduce the risk of injury and death from vehicle crashes and roll-over are:

- Limit speed. Posted speed limits should never be exceeded, and you should always drive below these limits whenever traffic, weather, road or other conditions dictate. Always use your common sense and good judgement.
- Take curves at reasonable speeds, avoiding unnecessary braking.
- Drive defensively. Be aware of traffic, road and weather conditions. Avoid risk taking behaviour such as following too close, rapid lane changing or abrupt manoeuvres.
- Assume that pedestrians or other drivers are going to make mistakes. Anticipate what they might do. Be ready for their mistakes.
- Avoid distractions such as cellular phone calling, reading, eating, drinking or reaching for items on the floor.
- Before changing lanes, check your mirrors and use the direction indicators.
- Always leave room for unexpected events such as sudden braking.
- Never operate your vehicle when you have consumed alcohol, are sleepy or fatigued or have taken any medications that affect judgement, reflexes or alertness.

WARNING

Many vehicle roll-overs occur when a driver attempts to bring a vehicle back onto the road after some or all of the wheels drift onto the shoulder of the road, especially when the shoulder is unpaved. If you find yourself in such a situation, do not initiate any sharp or abrupt steering and/or braking manoeuvres to re-enter the roadway. Instead, let the vehicle slow down as much as safely possible before attempting to re-enter the roadway and keep your wheels as straight as possible while re-entering the roadway.

Breakdown safety

If a breakdown occurs while travelling:

- Wherever possible, consistent with road safety and traffic conditions, the vehicle should be moved off the main highway, preferably onto the shoulder as far as possible.
- Switch on hazard warning lamps.
- If possible, position a warning triangle or a flashing amber lamp 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 the doors facing away from traffic, to a safe area away from the vehicle, as a precaution in case your vehicle is accidentally struck by another vehicle.

Starting and Driving

BEFORE DRIVING OFF-ROAD

Before driving off-road, it is absolutely essential that drivers become familiar with the vehicle's controls, in particular the transfer gear switch, CommandShift and Hill Descent Control (HDC).

Basic information and Off-Road driving techniques can be found in the Off-Road driving handbook, available on-line at:

<http://www.ownerinfo.landrover.com>

It is strongly recommended that off-road driver training is undertaken by anyone intending to drive off-road. Training is available at your nearest Land Rover Experience centre. More details can be found at:

<http://www.landroverexperience.com>

Wading

Caution: The maximum advisable wading depth is 500 mm (20 in.). Wading at a depth greater than the maximum wading depth regularly, is not recommended.

If the vehicle remains stationary for any length of time, in water above the level of the door sills, severe electrical damage may occur.

Do not switch off the engine during wading. If the engine stalls during wading, re-start immediately. Should the engine stall, get it checked by Land Rover Dealer/Authorised Repairer as soon as possible.

If during wading, water enters the engine air intake, switch off immediately. The vehicle should be towed from the water and recovered to a Land Rover Dealer/Authorised Repairer.

DIESEL PARTICULATE FILTER (DPF)

The Diesel Particulate Filter (DPF) forms part of the emissions reduction system fitted to Land Rover vehicles. The DPF will remove a high proportion of the harmful carbon microspheres (soot) before they leave the exhaust. It achieves this by filtering out the particles, which are then stored until they are burnt away and the filter is emptied.

Regeneration

Caution: The regeneration procedure produces high temperatures in the DPF. Heat can be felt radiating from beneath the vehicle, which is normal and not a cause for concern. However, the vehicle should not be parked over combustible material, particularly during dry weather. The heat generated could be sufficient to start a fire when in close proximity to combustible material such as long dry grass, paper etc.

Unlike a normal filter which requires periodic replacement, the DPF has been designed to regenerate, or clean itself to maintain operating efficiency. The regeneration process takes place automatically in most cases. However, some unfavourable driving conditions mean that the regeneration process must be initiated deliberately by the driver.

Regeneration procedure

If **DPF FULL** along with the handbook symbol appears in the message centre, carry out the following procedure.

Starting and Driving

Note: At all times during this procedure you should observe all relevant speed limits, laws, and regulations. Always take account of traffic and weather conditions, and drive with consideration for other road users.

1. Drive the vehicle until the engine reaches normal operating temperature. The engine should not be left idling to achieve working temperature.
2. Drive the vehicle for a further twenty minutes, keeping the road speed above 80 km/h (50 mph).
3. If regeneration is successful the warning light, or message, will extinguish. If they do not repeat the process.

Note: If the warning indicator or message fails to extinguish after following the regeneration process three times, contact your Land Rover Dealer/Authorised Repairer for assistance.

Warning indicators and messages

Caution: Failure to take the appropriate action when a warning indicator or message appears may result in damage to the engine, DPF system, increased vehicle emissions, and costly repairs.

If regeneration cannot be achieved automatically by the system, due to short journeys for example, the driver will be notified via a warning indicator, or message.

DPF FULL

If this message appears the driver should carry out the DPF regeneration procedure as soon as possible.

DPF FULL VISIT DEALER

If this message appears the vehicle should be taken to your Land Rover Dealer/Authorised Repairer as soon as possible.

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/Authorised Repairers are properly equipped to perform repairs and to maintain the emission control system on your vehicle.

Caution: If the vehicle runs out of fuel, a misfire can result. This can cause damage to the emission control system.

Catalytic Converter

CATALYTIC CONVERTER

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.

The exhaust system incorporates a catalytic converter, which converts poisonous exhaust emissions from the engine into environmentally less harmful gases. It cannot, however, remove all harmful exhaust emissions.

Caution: Severe damage to the catalytic converter could occur if the engine is stopped for any length of time when being driven through water, where the water level is above the exhaust pipe.

Caution: 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. See **ENGINES, 296**.

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/Authorised Repairer for assistance.
- Never allow the vehicle to run out of fuel (the resultant misfire could damage the catalyst).
- Consult your Dealer/Authorised Repairer 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.

Vehicle maintenance

- 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/Authorised Repairer.
- 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.

WARNING

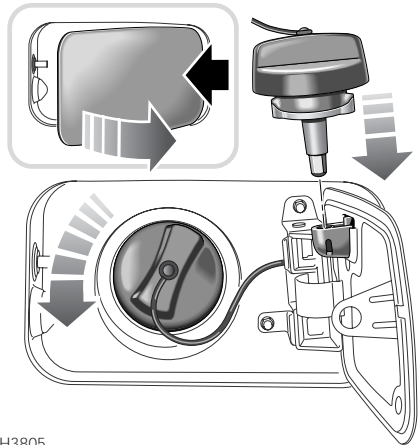
Always ensure that the fuel burning heater is not operating when refuelling the vehicle. See **TIMED CLIMATE CONTROL**, 137.

FUEL FILLER

WARNING

To avoid any sudden discharge of fuel caused by excessive fuel vapour pressure, do not fully remove the filler cap until any captive tank pressure has been released.

Take careful note of warning labels located around the filler cap.



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 anticlockwise 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.

Fuel Filling

TYPE OF FUEL

Fuel specification - petrol engines

See **ENGINES, 296** for the recommended fuel specification.

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

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

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.

Your vehicle will run on a lower grade of fuel but performance and fuel economy will be reduced.

Using petrol with a lower octane rating than 90 RON, 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.

Fuel specification - diesel engines

See **ENGINES, 296** for the recommended fuel specification.

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.

Caution: If your vehicle is fitted with a Diesel Particulate Filter (DPF) the maximum Sulphur content must not exceed 0.005%. Using an incorrect fuel will cause serious damage to the DPF. For more information about DPF see DIESEL PARTICULATE FILTER (DPF), page 173.

Note: Maximum allowable Bio-diesel mix is 5%.

ALTERNATIVE FUELS FOR PETROL ENGINES

Ethanol

Caution: This vehicle is not suitable for use with fuels containing more than 10 per cent ethanol.

Do not use E85 fuels (85 per cent ethanol content). Equipment necessary for the use of fuels containing more than 10 per cent ethanol is not fitted to this vehicle. If E85 fuels are used, serious engine and fuel system damage will occur.

Fuel Filling

Fuels containing up to 10 per cent ethanol (grain alcohol) may be used. Ensure the fuel has octane ratings no lower than those recommended for unleaded fuel. Most drivers will not notice any operating difference with fuel containing ethanol. If a difference is detected, the use of conventional unleaded fuel should be resumed.

Methanol

Some fuels contain methanol (methyl or wood alcohol). If you use fuels containing methanol the fuels must also contain co-solvents and corrosion inhibitors for methanol. Also, do not use fuels that contain more than three per cent methanol even if they contain co-solvents and corrosion inhibitors. Fuel system damage or vehicle performance problems resulting from the use of such fuels is not the responsibility of Land Rover, and may not be covered under the warranty.

Methyl Tertiary Butyl Ether (MTBE)

Unleaded fuel containing an oxygenate known as MTBE can be used provided the ratio of MTBE to conventional fuel does not exceed 15%. MTBE is an ether based compound, derived from petroleum, which has been specified by several refiners as the substance to enhance the octane rating of fuel.

Reformulated gasoline

Several petroleum companies have announced the availability of reformulated fuels. These fuels are specially designed to further reduce vehicle emissions. Land Rover fully supports all efforts to protect and maintain ambient air quality and encourages the use of reformulated gasoline where available.

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.

Petrol engine vehicles

The fuel filler neck will accept only a narrow filler nozzle of the type found on pumps that deliver unleaded fuel.

Diesel engine vehicles

The diesel pumps on garage forecourts fill at a maximum of 55 litres (12 gallons) per minute.

If the fuel cuts off as soon as the trigger on the pump is operated, check that the correct fuel has been selected. Immediate cut-off may have been caused by the fuel guard system. See **PETROL FUEL GUARD, 179**.

Fuel Filling

PETROL FUEL GUARD

WARNING

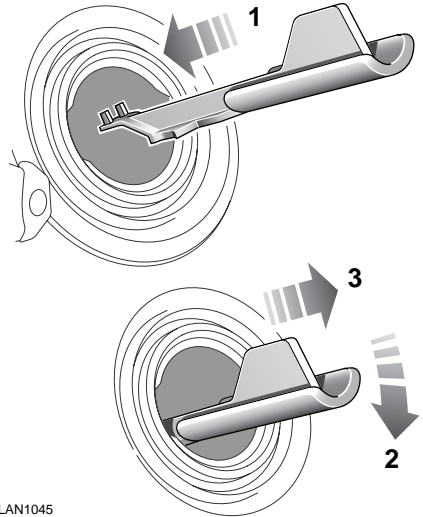
When the fuel guard is activated, it could cause petrol to be discharged from the filler neck.

On diesel engine vehicles, to prevent the tank being accidentally filled with petrol, the filler neck incorporates a fuel guard system. The narrow filler nozzle fitted to pumps delivering unleaded petrol activates a protective guard, which prevents the fuel from being delivered.

If this occurs, the yellow fuel guard will be visible in the filler neck. The fuel guard will need to be reset before the tank can be correctly filled with diesel fuel. This is achieved using the reset tool, located in the tool kit. See **TOOL KIT, 261**.

Note: It is the driver's responsibility to fill the vehicle with the correct fuel. The petrol fuel guard only reduces the risk of filling the vehicle with the incorrect fuel.

Caution: Using the incorrect fuel can result in major damage to your vehicle's engine and fuel system.



LAN1045

Reset the fuel guard as follows:

1. Insert the reset tool (with the teeth uppermost) as far as it will go into the filler neck.
2. Pivot the tool handle downwards to engage the teeth into the fuel guard.
3. Pull the tool rearwards, to reset the fuel guard.

Note: To ensure that the fuel guard is correctly reset, check that the yellow fuel guard is no longer visible in the filler neck before refuelling with diesel fuel.

After resetting the fuel guard system, remove the tool from the filler neck and secure in its stowage slot in the spare wheel well. If subsequent driveability difficulties are encountered, seek assistance from a Land Rover Dealer/Authorised Repairer.

Fuel Filling

Note: On diesel vehicles, when refuelling the vehicle using a disposable fuel canister, always use a canister designed for diesel fuel where possible. The spout on petrol canisters, may activate the fuel guard.

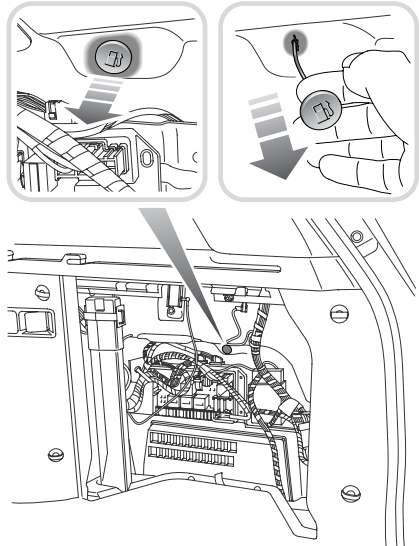
EMPTY FUEL TANK

Caution: Do not run the fuel tank dry.

Running the fuel tank dry could create an engine misfire.

Note: When refuelling an empty fuel tank, at least 5 litres (1.1 gallons) of fuel must be added to the tank, before the engine can be started.

FUEL FILLER FLAP EMERGENCY RELEASE

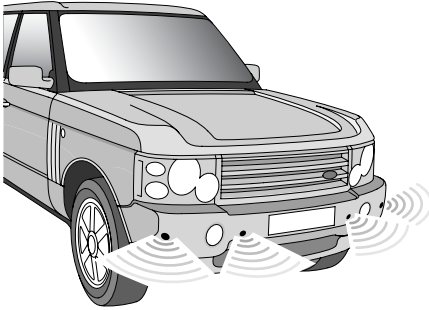


H4050

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, 162**. Pull the green release handle (as illustrated in the insets) to open the filler flap.

Park Distance Control

USING PARK DISTANCE CONTROL (PDC)



LAN0592G

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 600 mm (2 feet). The two centre rear sensors have a range of approximately 1 500 mm (5 feet).

Caution: 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.

Caution: 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

Activating PDC

PDC is automatically activated whenever **R** (Reverse) is engaged. Both front and rear sets of sensors are activated and the indicator in the switch illuminates. A short confirmation tone sounds after 1 second.

In **R**, the sensors remain on regardless of vehicle speed.

Selection of **P** (Park), or applying the parking brake while the vehicle is stationary, overrides other inputs and turns off the system.



LAN0466G

PDC is automatically cancelled when **D** (Drive) is selected and the vehicle exceeds 16 km/h (10 mph).

When driving forwards into a limited space, front PDC can be activated manually 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 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 300 mm (1 foot), the tone becomes continuous.

PDC will remain active until the vehicle speed exceeds approximately 32 km/h (20 mph) or until the vehicle has travelled approximately 50 metres (165 feet), when it will automatically deactivate.

Rear View Camera

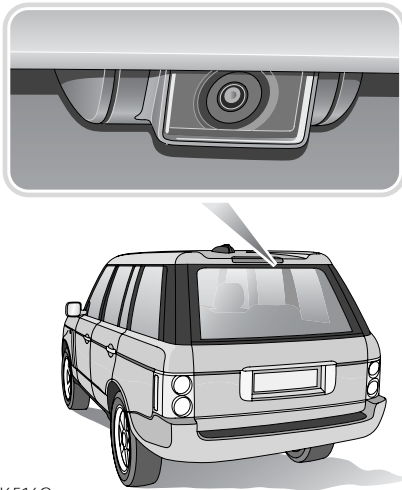
PRINCIPLE OF OPERATION

WARNING

It remains the driver's responsibility to detect obstacles and estimate the vehicle's distance from them when reversing. Some overhanging objects or barriers, which could possibly cause damage to the vehicle, may not be detected by the camera.

Always be vigilant when reversing.

The system provides a rear view image to assist in reversing the vehicle.



H6516G

The camera is integrated in the rear spoiler and when reverse gear is selected, it automatically displays a wide angle, colour picture of the view from the back of the vehicle. The picture is displayed on the touch screen used for the navigation system.

The rear view image will not be displayed when any of the following apply:

- Drive is selected and the vehicle speed is greater than 16 km/h (10 mph).
- Drive is selected for longer than 15 seconds (the approximate time out period), and the vehicle speed is less than 16 km/h (10 mph).

Note: In the top right corner of the display, there is a back-up soft key, which takes the user back to the previously viewed screen.

Automatic Transmission

USING AUTOMATIC TRANSMISSION

Starting

Caution: Vehicles must not be push or tow started.

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

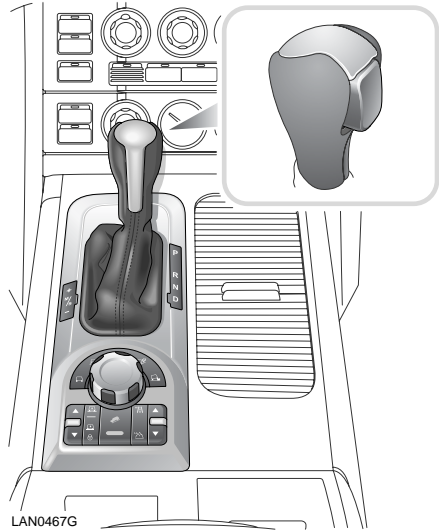
- Always apply the parking brake and foot brake before starting the engine.
- Keep the brakes applied while moving the selector lever into a drive position (the selector lever cannot be moved from the **P** position unless the foot brake is applied).

Note: If pressure is applied to the selector lever before the foot brake is applied, any gear selected may not be available irrespective of the lever position. In this situation, remove pressure from the selector lever, ensure that the foot brake is applied and select the required gear.

- 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 transmissioned vehicle may 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).

Note: The gear selector must be in the **P** position before the starter key can be removed.

Note: For maximum air conditioning performance while stationary, select **P** or **N**.



Selector lever positions

Caution: Do not select P or R if the vehicle is moving.

Do not select a forward drive gear when the vehicle is moving backwards.

Do not select reverse gear when the vehicle is moving forwards.

Select P and turn the starter switch off before leaving the vehicle.

Do not leave children unattended in the vehicle.

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

Automatic Transmission

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

The selector release button must be pressed before moving the selector lever into **P**.

Press the selector release button and foot brake to move the selector lever out of **P**.

***Note:** The selector lever will not be released from **P**, unless the starter switch is in the second position.*

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

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 **N**, the transmission is not locked, so the parking brake must be applied whenever **N** is selected.

If the vehicle remains stationary, the selector lever becomes locked in **N** and it is then necessary to depress the brake pedal in order to release the selector lever.

Press the selector release button and foot brake to move from **N** to **R** or **D**.

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

Kick-down in automatic mode

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.*

Automatic Transmission

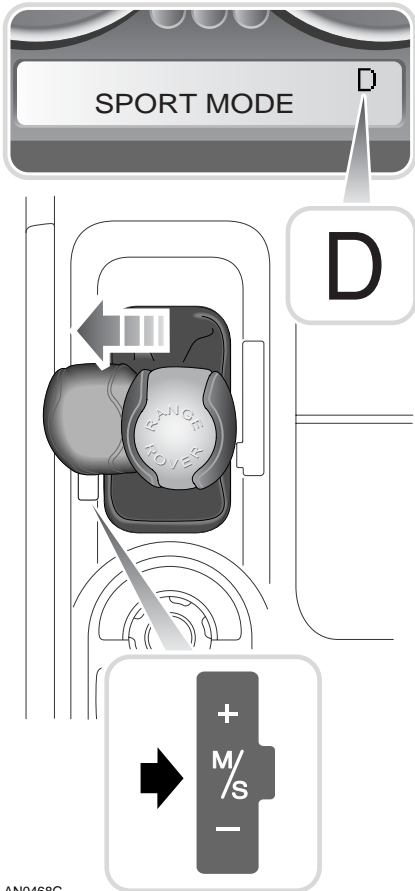
Sport mode

In Sport mode, full automatic progression through the gear ratios is retained and the transmission will stay in the lower gears for longer. This improves mid-range performance with downshifts occurring more readily.

To select Sport mode, move the gear lever from the **D** position towards the left hand side of the vehicle (see illustration). The LED in the selector display to the side 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.

To return to Sport mode after CommandShift has been selected, move the selector lever across into the automatic mode **D** position, then move it back across into Sport mode.

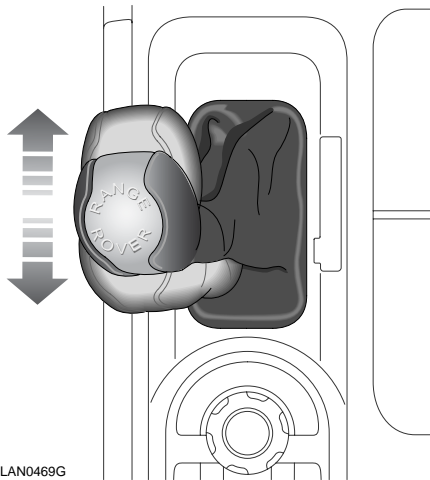


LAN0468G

Automatic Transmission

CommandShift™ GEAR SELECTION

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



LAN0469G

There are six 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 from the **D** position towards the left hand side of the vehicle (this is exactly the same as selecting Sport mode). **SPORT MODE** is displayed in the main message centre for 6 seconds.
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 (when available). The selected gear will be indicated in the digital display in the instrument panel (see inset).

Note: The transmission will automatically change to a higher gear if engine speed is increased beyond a certain level.

4. To deselect CommandShift, move the selector lever sideways, back to the **D** position. Automatic gear changing will then resume.

Note: In CommandShift, kick-down is still available for increased acceleration. See **Kick-down in automatic mode, 185**.

Note: When Terrain Response is selected, the transmission will automatically enter CommandShift mode if the lever is moved into Sport/CommandShift while any Special Program is selected.

Using CommandShift 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 CommandShift 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.

Kick-down in manual CommandShift mode:

When in CommandShift, kick-down overrides the manual gear selection, to provide increased acceleration.

In High range, with CommandShift selected, kick-down will cause a downshift to the lowest gear possible for the current vehicle speed.

Automatic Transmission

ELECTRONICALLY SELECTED AUTOMATIC MODES

In automatic or Sport mode (not available in CommandShift), the transmission control system will electronically adjust gear change points to suit a variety of driving conditions.

Note: The electronic modes described below are selected automatically by the transmission control unit. They cannot be selected by the driver.

Hill ascent, trailer and high altitude mode

A suitable gear change pattern is selected to retain lower gears for longer. This is to counter momentum loss caused by more frequent gear changing during hill ascent or when towing. This gear change pattern is also selected at high altitudes to combat reduced engine torque.

Hill descent mode

When in CommandShift 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, while enabling the gearbox to continue performing normally in high temperatures.

Note: When Terrain Response is used, automatic transmission change points/patterns will change, depending on which mode has been selected.

Limp home mode

Should the transmission develop a fault, F is displayed in the gear position display and only limited gears are available. See immediate assistance from your Land Rover Dealer/ Authorised Repairer.

Transfer Gearbox

TRANSFER GEARBOX

Your vehicle is equipped with an electronically controlled transfer gearbox allowing the driver to select High or Low range driving gears.

High range

High range should be used for all normal road driving and also for off-road driving across dry, level terrain.

Low range

Low range should only be used in situations where low speed manoeuvring is necessary, such as reversing a trailer or negotiating a boulder-strewn river bed, or when moving off while heavily loaded or towing.

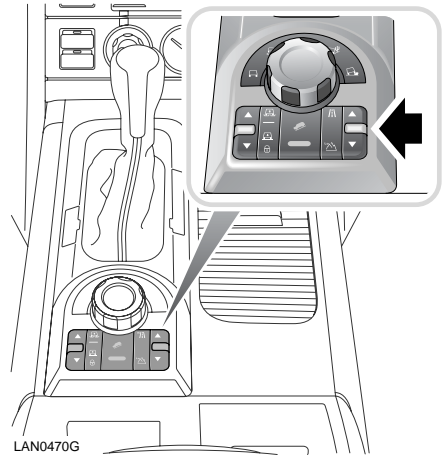
Also use Low range for more extreme off-road conditions, such as steep ascents and descents. Do not attempt to use the Low range for normal road driving.

Range changing

The recommended method of changing range is with the vehicle stationary. Messages displayed in the main message centre will assist the experienced driver in carrying out a range change on-the-move.

Stationary method

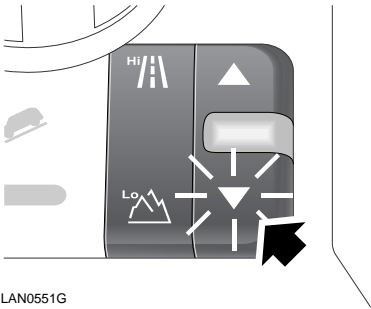
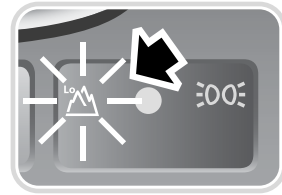
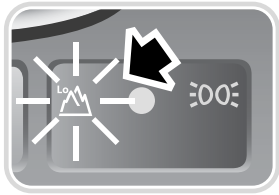
With the vehicle stationary and the engine running, apply the foot brake and move the automatic gearbox selector to the **N** (neutral) position before pressing the appropriate portion of the transfer gear switch - press the forward arrow to select High range and press the rearward arrow to select Low range. When the switch is released, it returns to the central position.



While the vehicle is in High range, the range indicator in the instrument pack display is extinguished and the High range indicator in the switch is illuminated.

The range indicator in the instrument pack illuminates continuously to act as a reminder that Low range is engaged. It flashes to indicate a range change in progress and extinguishes once the vehicle is in High range.

Transfer Gearbox

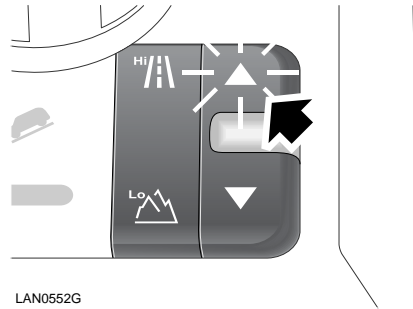


LAN0551G

While a High to Low range change is in progress, the High range indicator in the switch will remain illuminated. The Low range indicators in both the switch and the instrument pack display will flash.

When the range change is complete, the High range indicator in the switch extinguishes. The Low range indicators in both the switch and the instrument pack display will illuminate constantly.

A warning chime will sound, and **LOW RANGE SELECTED** is displayed in the message centre for a few seconds.



LAN0552G

While a Low to High range change is in progress, the Low range indicator in the switch will remain illuminated. The High range indicators in both the switch and the instrument pack display will flash.

When the range change is complete, the Low range indicator in both the switch and the instrument pack display extinguishes. The High range indicator in the switch will illuminate constantly.

A warning chime will sound, and **HIGH RANGE SELECTED** is displayed in the message centre for a few seconds.

Transfer Gearbox

RANGE CHANGING ON THE MOVE

*Note: If the vehicle speed is too high when a range change is requested, a warning chime sounds and **SPEED TOO HIGH FOR RANGE CHANGE** appears in the message centre. Slow down to allow a new range to be selected.*

If **N** is not selected before using the transfer gear switch, the message **SELECT NEUTRAL FOR RANGE CHANGE** is displayed and a warning chime sounds.

Note: Do not attempt to make moving range changes at speeds of 3 km/h (2 mph) or less.

Changing from High to Low on the move

With the vehicle slowing down and travelling no faster than 40 km/h (24 mph), first select **N** in the main gearbox. Press the rear of the transfer gear switch and release.

Indication of the range change status is the same as for the stationary method.

Now select **D** or manual CommandShift mode. The transmission interlock prevents the engagement of a drive gear until the range change is complete.

Changing from Low to High on the move

With the vehicle travelling no faster than 60 km/h (38 mph), select **N** in the main gearbox. Press the front of the transfer gear switch and release.

Indication of the range change status is the same as for the stationary method.

Now select **D** (drive). The transmission interlock prevents the engagement of a drive gear until the range change is complete.

Caution: If the range change indicator still flashes when the starter key is turned from the second position to the first position, apply the parking brake.

Transmission fault message

If a fault occurs within the transmission, a message will be displayed in the main message centre. See **MAIN MESSAGE CENTRE, 97**.

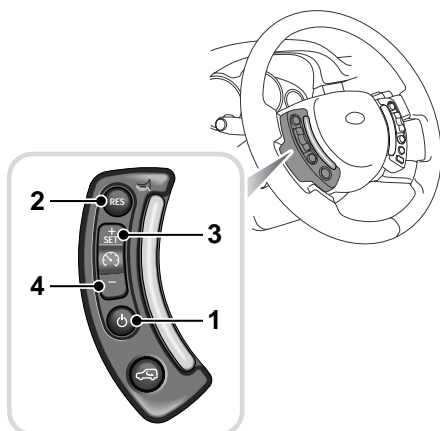
AUXILIARY EQUIPMENT

Caution: Do not use auxiliary equipment, such as roller generators, that are driven by only one or two wheels of the vehicle, as they will cause failure of the transfer gearbox.

Cruise Control

CRUISE CONTROL

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.



LAN1132

The cruise control system has four switches:

1. **Master** switch (On/Suspend/Off)
2. **Resume** switch
3. **+** Accelerate/Set switch
4. **-** Decelerate switch

WARNING

Do not use cruise control on winding or slippery road surfaces, or in traffic conditions where a constant speed cannot be easily maintained.

Caution: Always observe the following precautions:

- Do not use cruise control when using reverse gear.
- Do not use cruise control 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 indicator 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 32 km/h (20 mph).
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.



The warning indicator in the instrument pack illuminates when cruise control is 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.

Cruise Control

To reduce the cruising speed

Press and hold the Decelerate (-) switch (4); the vehicle speed will decrease. 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 Decelerate (-) switch. Each press of the switch will decrease the speed by 2 km/h (1.2 mph).

Note: Cruise control will not operate at speeds below 32 km/h (20 mph).

To increase the set cruising speed:

WARNING

When setting cruise control to the speed limit, it is important to remember that it is possible for the vehicle speed to increase when travelling downhill. This may result in the vehicle exceeding the speed limit.

The driver must always ensure that a safe speed is maintained below the speed limit, taking account of traffic and road conditions.

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 2 km/h (1.2 mph).

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.

To resume cruise control at the previously set speed, press the **Resume** switch.

Switching off cruise control

To switch off cruise control, press the **Master** switch once to suspend cruise control and then press and hold the switch again until the warning indicator in the instrument panel extinguishes.

*Note: The set speed held in the cruise control memory will be erased when either the **Master** switch or the starter switch is turned off.*

Brakes

FOOT BRAKE

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 allow the vehicle to freewheel with the engine turned off as braking assistance will not be available. The pedal brakes will still function, but more pressure will be required to operate them.

If the Red brake warning indicator should illuminate while the vehicle is in motion, bring the vehicle to a halt as quickly as traffic conditions and safety allow and seek qualified assistance before continuing. See Warning Indicators, 109.

Never place a non-approved floor matting or any other obstructions under the brake pedal. This restricts pedal travel and braking efficiency.

The hydraulic braking system operates through dual circuits. If one circuit should fail, the other will continue to function.

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:

- 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.

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.

Brake pads

Brake pads require a period of bedding in. For the first 800 km (500 miles), 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.

Brakes

ANTI-LOCK BRAKING SYSTEM (ABS)

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 anti-lock brake system (ABS) helps the driver to maintain full steering and directional stability during emergency braking, by preventing the road wheels from locking and skidding. ABS constantly monitors the speed of each road wheel and varies brake pressure to each, according to the available grip. ABS optimises the tyre-to-road adhesion under maximum braking.

When ABS is activated, you will feel a pulsating effect on the brake pedal. This is normal and you must **maintain maximum pressure** on the brake pedal.

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

ABS will enable you to steer around obstacles during emergency braking. ABS will not eliminate dangers inherent when;

- driving too close to the vehicle in front of you.
- aquaplaning.
- cornering with excessive speed.
- negotiating poor road surfaces.

Precautions:

- 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.

Warning indicator



If a fault is detected in the ABS, the ABS warning indicator will illuminate. Drive with care if the ABS warning indicator illuminates or remains on after the bulb check cycle. The brake system will continue to function normally, but without ABS braking.

WARNING

If the ABS warning indicator illuminates when driving, avoid heavy braking. Seek qualified assistance as soon as possible. Failure to follow this instruction may lead to personal injury or loss of vehicle control.

Brakes

Off-road driving

While anti-lock braking will operate in off-road driving conditions, on certain surfaces total reliance on the system may be unwise. 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 provide a signal 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 steering control during 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. 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 indicator. See **Warning Indicators, 109**.

Electronic Brake Distribution (EBD)

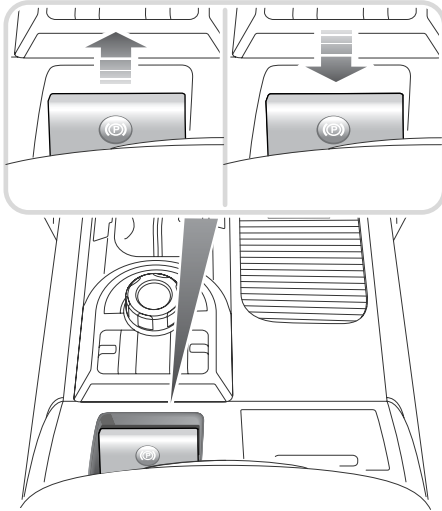
Your vehicle is equipped with Electronic Brake Distribution (EBD), which balances the distribution of braking forces between front and rear axles to maintain maximum braking efficiency under all vehicle loading conditions.

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 indicator. See **Warning Indicators, 109**. If this illuminates while the vehicle is being driven, gently stop the vehicle as soon as safety permit and seek qualified assistance.

Brakes

ELECTRONIC PARKING BRAKE (EPB)



LAN0471G

Applying the EPB manually

With the vehicle stationary, pull up the lever (1) and release it. The lever will return to the neutral position, the indicator light in the switch and the red EPB warning indicator in the instrument pack will illuminate.

It is important to confirm that the red warning indicator is continuously illuminated (not flashing). This indicates that the EPB has been correctly applied.

If the lever is operated while the vehicle is travelling at less than 3 km/h (2 mph), the vehicle will be brought to a stop abruptly. The stop lamps will not illuminate.

If the system detects a fault with the EPB, the warning indicator will illuminate yellow and the message **PARKBRAKE FAULT** will appear in the message centre. If a fault is detected while EPB is operated, the warning indicator will flash red or illuminate yellow. Also the message **PARKBRAKE FAULT. SYSTEM NOT FUNCTIONAL** will appear in the message centre. The indicator will continue to be illuminated for at least ten seconds after the starter switch has been turned off.

WARNING

The EPB operates on the rear wheels of the vehicle and hence secure parking of the vehicle is dependent on being on a hard and stable surface.

Do not rely on the EPB to operate effectively if the vehicle has been subjected to immersion in mud and water.

Do not rely on the EPB system to hold the vehicle stationary if the yellow EPB warning indicator is illuminated and/or the red warning indicator is flashing. Seek qualified assistance urgently.

Brakes

Dynamic operation

In an emergency, the parking brake can be applied dynamically, i.e. with the vehicle travelling at more than 3 km/h (2 mph). Pulling up on the lever and holding it up gives a reduction in speed. The brake warning indicator will illuminate accompanied by a harsh sound and **CAUTION! PARK BRAKE APPLIED** appears on the main message centre. The stop lamps will illuminate.

Releasing or depressing the lever will cancel the EPB application.

The EPB should not be used regularly to decelerate the vehicle or to bring it to a standstill; this facility is intended for emergency use only.

Caution: Driving the vehicle with the parking brake applied (other than in the emergency situation described above) or repeated use of the parking brake to decelerate the vehicle may cause serious damage to the brake system.

Releasing the EPB manually

To disengage the EPB, the starter switch must be in the second position. Apply pressure to the foot brake while pressing down on the EPB lever.

It is not possible to manually release the EPB without pressing the foot brake.

If the EPB cannot be released manually, seek qualified assistance immediately.

Releasing the EPB automatically

If the vehicle is stationary with the EPB applied and the transmission in **D** or **R**, pressing the accelerator will release the EPB and allow the vehicle to move off.

With the transmission in CommandShift™ mode, automatic release is available in 1st and 2nd gears in High range and in 1st, 2nd and 3rd, in Low range.

To delay the automatic release feature, hold the lever in the applied position, then at the desired point, release it.

In the event of a fault, **PARK BRAKE FAULT. AUTO RELEASE NOT FUNCTIONAL** will appear in the message centre. In this event, release the EPB manually.

Under most conditions the EPB system will release seamlessly as the accelerator is applied, allowing the vehicle to move forward. However, release times may be extended for an initial time period at the start of a journey when changing into gear from **P** or **N**. This is normal and is to allow for the extended gear engagement times that may occur under certain circumstances.

The EPB system will also reduce the system load (depending on gradient) to assist a smooth drive away. If the reduction in system load causes the vehicle to move, the full load will be automatically re-applied to the parking brake. To override the load reducing feature of the EPB, apply the parking brake after selecting a gear.

If the vehicle is used in severe off-road conditions, such as wading, deep mud, etc., additional maintenance and adjustment of the parking brake will be required. Consult your Land Rover Dealer/Authorised Repairer.

Fault management

If a fault is diagnosed by the system when the starter switch is on but the parking brake is not in use, the yellow EPB warning indicator will flash and the message **PARK BRAKE FAULT** will be displayed in the main message centre.

***Note:** Under some transmission fault conditions, the parking brake may not function or may not operate automatically.*

Dynamic Stability and Traction Control

DYNAMIC STABILITY CONTROL

Dynamic Stability Control (DSC) optimises vehicle 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 understeer and oversteer 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

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.

Warning indicator



Illuminates as a bulb and system check when the starter switch is turned to the second position and should extinguish when the engine is running. If the warning indicator flashes rapidly the system is active, regulating engine output and brake forces.

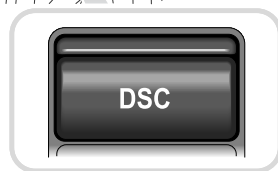
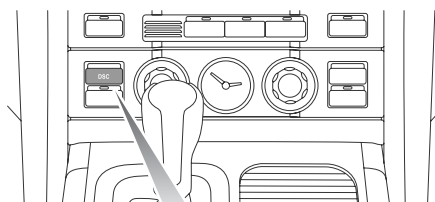
If the indicator flashes continuously a fault in the system has been detected. The vehicle can still be driven with care, but be aware that driving characteristics of the vehicle may change in adverse conditions.

Deactivating 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.



LAN0472G

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

Reactivating DSC

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

Dynamic Stability and Traction Control

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.

Warning indicator



A fault with the ETC system is indicated by the DSC warning indicator flashing continuously.

See **Warning Indicators, 109**.

If the indicator flashes continuously a fault has been detected in the system. Any fault will deactivate ETC. Drive with care and seek qualified assistance as soon as possible.

Hill Descent Control

HILL DESCENT CONTROL

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.

HDC can be used in **D**, **R** and CommandShift. When in **D**, HDC will automatically select the most appropriate gear to enable a controlled descent. The vehicle should not be driven with the HDC active in **N** neutral, unless the driver is changing gear range using the transfer gearbox.

Note: Some of the Terrain Response program/range combinations will activate and deactivate HDC automatically. If HDC is selected manually, it will not be deactivated by Terrain Response.

HDC information indicator

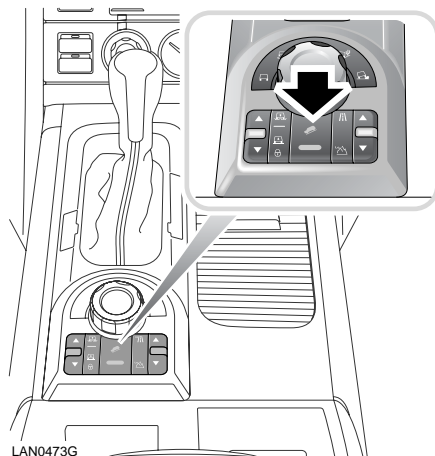


HDC can be selected at speeds below 80 km/h (50 mph), but the vehicle has to be travelling at less than 50 km/h (30 mph) for the system to operate.

The green HDC information indicator will illuminate continuously when HDC operating conditions are met; e.g. vehicle speed reduces below 50 km/h (30 mph) - and HDC is activated.

If the information indicator is flashing, HDC has been selected, but the system's operating conditions have not been met (e.g. the vehicle is travelling too fast), or HDC fade-out is occurring. See **HDC fade-out, 203**.

If HDC is already selected and vehicle speed rises above 50 km/h (30 mph), HDC is suspended and the information indicator will flash. A message will also appear in the main message centre.



To select HDC

Press and release the switch (arrowed) to select HDC (HDC information indicator illuminates). To deselect, press and release again (indicator extinguishes).

If HDC is deselected when HDC is operating, the system fades out, allowing the vehicle to gradually increase in speed.

When used in Low range, HDC is able to control the vehicle to a lower target speed. Use Low range gears when steep descents are to be attempted.

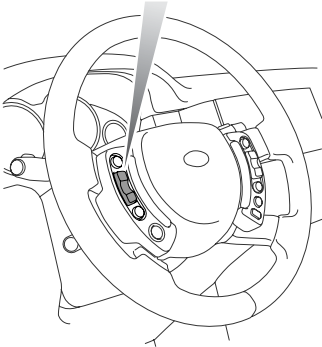
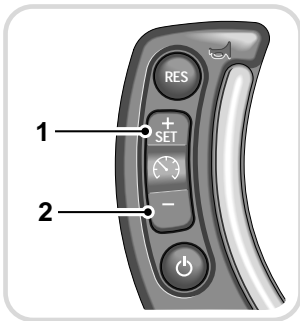
Note: HDC is automatically deselected if the vehicle ignition is switched off for more than 6 hours.

Hill Descent Control

HDC in action

HDC should be used in conjunction with an appropriate gear selection. HDC can be used in **D**, **R** and CommandShift. When in **D**, HDC will automatically select the most appropriate gear to enable a controlled descent.

During a descent, HDC will maintain a target speed of up to a maximum of 20 km/h (20 mph). If engine braking is insufficient to control the vehicle speed, HDC automatically operates the brakes to slow the vehicle and maintain a speed relative to the selected gear range and the accelerator pedal position.



LAN1126

While HDC is controlling the vehicle speed, the target speed can be varied using the steering wheel-mounted cruise control (1) + and (2) - switches. To reduce the target descent speed, press and hold the - switch. The vehicle speed at the point of switch release will become the new target speed.

To set the minimum target speed for the selected gear, bring the vehicle to a halt using the foot brake, before releasing the foot brake and beginning the descent.

Note: Each gear has a pre-defined minimum descent speed.

To increase the target descent speed, press and hold the + switch. The vehicle speed at the point of switch release will become the new target speed. Alternatively, the target speed can be adjusted by tapping the + or - switches. Each press of the switch will adjust the target speed by approximately 0.5 km/h (0.3 mph).

Note: The descent speed will only increase if the gradient is sufficiently steep to cause the vehicle to accelerate as the braking effect is reduced. On a shallow slope, pressing the + switch may result in no speed increase.

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 the speed at which the brakes were released.

Hill Descent Control

In extreme circumstances, the HDC system may cause brake temperatures to exceed their pre-set limits. If this occurs, **HDC TEMPORARILY NOT AVAILABLE SYSTEM COOLING** will be displayed in the message centre. HDC will then fade out and 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 FAULT SYSTEM NOT AVAILABLE** will appear in the message centre. If the fault is detected while the system is active, HDC will fade out. Do not attempt a steep descent when HDC is unavailable or use a very low gear and/or the foot brake. If a fault has been detected, consult your Land Rover Dealer/Authorised Repairer at the earliest opportunity.

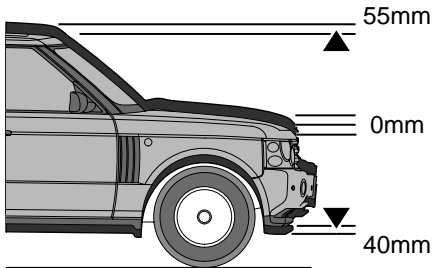
HDC fade-out

HDC fade-out regulates the vehicle's acceleration in a controlled manner, by reducing brake pressure, until the rate of hill descent is controlled by engine braking alone. HDC will then enter stand-by mode. During fade-out, the HDC information indicator will flash.

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 - the information indicator will extinguish.

Air Suspension

AIR SUSPENSION



H6505G

The air suspension system maintains the correct vehicle height by controlling the quantity of air in the vehicle's air springs.

Unless stated otherwise, height changes may only be made while the engine is running and the driver and passenger doors are closed.

When the air suspension system lifts the vehicle, it normally uses compressed air stored in its reservoir. The suspension will rise much more slowly if this reservoir is depleted due to repeated raising and lowering of the suspension.

On-road height

The normal height for the vehicle.

Off-road height

This is 55 mm (2.2 in.) higher than On-road height. It provides improved ground clearance and approach, departure and break-over angles. See **VEHICLE DIMENSIONS, 300**.

Off-road height can be selected at any speed up to 40 km/h (24 mph). When the system is at Off-road height, the system will automatically select On-road height if the vehicle speed exceeds 50 km/h (30 mph).

Note: When using Terrain Response, some of its programs/range combinations will adjust suspension height automatically

Access height

This is 40 mm (1.6 in.) lower than On-road height. It provides easier entry, exit and loading of the vehicle.

Access height can be selected at any time, but the system response will depend on the vehicle's speed:

- If the vehicle speed is greater than 20 km/h (12 mph), the suspension will wait for up to one minute for the vehicle to slow down. If the vehicle does not slow down to below 20 km/h (12 mph) within this time, the Access height request will be cancelled.
- If the vehicle speed is less than 20 km/h (12 mph), the suspension will move to a part-lowered height and remain at this height for up to one minute. If the vehicle does not slow down to 8 km/h (5 mph) within this time, the Access height request will be cancelled.
- If the vehicle speed is lower than 8 km/h (5 mph), the suspension will be lowered to Access height immediately.

Access height may be selected up to 40 seconds after the starter switch is turned off, provided that the driver's door has not been opened within this time.

WARNING

The driver should ensure that the vehicle is clear of obstacles and people before lowering the vehicle. Remember that, for example, the clearance under the floor and bumpers, and in the wheel arches, will be 95 mm (3.7 in.) less at Access height than at Off-road height.

Air Suspension

The suspension will automatically rise from Access height when the vehicle speed exceeds 10 km/h (6 mph).

If Access height was selected directly from Off-road height, the system will return to Off-road height when the vehicle speed exceeds 10 km/h (6 mph). Otherwise the system will lift the suspension to On-road height.

High speed height

This feature is designed to improve vehicle stability at higher speeds, and lowers the suspension ride height by 20 mm (0.8 in.), if the vehicle exceeds 160 km/h (100 mph) for longer than five seconds. This action is automatic and cannot be over-ridden. Ride height will return to normal when vehicle speed remains below 130 km/h (80 mph) for 30 seconds.

Note: *Never exceed the speed limits.*

Crawl (locked at Access height)

This mode enables the vehicle to be driven at low speeds at Access height to give increased roof clearance in low car parks, etc.

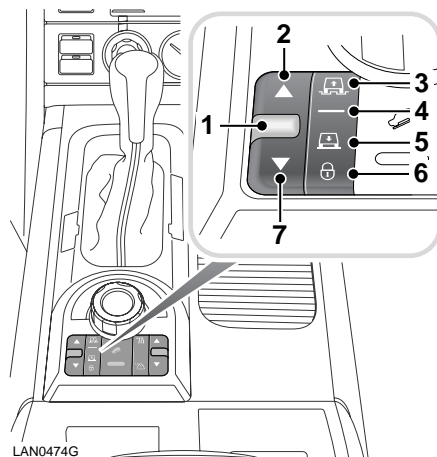
Crawl can be selected when the vehicle speed is below 35 km/h (22 mph). When the vehicle is in Crawl, On-road height will be selected automatically if the vehicle speed exceeds 40 km/h (24 mph).

Messages

Messages relating to the air suspension system will be displayed in the main message centre.

See **MAIN MESSAGE CENTRE, 97**.

Adjusting suspension heights



1. Raise/lower switch
2. Raising indicator
3. Off-road indicator
4. On-road indicator
5. Access indicator
6. Lock indicator
7. Lowering indicator

Suspension heights

The raise/lower switch (1) is used to move up or down through the suspension heights. Indicators (3), (4) or (5) will be lit to show the height selected. A message indicating the suspension height will also be displayed in the message centre when Off-road, Access or Crawl is selected.

Indicators (2) or (7) will be lit to show the direction of movement. They extinguish when the height change movement is completed.

Air Suspension

If a height change is requested that is not allowed, such as attempting to raise the height of the vehicle with the engine not running, indicators (2) and (7) will flash twice and a chime will sound. A message will be displayed on the message centre.

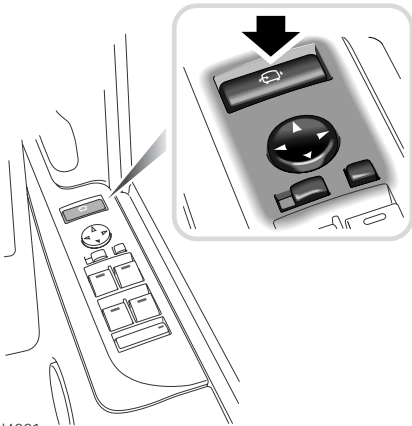
A flashing indicator (2) or (7) indicates that the system is in a waiting state or shows that it will automatically override the driver's choice if speed criteria are exceeded.

Selecting Access height

If Access height is selected above 20 km/h (12 mph), indicators (5) and (7) will flash while the system waits for the vehicle to slow down.

When the vehicle slows down to 20 km/h (12 mph), indicator (4) will extinguish as the system goes to the part-lowered height. indicator (5) will be lit and indicator (7) will continue to flash.

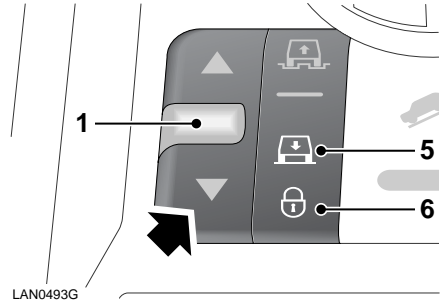
When the vehicle slows down to 8 km/h (5 mph), indicators (5) and (7) will be lit. When Access height is reached, indicator (7) will extinguish.



H4001

Access height may be selected directly by pressing the Access switch on the driver's door panel.

Selecting and cancelling Crawl (locked at Access height)



When the suspension is at On-road or Access height and the vehicle speed is below 35 km/h (22 mph), press the raise/lower switch (1) in the down direction for one second. Indicators (5) and (6) will be lit to confirm the selection.

Crawl can be cancelled manually by pressing the raise/lower switch in the up direction for one second. Indicator (6) will extinguish.

Note: When Crawl is cancelled, the suspension will rise to On-road height if the vehicle speed is greater than 10 km/h (6 mph).

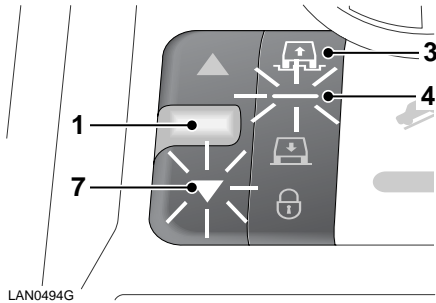
Selecting Access height directly from Off-road height

When the suspension is at Off-road height, press switch (1) down, then press it again before indicator (7) goes out.

The system will remember to return the suspension to Off-road height automatically if the vehicle is driven above 10 km/h (6 mph).

Air Suspension

Automatic height change warnings



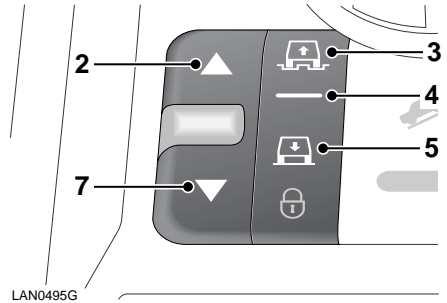
When the suspension is at Off-road height, Access or Crawl, the suspension height will change automatically when vehicle speed exceeds predetermined levels.

When the suspension is at Off-road height or Crawl, it warns the driver that the vehicle is approaching a speed threshold. A chime will sound, a message will be displayed on the message centre and the On-road indicator (4) and either (2) or (7) will flash.

The Off-road height speed warning is shown above. If the vehicle slows down, the warning will disappear.

Door open override

If a door is opened during a height change while the vehicle is at rest, the height change will be restricted.



The indicator for the target height (3, 4 or 5) will remain lit and the raising indicator (2) or the lowering indicator (7) will flash.

The height change will resume if all of the doors are closed within 90 seconds.

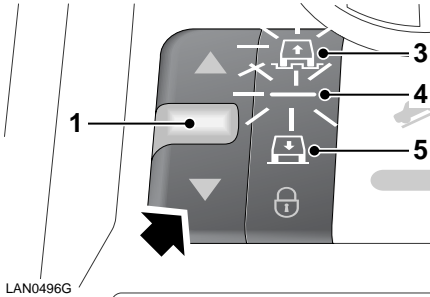
If the doors are not closed within this time, the raising indicator (2) or the lowering indicator (7) will extinguish and the indicators showing the heights above and below the current position will be illuminated.

Selecting a new height using the raise/lower switch (1), or driving off will reset the system.

Air Suspension

Extended mode

If the vehicle is grounded and traction control is induced, the system raises the vehicle by 35 mm (1.4 in.) to clear the obstruction. Extended mode is activated automatically and cannot be selected manually.



When Extended mode is activated, indicator (3) will flash if the suspension is above Off-road height. Indicators (3) and (4) will flash if the suspension is between Off-road and On-road heights. Indicators (4) and (5) will flash if the suspension is between On-road and Access heights. A message will be displayed on the message centre.

To exit Extended mode, either press the raise/lower switch (1) briefly up or down, or drive the vehicle at a speed greater than 5 km/h (3 mph) for 30 seconds.

Additional lift whilst in extended mode

When Extended mode has been invoked and the automatic lifting of the vehicle has been completed, the driver can request an additional lift in order to clear the obstacle. This can be particularly useful when Extended mode has been invoked on soft surfaces.

To request additional lifting wait for the raising indicator (2) to extinguish, then press and hold the switch (1) in the up direction for 3 seconds while also pressing the brake pedal. A chime will sound to confirm that the request has been accepted. The raising indicator (2) will be illuminated while the vehicle is being lifted.

Suspension freeze

If the system is attempting to change the suspension height and it detects that the suspension is prevented from moving, the system will freeze all movements.

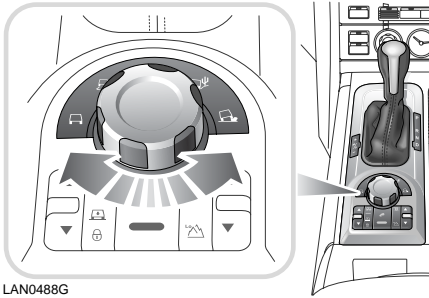
This can be caused by attempting to lower the vehicle onto an obstacle or attempting to lift the vehicle against an obstruction.

The symbols behave in the same way as described in Extended mode and the same message will be displayed on the message centre. As in Extended mode, to exit this freeze state, either press the switch (1) up or down, or drive the vehicle at a speed greater than 20 km/h (12 mph).

Terrain Response

TERRAIN RESPONSE™

The Terrain Response system is permanently active, continuously providing benefits in traction and driveability. These can be further enhanced for specific on and off-road driving conditions by the selection of special programs, using one simple driver interface.



This interface allows the driver to tell the vehicle what sort of terrain is to be driven over. Based on the selected special program, the system optimises the vehicle set-up for the prevailing conditions, providing the optimum in traction, driveability and vehicle composure.

The Terrain Response special programs automatically bring in changes in vehicle drive and suspension systems that have until now been only individually and manually controllable by the driver.

The suspension and drive systems comprising Terrain Response are:

- Engine management.
- Gearbox management.
- Intelligent differential control.
- Dynamic stability, traction control and HDC systems.
- Air suspension.

The system will provide a variable accelerator response, ranging from very cautious for slippery conditions (where a large pedal movement has only a small effect on engine power) to very responsive, for example, for sand, where engine power is allowed to rise more quickly.

This further extends the breadth of off-road capability of Land Rover vehicles. In addition, Terrain Response offers control of systems that have previously not been manually controllable.

Note: *Since each Terrain Response special program uses the optimum settings of each drive component - accelerator response, suspension, transmission, etc. - relative to the terrain being driven over, it follows that changing from one special program to another brings in a different set of criteria.*

This means that, for instance, the engine revs produced by the current accelerator pedal position might increase or decrease slightly in the new program, or the suspension could change height. The changes are not dramatic, but are noticeable.

To obtain the maximum benefits from the system, it is suggested that you first try it out in circumstances where any distraction will not affect other road users.

Terrain Response is designed to benefit the driver, regardless of the level of off-road driving experience. The enhanced traction system, with the control of many system parameters through one simple driver input, coupled with specific advice from the message centre, will aid drivers with limited off-road experience. Additionally, the system can back-up the skills of experienced drivers, who will also benefit from the wider performance envelope available through the special programs.

Terrain Response

Using Terrain Response

The Terrain Response system is always active and can not be switched off. When the vehicle is started, the system will normally start in its General program (SPECIAL PROGRAMS OFF). Using the correct special program, will provide benefits in how the vehicle can be driven over different surfaces or terrains. It is recommended that a special program be engaged, whenever driving conditions could become difficult.

Depending on the terrain, it may be beneficial for the automatic transmission to change gear under different speed and load conditions. Each special program will provide the most appropriate gear-shift points for the terrain, including the most appropriate gear to set off in (i.e., second, High range, or third, Low range, in Grass-Gravel-Snow or first, Low range, when in Rock Crawl).

The amount of slip allowed in the electronically controlled differentials will be optimised continuously, both from the point of view of traction and vehicle stability.

Depending on the Terrain Response program selected, the control of the differentials will vary to provide the optimum settings.

Note: Special programs should be engaged pro-actively - before starting to drive in particular conditions. They are not intended as a means of extracting a vehicle that has been driven into difficulties.

The system has been designed to instil confidence regarding choice of special program, despite the fact that conditions associated with each program are distinctly different. However, the vehicle will be very capable under all circumstances, even when no special program is selected, as some sub-systems will react to the conditions where possible. In case of any uncertainties about the most appropriate special program selection, it will be best to leave the system in Terrain Response General program (SPECIAL PROGRAMS OFF) until terrain conditions become more distinct and a program choice can be made with more confidence.

The system is of particular use when driving off-road, but, even here, it should be used pro-actively and not be used as a means of retrieving control.

If a Terrain Response special program has been selected, then the transmission can be left in **D**. If descending a slippery slope, CommandShift **1** or **2** should be considered.

WARNING

When towing, the automatic vehicle height rise associated with using the system in low range, will be automatically prevented by the system. This will be indicated by a warning in the message centre. However, this function relies on the fitting of a Land-Rover approved towing electrical socket. Failure to fit a Land-Rover approved towing electrical socket or to follow these guidelines may lead to the vehicle being raised to Off-road height even with a trailer attached.

Terrain Response

Driver over-ride options

All systems will be set to optimum parameters for the terrain conditions reflected in the choice of control program. The following two systems controlled by Terrain Response, may also be operated independently by the driver:

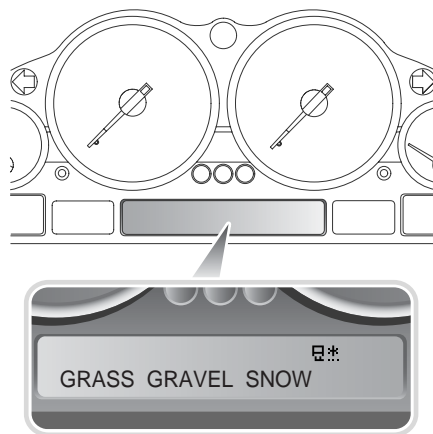
- Air suspension.
- Hill Descent Control.

In some special programs, the Terrain Response system will switch on HDC and in Low range the system will automatically move the suspension to Off-road height.

WARNING

This height increase will start regardless of whether the vehicle is moving or not.

Both the HDC and ride height automatic selections can be cancelled by the driver at any time. Conversely, if HDC or a specific ride height has not been automatically selected by the system, the driver can always choose to operate it as normal at any time.



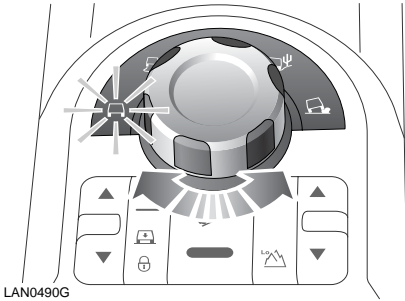
LAN0489ENG

Whether the HDC or ride height options are being brought in automatically by the system, or manually by the driver, the changes of state will be confirmed through the message display and by the individual system information indicators. Use of the system in the special programs, particularly in low range, may prompt some driving advice and warnings as well as additional information to be displayed on the touch-screen and in the message centre.

Note: Gear selection can be overridden by using the CommandShift function on the gearbox to lock the vehicle in a particular gear.

Terrain Response

Operation



A rotary knob just behind the gear lever is rotated to select the required special program. When the selector reaches either end of the selection range, it can be turned further, but doing so has no effect.

Four special programs are available:

- Grass/gravel/snow (also includes ice).
- Mud/ruts.
- Sand.
- Rock Crawl.

When the starter switch is turned on, the graphics around the control knob are illuminated, with the active program highlighted in amber. The brightness of graphic illumination at night, is controlled as part of the instrument illumination control; the brightness of the amber lighting is high or low depending on the use of the headlamps.



When a Terrain Response program is selected, the appropriate symbol will also be displayed on the message centre and a confirmation pop-up screen on the touch-screen will be displayed (as illustrated).

If the starter switch is turned off with a special program selected, then the system will remember for approximately six hours which program was selected and return to that program once the starter switch is turned back on.

The system indicates, via the message centre, that the previously selected special program is still selected. When the starter switch has been in the off position continually for more than six hours, the Terrain Response system defaults to the General program (SPECIAL PROGRAMS OFF) with the exception of the Grass Gravel Snow program, which will remain selected.



It is possible to have the Terrain Response system configured so that if the Grass Gravel Snow program is selected, and the starter switch is turned off, the system will default back to the General program after the six hour period, as is the case with the other special programs. Consult your Land Rover Dealer/Authorised Repairer.

Terrain Response

Terrain Response general (SPECIAL PROGRAMS OFF)



When the Terrain Response special programs are off, the system will be in its General program. This will be indicated by the above symbol being displayed briefly on the message centre. Sub-systems will adapt to the prevailing terrain conditions and select control settings based on the conditions sensed.

This program setting is compatible with all on and off-road terrain conditions. Normal conditions in which it is not necessary to select a specific program include driving on surfaces that closely match a hard road surface. Dry cobbles, Tarmac or even wooden planks are all included in the scope which consists of hard supportive surfaces with no loose coating of water, dust or similar material.

It is recommended that a special program be de-selected, once the specific conditions for its use no longer prevail. This is done by turning the selector knob back to the General program position.

When a special program is de-selected, all vehicle systems will be returned to their normal control settings. The one exception is HDC, which will remain active if it was manually selected previously. Also, as a precaution, the vehicle will change from raised to Normal ride height only when moving.

Grass-Gravel-Snow



Use this program for surfaces where the underlying base is fairly firm, but a coating of other material gives a tendency to slip. The coating can be water, slime, grass, snow or loose gravel, shale or pebbles, or even a thin coating of sand. This program should also be selected in icy conditions.

In this special program the Terrain Response systems will select settings to give the best traction, handling and driveability for predominantly slippery conditions. Hill Descent Control will be engaged automatically in low range, but can be manually de-selected. See **HILL DESCENT CONTROL, 201**.

In slippery conditions, it is often beneficial to start off in a higher gear than usual, for example, CommandShift 2 in HIGH range or CommandShift 3 in LOW range.

For use of the vehicle with snow chains fitted, see **SNOW CHAINS, 253**.

***Note:** When in deep snow, if the vehicle is struggling for forward traction or is stuck, then switching off Dynamic Stability Control (DSC) may be an advantage. If DSC is switched off, then it must be switched back on as soon as the difficulty is overcome.*

Terrain Response

Mud-Ruts



Use this program when traversing ground that is not only muddy or deeply rutted, but possibly soft and uneven to the point of demanding maximum axle displacement. This unevenness can also be that brought about by sizeable wooden debris in the form of roots, brushwood, small logs, etc.

This acts like the previous program, except that it selects settings for the individual systems that optimise traction and driveability for muddy/rutted driving conditions, with driver over-ride options as before. The program is available in High and Low range, but Low range is recommended.

It is anticipated that this program will usually be used in low range. If not, the driver will be prompted to consider selecting low range. If the Mud-Ruts program and low range are selected together, the vehicle ride height will be raised automatically.

Sand



Use this program to drive on soft and predominantly dry, yielding sandy ground, such as dry beaches, dunes and sand deserts. Also consider using this program for deep gravel.

The Sand special program uses the control settings and software logic best suited to driving on sand, with the driver-over-ride option as before.

In instances where the sand is damp or wet and soggy, the conditions are better addressed by the use of mud/ruts special program.

Where the sand is extremely soft and dry and of a depth that allows the wheels to sink well into it, there may be additional benefit in switching off the Dynamic Stability Control. See **Deactivating DSC operation, 199**.

Rock Crawl



Use this program to cross wet or dry, solid, unyielding ground, such as clusters of boulders, which demands high levels of road-wheel displacement and careful vehicle control. This program would also be used for crossing river beds strewn with large rock features submerged below water.

Unlike the other options, Rock Crawl is only selectable in Low range. If selection is attempted in High range, the special program selection will not be accepted and the driver will be prompted to select Low range. This special program will utilise system control settings to optimise the vehicle suspension and traction system for the conditions, which are likely to require extreme suspension articulation and good low-speed control.

When a special program requires increased air suspension height, the system will automatically select it, unless it suspects that a trailer is attached because an electric load is seen on the trailer socket.

A message will be displayed on the message centre.

Caution: Selection of a wholly inappropriate special program for the prevailing terrain conditions will not endanger the driver or immediately damage the vehicle. However, if continued, such an action will impair vehicle response to those conditions and will reduce the durability of the suspension and drive systems.

Terrain Response

Inappropriate special program selection

If an inappropriate special program is attempted to be selected - such as choosing Rock Crawl while in High range - the symbol of that program will flash amber, an audio warning will sound and the message centre will advise that the chosen special program is unavailable and will suggest corrective action to be taken.

If, after 60 seconds, the requirements have not been met, the warnings will cease and the message centre will show which program remains active.

Should the system become partly inoperable for any reason, it may not be possible to select certain special programs and a warning will be given when selection of an affected program is attempted. If the system should become totally inoperable, all of the control program symbols will be switched off and the message centre will display message.

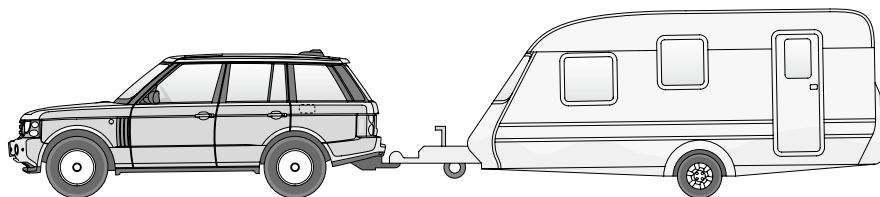
The air suspension system provides an automatic levelling function. See **AIR SUSPENSION, 204**. In circumstances where the system is used in Low range, it is most likely that mobility and vehicle composure would benefit from increased ground clearance.

System messages

Messages relating to the Terrain Response system are displayed on the message centre.

For an explanation of those messages, see **MAIN MESSAGE CENTRE, 97**.

Towing



H6518G

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 smoother start can be achieved with trailers over 2 000 kg (4 400 lb) by moving off in Low range then changing to High range while on the move.

WARNING

To preserve vehicle handling and stability, only fit towing accessories that have been designed and approved by Land Rover.

Do not use lashing eyes or vehicle recovery towing eyes to tow a trailer. Use of the towing eyes for purposes other than their designed intention could result in damage or injury.

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 above). This is particularly important when towing twin axle trailers! Adjust the height of the hitch point if necessary.

The air suspension system is designed to cope with a heavy trailer load without upsetting the balance or feel of the vehicle. To ensure that the vehicle is in the correct position when setting the towing hitch height, the engine should be running with the air suspension set to on-road height and all doors closed. See **AIR SUSPENSION, 204**.

Note: The high speed height is disabled while the trailer electrics are connected.

- The trailer should be level with the ground when loaded.
- The height of the draw bar hitch point should be set so that the trailer is level when connected to the loaded vehicle.

Towing

Points to remember:

- When calculating the laden weight of the trailer, remember to include the weight of both the trailer and its load.
- The trailer nose weight plus the combined weight of the rear seat passengers and the vehicle's load carrying area must never exceed the GVW or the individual maximum axle loads.

Note: When towing, European legislation allows for the GVW to be exceeded by 100 kg (220 lb). See **Weights, 298**.

- Where the luggage 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 GVW and maximum rear axle load are not exceeded and that the combination remains level.
- For maximum stability, ensure that loads are properly secured and unable to shift position during transit. Also, position loads so that most of the weight is placed close to the floor and, where possible, immediately above or close to the trailer axle(s).
- 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, 299**.

Note: When towing, do not exceed 97 km/h (60 mph). Additionally, if the temporary spare wheel is in use, do not exceed 80 km/h (50 mph).

Vehicle weights

When loading a vehicle to its maximum (GVW), take account of the load distribution to ensure that axle loads 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 GVW are exceeded. The most accurate method of determining load distribution is by using a public weighbridge.

Nose weight must be the greater of 50 kg (110 lb) or 7% of the actual trailer laden weight, up to the maximum tow hitch load. Nose weight can be measured using a proprietary brand of nose weight indicator.

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.

Electronically selected gearbox modes

A suitable gear change pattern for trailer towing, hill ascent and high altitude is selected electronically and retains lower gears for longer. This feature is enabled 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.

Gearbox overheating

To avoid overheating the gearbox, it is not advisable to tow heavy trailer loads at prolonged speeds of less than 32 km/h (20 mph) using the main gearbox in High range. Use the transfer gearbox to select Low range instead.

Towing

Towing on severe inclines

If a journey includes severe inclines and the Gross Train Weight (the maximum permissible weight of vehicle, plus trailer - see **TOWING, 299**) is towed, ensure that the grille and radiator are free from obstruction and that only high quality fuel is used. This enables the engine and the cooling system to operate more efficiently.

Trailer socket

The vehicle connector provides a 5 amp output, which must NOT be exceeded. If it is required to exceed 5 amps, a 12S and a 13 pin accessory harness kit is available from your Land Rover Dealer/Authorised Repairer, increasing the output to 15 amps.

Tachographs

In some circumstances it is necessary for a tachograph to be fitted. In Europe, this is usually when the vehicle is used for business purposes and the combined maximum weights of vehicle and trailer exceed 3 500 kg (7 716 lb).

Please contact your local Department of Transport for detailed information.

ESSENTIAL TOWING CHECKS

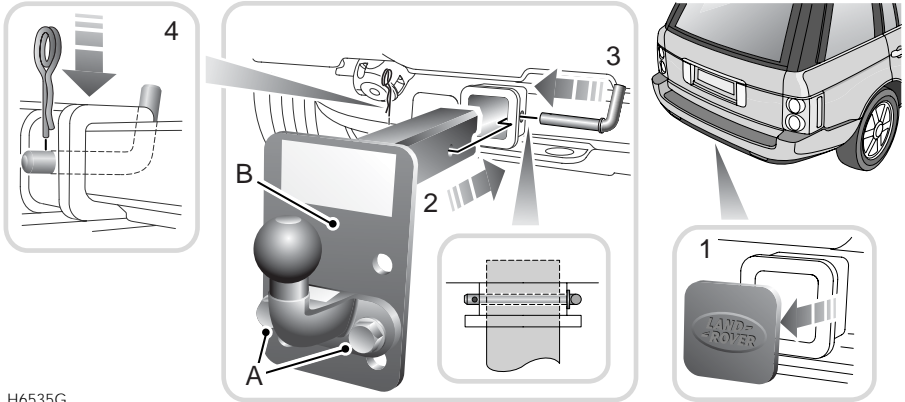
Tyre pressures:	Increase rear pressures of towing vehicle to those for Maximum Gross Vehicle Weight conditions. See Tyre pressures, 249 . Ensure trailer/caravan tyres are at the pressures recommended by the trailer manufacturer.
Nose weight:	If the vehicle is loaded to the Gross Vehicle Weight (GVW), the nose weight is limited to 150 kg (330 lb). If a trailer with over-run brakes is used the nose weight can be increased up to 250 kg (550 lb) total nose weight. However, vehicle payload must be restricted by at least the same weight to ensure that the GVW and rear axle weights are not exceeded. See Weights, 298 .
Breakaway cable or secondary coupling	A breakaway cable or secondary coupling must be attached. If the trailer/caravan is fitted with brakes, it is usual for an attached breakaway cable to operate the brakes in the event of the coupling becoming detached. See your trailer manufacturers literature. If your trailer does not have a breakaway cable, a secondary coupling must be attached. Use a suitable point on the towing bracket to securely attach the coupling. It is not advisable to loop cables or couplings around the neck of the tow ball as they could slide off.

Towing

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



H6535G

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

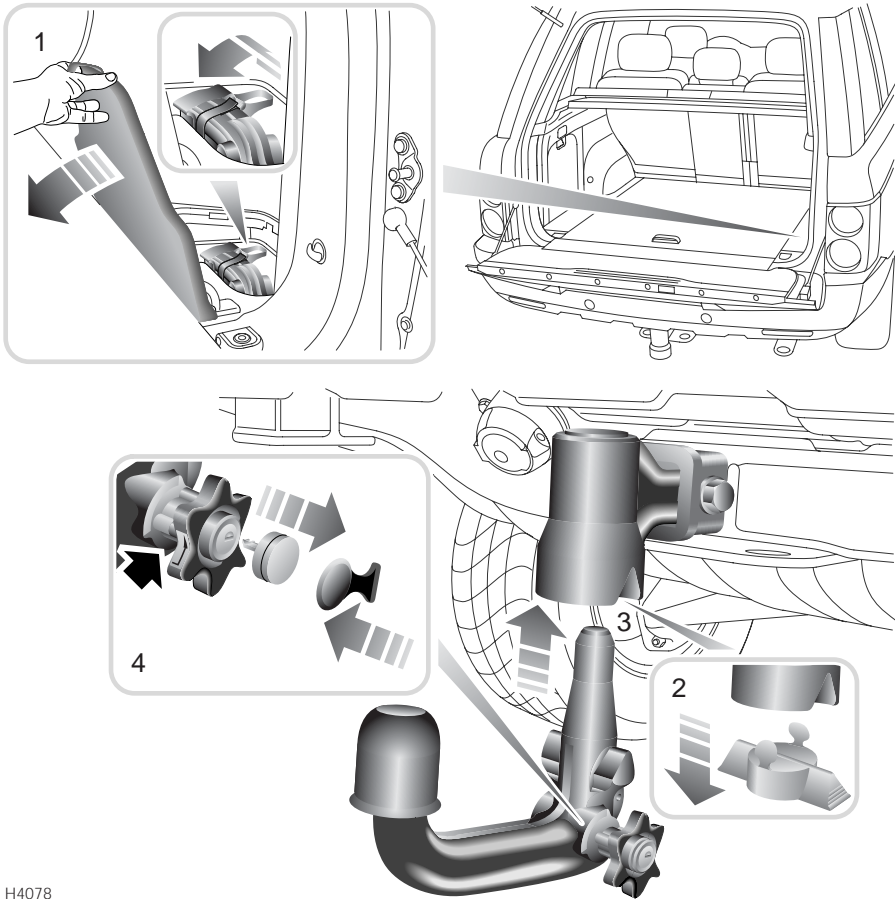
Before towing, always check that the retaining pin is firmly in place through the securing bar.

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.

Towing

Detachable tow bar



H4078

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.

Towing

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 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 anticlockwise 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-road

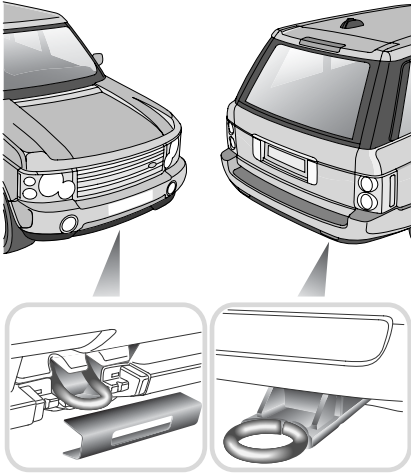
Remove the cover from the handwheel lock, insert the key and turn it clockwise.

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.

Towing the Vehicle

TOWING EYES



H6527G

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 recovery situations.

Towing the Vehicle

TOWING FOR RECOVERY

Caution: Under no circumstances must your vehicle be towed with only two wheels in contact with the ground. It must be towed with all four wheels on the ground, recovered onto a trailer, or have a combined wheel lift and towing dolly arrangement to lift it clear of the ground.

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 all four wheels

Caution: 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 transmission. If the main gearbox cannot be set in neutral, the vehicle must not be towed under any circumstances.

Before selecting neutral, ensure that the parking brake is properly and securely applied.

Note: 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 the first or second position for extended periods may drain the vehicle battery.

1. Secure the towing attachment from the recovery vehicle to the front towing eye. See **TOWING EYES, 222**.
2. With the parking brake applied, insert the starter key and turn it to the second position.
3. Place the gear lever in **N** (Neutral).
4. Turn the starter switch to the first position. Do not turn the starter switch off.
5. If required, the starter switch may be turned to the second position to operate the brake lamps and direction indicators.
6. Release the parking brake before towing the vehicle.

WARNING

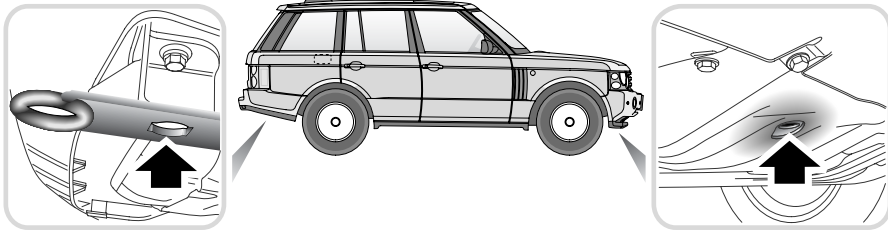
Do not remove the key or turn the starter switch off while the vehicle is in motion.

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.

If the above conditions are met, and the transfer box remains in gear, the vehicle may only be towed for a distance of 50 km (30 miles) at a maximum speed of 50 km/h (30 mph).

Towing the Vehicle

TRANSPORTER OR TRAILER LASHING



H6520G

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.

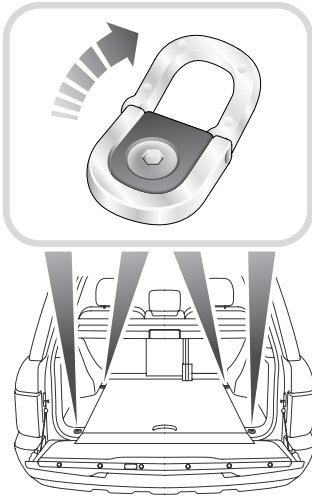
Note: *The front and rear lashing eyes are for lashing only and must not be used for towing.*

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.

Load Carrying

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 is 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/ Authorised Repairer.

Always observe the following precautions:

- The **maximum** load for approved roof rack systems is 100 kg (220 lb) for normal road use and 50 kg (110 lb) 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 Land Rover Dealer/Authorised Repairer.
- 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 (30 miles) of any journey.

WARNING

To avoid the risk of personal injury or death, do not permit children or any other person to travel on the roof rack (or access ladder) whilst the vehicle is in motion.

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

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.

Front Lighting Systems

FRONT LIGHTING SYSTEMS

There are three types of headlamps systems:

- Halogen high/low beam main lamp with a fill-in high beam halogen lamp alongside
- Bi-Xenon high/low beam main lamps with a fill-in high beam halogen lamp alongside.
- An Adaptive Front Lighting System (AFS).

Bi-Xenon headlamps

Bi-Xenon headlamp units use Xenon bulb for both high and low beam, while a halogen bulb is used for high beam fill-in. A shutter, operated by a solenoid, changes the direction of the Xenon lamp beam to give either low or high beam.

The operational life of a Bi-Xenon lamp is significantly longer than that of a conventional or halogen bulb.

WARNING

Bi-Xenon lamp units operate at a very high temperature. If they have recently been in use, allow sufficient time for the to cool before touching them.

Used Xenon lamp units contain Mercury, which is hazardous and can be injurious to health.

A very high voltage is required to ignite the gas and metal vapour used to power Xenon lamps. Contact with this voltage could cause very serious injury.

Replacement or maintenance of Xenon lamps should be carried out only by qualified personnel.

Front Lighting Systems

Adaptive Front Lighting System (AFS)

AFS is a new lighting system designed to give the driver improved visibility. It has two main components: a swivelling headlamps unit and a static bending lamp, with a beam set to 45 degrees from the centre line of the vehicle.

The headlamps units can swivel left or right, to improve light spread on bends in the road and they operate throughout the vehicle speed range. They also react in the vertical plane to the vehicle's braking or acceleration to maximise headlamp performance.

These units operate when the engine is running and the lamps master switch is in position 3. They will also operate with the lamps master switch in position 4 (Auto), if the ambient light has fallen below a preset level.

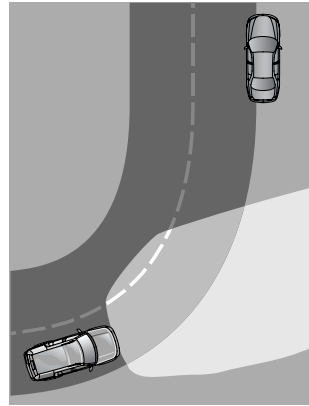
The system takes inputs from the vehicle's road speed and steering angles to determine the amount of horizontal swivel. The amount of swivel is highest at low manoeuvring speeds, and reduces as speed increases.

If reverse gear is selected, the lamps return to the central position and the unit's swivelling capability is disabled.

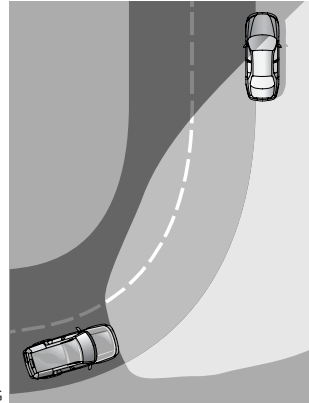
When the engine is started, the headlamps can be seen to swivel as they go through a self-calibration for a few seconds.

The AFS advantage

A



B



H6920G

- A. Shows the light spread of a vehicle not fitted with AFS.
- B. Shows the light spread of a vehicle fitted with AFS.

Front Lighting Systems

Static Bending Lamps (SBL)

Additional lighting comes from the static bending lamps which have a beam set to 45 degrees from the centre line of the vehicle.

These lamps broaden the beam of the headlamps when cornering during normal driving.

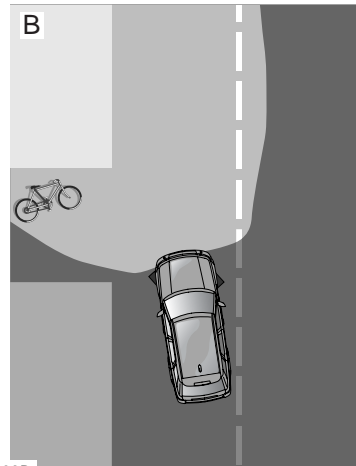
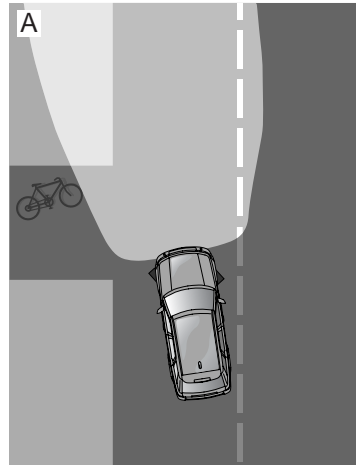
The system receives signals for the vehicle's road speed and the steering angle. Based upon these signals, the lighting system can determine in which direction the vehicle is turning, and illuminate the respective SBL.

- A. Shows the light spread of a vehicle not fitted with SBL.
- B. Shows the light spread of a vehicle fitted with SBL.

Static bending lamps operate when the system detects a steering wheel rotation of 70 degrees or more.

Static bending lamps will be deactivated when the vehicle's speed exceeds 70 km/h (44 mph), and will only be reactivated when the speed reduces to 60 km/h (37 mph).

Note: *Static Bending Lamps will de-activate if the vehicle has been stationary for more than two minutes or when park, neutral or reverse are selected.*



H6238R

Maintenance

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/Authorised Repairer.

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 Land Rover Dealer/Authorised Repairer to record brake fluid changes.

Ensure your Land Rover Dealer/Authorised Repairer signs and stamps the book after each oil service and inspection.

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 Land Rover Dealer/Authorised Repairer without delay.

Daily checks

- Operation of lamps, horn, direction indicators, wipers, washers and warning indicators.
- Operation of seat belts and brakes.
- Look for fluid deposits underneath the vehicle that might indicate a leak.
Condensation dripping from the air conditioning is normal.

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, 294**.

WARNING

If brake pedal travel is unusually long or if there is any significant loss of brake fluid, contact your Land Rover Dealer/Authorised Repairer immediately. Driving under such conditions could result in extended stopping distances or complete brake failure.

Maintenance

SAFETY IN THE GARAGE

WARNING

Under no circumstances should any part of the fuel system be dismantled or replaced by anyone other than a suitably qualified vehicle technician. Failure to comply with this instruction, may result in fuel spillage with a consequent risk of fire.

- 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.
 - Never leave the engine running in an unventilated area - exhaust gases are poisonous and extremely dangerous.
-

WARNING

Cooling fans may continue to operate after the engine is switched off. When the engine is hot, the cooling fans may also start 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.

- 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.
-

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, antifreeze, 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.

Maintenance

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 (only on a four-wheel drive dynamometer) practised by Land Rover Dealers/Authorised Repairers. Contact your Land Rover Dealer/Authorised Repairer for further information.

DRIVING IN ARDUOUS 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 (6 miles)), 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/Authorised Repairer for advice.

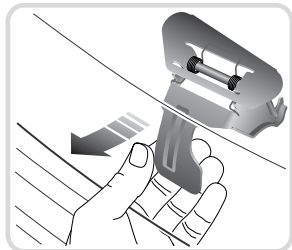
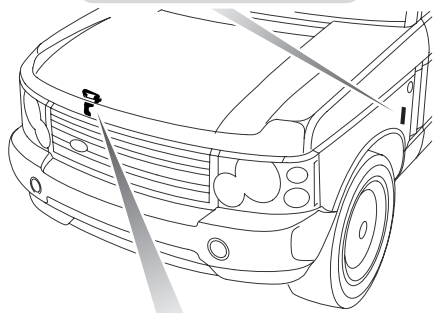
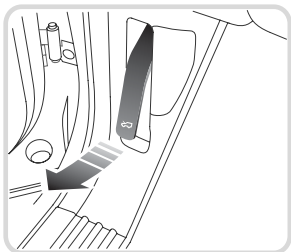
PREPARATION FOR WINTER

Before the onset of winter, to prevent the door seals from freezing closed, apply a Carbaflo lubricant pen 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. For further information, consult a Land Rover Dealer/Authorised Retailer.

Bonnet Opening

BONNET OPENING



LAN0595G

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

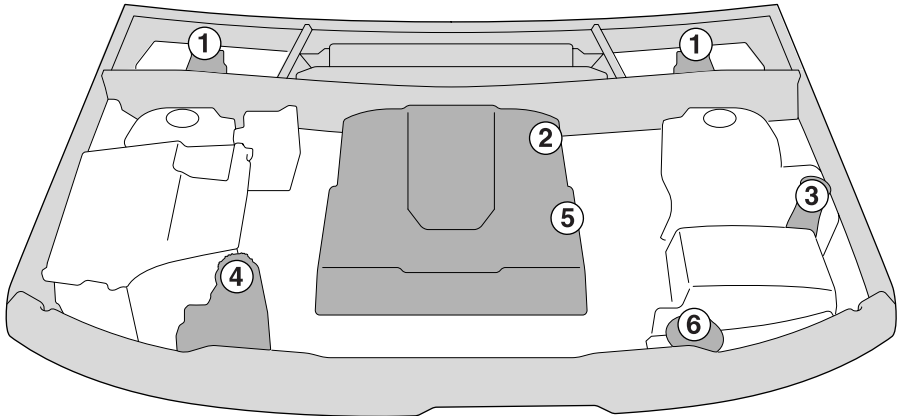
WARNING

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.

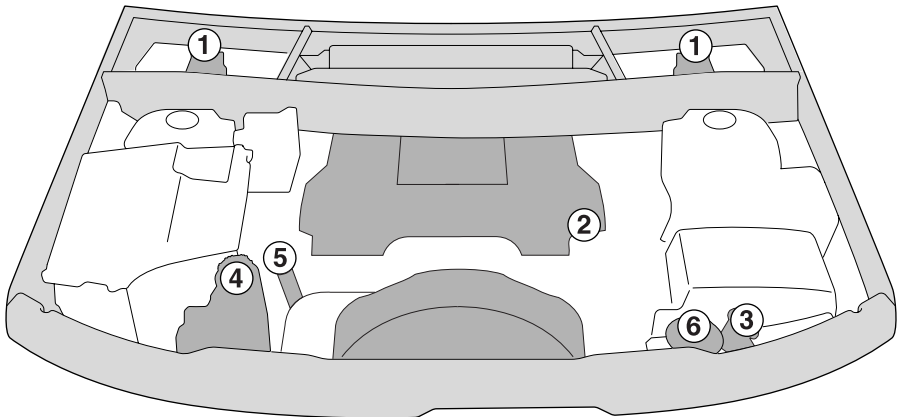
Engine Compartment

FLUID CHECKS



LAN0475G

Petrol engine



LAN0504G

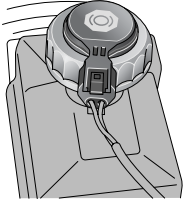
Diesel engine

WARNING

While working in the engine compartment, always observe the safety precautions listed under, **SAFETY IN THE GARAGE, 230.**

Engine Compartment

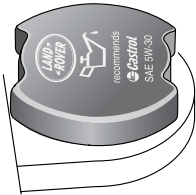
1. Brake fluid reservoir



LAN0509G

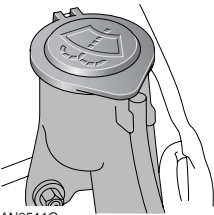
Note: The brake fluid reservoir is located on the right of the engine compartment on a right-hand drive vehicle and on the left on a left-hand drive vehicle.

2. Engine oil filler



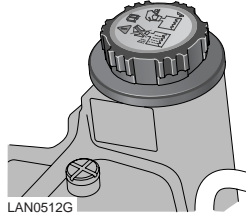
LAN0510G

3. Washer reservoir



LAN0511G

4. Cooling system reservoir



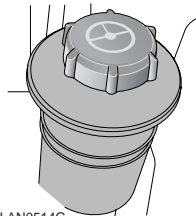
LAN0512G

5. Engine oil dipstick



LAN0513G

6. Power steering reservoir



LAN0514G

Engine Oil

CHECK AND TOP-UP

WARNING

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

The oil consumption of your engine is influenced by many factors. Diesel engines consume slightly more oil than petrol engines. Under high loads your engine will also consume more oil.

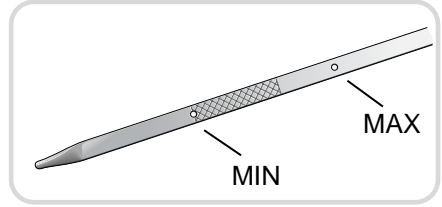
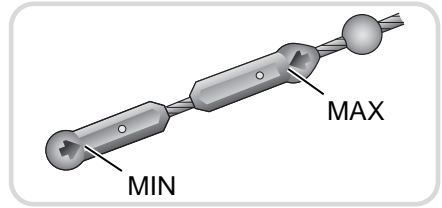
Check the oil level weekly, when the engine is cold and with the vehicle resting on level ground.

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 0.5 litre (1 pint) of oil.
- is below the lower mark, add 1 litre (1.8 pints) of oil and re-check the level after a further five minutes.

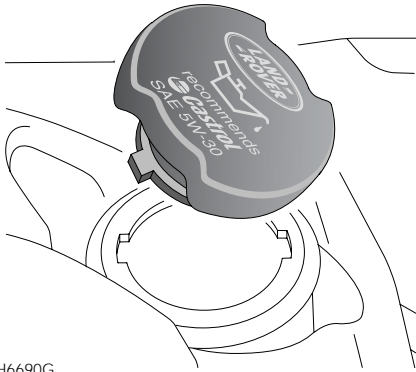
Caution: Driving the vehicle with the engine oil level above the upper mark, or below the lower mark on the dipstick, can damage the engine.



LAN0476G

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.

Engine Oil



H6690G

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, 294**. If in doubt, contact your Land Rover Dealer/Authorised Repairer.

Caution: Your vehicle's warranty may be invalidated if damage is caused by use of improper engine oil. Low quality or obsolete oils do not provide the protection required by modern, high performance engines.

Failure to use an oil that meets the required specification could cause excessive engine wear, a build up of sludge and deposits, and increased pollution. It could also lead to engine failure.

Cooling System

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.

Avoid spilling antifreeze onto a hot engine - a fire may result.

Caution: Never run the engine without coolant.

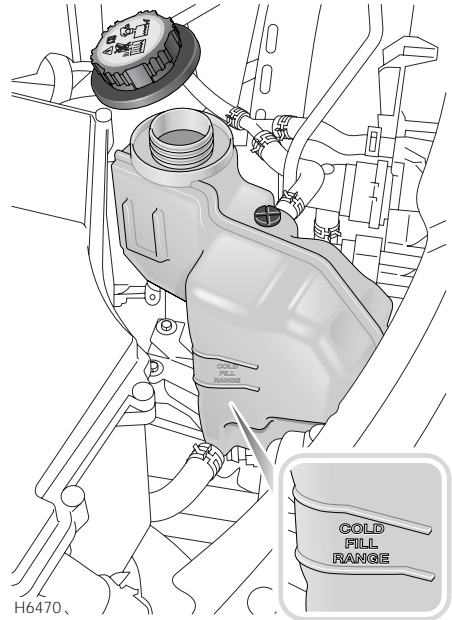
Antifreeze will damage painted surfaces; soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.

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.

The coolant level in the expansion tank should only be checked when the **CHECK COOLANT LEVEL** message is displayed on the message centre. Always check the level when the system is cold.

Note: *Coolant expands when hot. This may cause the level to rise above the upper level mark on the side of the expansion tank.*

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 antifreeze and water. See **LUBRICANTS AND FLUIDS, 294**.

Top-up to the upper level indicator mark located above the COLD FILL LEVEL text, on the side of the expansion tank. This should be viewed from standing in front of the vehicle. Ignore any coolant visible in the top section of the tank.

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 Land Rover Dealer/Authorised Repairer to examine the vehicle.

Caution: An over-filled expansion tank may cause a build-up of pressure and excess fluid could be expelled through the filler cap.

Cooling System

ANTIFREEZE

WARNING

Antifreeze 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 antifreeze coming in contact with the skin or eyes. If this occurs, rinse immediately with plenty of water.

Antifreeze contains important corrosion inhibitors. The antifreeze 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 antifreeze content should be checked once a year.

The specific gravity of a 50% antifreeze solution at 20°C (68°F) is 1.068 and protects against frost down to -40°C (-40°F).

Antifreeze must be renewed at regular intervals, regardless of distance travelled (refer to your **Service Portfolio** book). Failure to do so may cause corrosion of the radiator and engine components.

Coolant specification

Use only a 50% mix of water and an approved antifreeze. See **Engine cooling system, 294**.

In an emergency - and only if this type of antifreeze 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 antifreeze formulations. If in doubt consult a Land Rover Dealer/Authorised Repairer.

Note: When clean water is added in the event of an emergency, the low coolant indicator will illuminate if the water/antifreeze mix ratio is over-diluted. This indicator will extinguish when the ratio of water/antifreeze is returned to a 50% mix. This should be done at the earliest opportunity.

Brakes

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.

Caution: 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

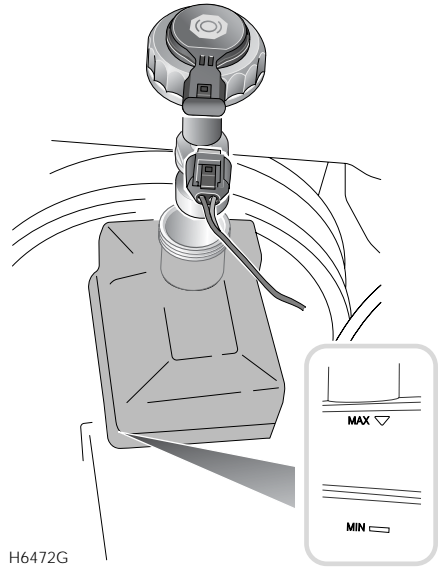
The fluid level may fall slightly during normal use as a result of brake pad wear but should not be allowed to fall below the **MIN** mark. Any substantial drop in fluid indicates a leak in the system, in which case the vehicle must not be driven and you should contact your Land Rover Dealer.

WARNING

Contact your Dealer/Authorised Repairer 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



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 brake fluid conforming to DOT 4 specification. See **LUBRICANTS AND FLUIDS, 294**, for a full 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 at regular intervals, regardless of distance travelled. See **Service Portfolio** book.

Brake pedal free travel: No adjustable free travel.

Power Steering

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 fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.

Do not spill the fluid onto a hot engine - a fire may result.

Caution: 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

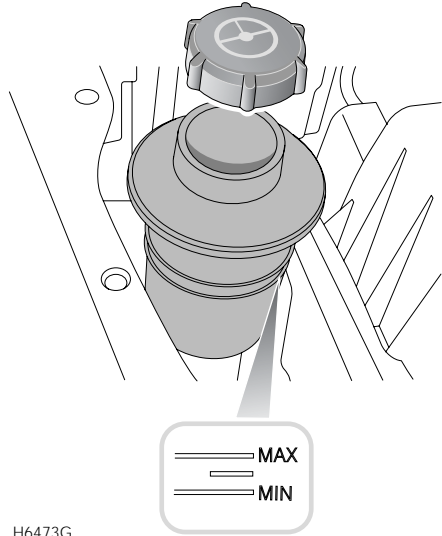
Check and top-up the fluid level only with the engine switched off and the system cold, and ensure that the steering wheel is not turned after stopping the engine.

With the vehicle on level ground, check the level visually through the side of the transparent reservoir, without removing the filler cap.

Maintain the fluid level so that it is between the MIN and MAX marks on the reservoir.

If topping-up is required, wipe the filler cap clean, to prevent dirt from entering the reservoir. Remove the filler cap and top-up the reservoir to the MAX mark.

Do not fill above the MAX mark on the side of the reservoir.



H6473G

Emergency operation

Any large or sudden drop in the fluid level must be investigated by a Land Rover Dealer/ Authorised Repairer.

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 Land Rover Dealer/ Authorised Repairer 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.

Caution: The engine must not be started if the fluid level has dropped below the MIN mark on the side of the reservoir - severe damage to the pump could result.

Washers

WINDSCREEN WASHER TOP-UP

Fluid top-up

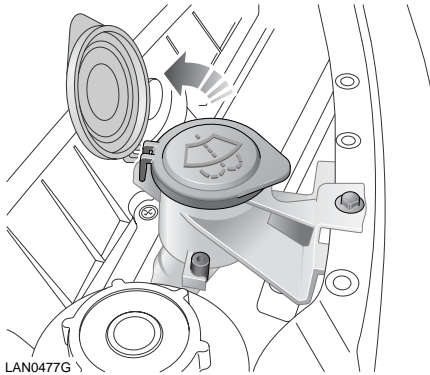
WARNING

If you operate your vehicle in temperatures below 5°C (40°F), use washer fluid with antifreeze protection. In cold weather, failure to use washer fluid with antifreeze protection could result in impaired windshield vision and increase the risk of a vehicle crash.

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.

Caution: Do not use an antifreeze or vinegar/water solution in the washer reservoir - antifreeze will damage painted surfaces, while vinegar can damage the windshield washer pump.

Caution: 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.



The windscreen washer reservoir supplies both front and rear screen washer jets and headlamp washer jets.

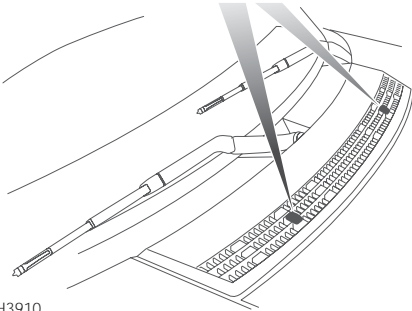
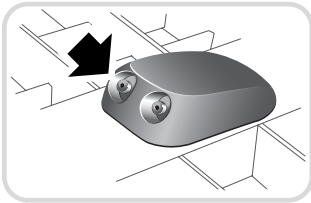
Check the reservoir level at least every week and top-up with a mixture of water and Land Rover Parts STC 8249 Screenwash. Preferably mix the recommended quantities of water and screenwash in a separate container before topping-up, and always follow the instructions on the container. Note that an approved screenwash is necessary to prevent freezing in very cold weather.

Washers

WASHER JETS

Operate the washer switches periodically to check that the nozzles are clear and properly directed.

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 windshield.



H3910

The rear screen jets located in the wiper arm are not adjustable.

WARNING

Should any jet become obstructed, insert a needle or thin strand of wire into the orifice to clear the blockage. Do not operate the washer jets during adjustment. Washer fluid may cause irritation to the eyes and skin.

Always read and observe the washer fluid manufacturers instructions.

HEADLAMP WASHERS

The spray jets are set during manufacture and should not need to be adjusted.

Caution: Ensure an approved screen washer solvent is used in the windscreen washer reservoir to prevent freezing.

Wiper Blades

WIPER BLADE REPLACEMENT

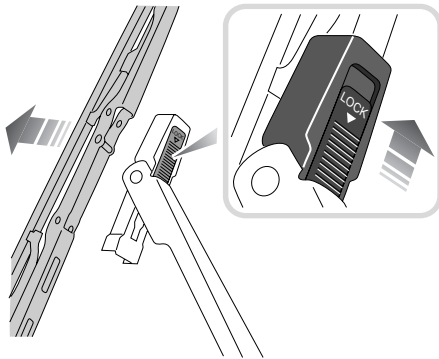
Only fit replacement wiper blades that are identical to the original specification.

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.

Front wiper blades

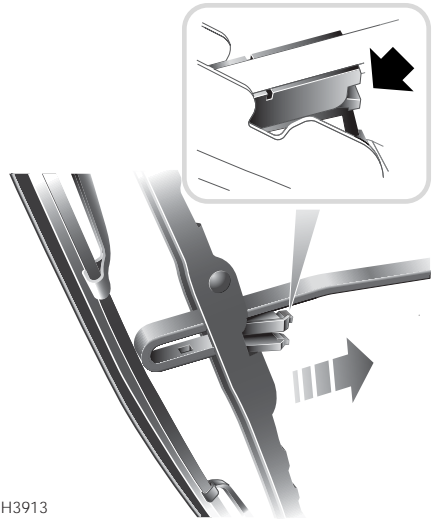


H3912

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.

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.

Battery

BATTERY WARNING SYMBOLS

There is a label on the battery, depicting a number of warning symbols. The warning symbols are as follows:



No smoking, flames, no sparks
(Red).



Shield eyes (Blue).



Keep away from children
(Red).



Explosive gas (Yellow).



Battery acid (Yellow).

BATTERY SAFETY

WARNING

Always wear appropriate eye protection when working with batteries.

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 use, batteries emit explosive hydrogen gas - ensure sparks and naked lights are kept away from the engine compartment.

Do not attempt to start the vehicle if the electrolyte in the battery is suspected of being frozen.

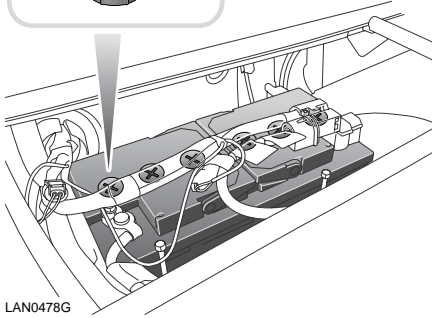
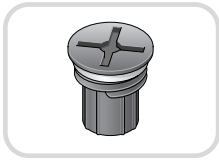
For your safety, remove all metal wrist bands and jewellery before working in the engine compartment and never allow the battery terminals or vehicle leads to make contact with tools or metal parts of the vehicle.

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

Take care when working near rotating parts of the engine.

Battery

BATTERY CARE



LAN0478G

WARNING

The cell plugs and vent pipe must be in place at all times when the battery is in the vehicle. Failure to fit, or incorrect fitting of these items is potentially hazardous. Ensure that the vent pipe is free from kinks or damage.

If battery acid comes into contact with your skin or eyes, immediately rinse with cold water and consult a doctor.

Never charge or boost a frozen battery.

Switch off the starter switch before disconnecting battery terminals. Always disconnect the earth terminal first and reconnect last.

Do not let battery acid come into contact with painted surfaces or fabric.

A low maintenance battery, specifically designed for use with this vehicle, is fitted in the engine compartment.

In hot climates, more frequent checks of the battery electrolyte level are required. If necessary, the battery cells can be topped up with distilled water.

The exterior of the battery should occasionally be wiped clean, to remove any dirt or grease.

Note: The service life of the battery is dependent on its condition of charge. It must always be sufficiently charged for the battery to last the optimum length of time.

Note: Do not connect any 12 volt equipment (for example, a 12 volt lamp), directly to the battery terminals. Use one of the accessory sockets located within the vehicle for connecting Land Rover approved accessories.

Replacement batteries

WARNING

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

Battery disposal



Used batteries should be recycled. However, batteries are hazardous - you should seek advice about disposal from a Land Rover Dealer/Authorised Repairer or your local authority.

Battery

BATTERY DISCONNECTION, CHARGING, REMOVAL AND REPLACEMENT

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, battery charging and removal should only be attempted by qualified personnel.

There may at times be a requirement to disconnect the battery:

- 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 control 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 remote control to turn it off.

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.

Tyres

TYRE CARE

WARNING

Defective tyres are dangerous. Do not drive the vehicle if a tyre is damaged, excessively worn, or incorrectly inflated.

Avoid contaminating the tyres with vehicle fluids, as they may cause damage to the tyre.

Avoid spinning the wheels. The forces released, can damage the structure of the tyre and cause it to fail.

If wheel spin is unavoidable due to loss of traction (in deep snow, for example), do not exceed the 50 km/h (30 mph) point on the speedometer.

All of the vehicle's tyres (including the spare) should be checked regularly for damage, wear and distortion. If you are in any doubt about the condition of a tyre, have it checked immediately by a tyre repair centre or your Land Rover Dealer/Authorised Repairer.

Tyre wear

Good driving practise will improve the distance you obtain from your tyres and avoid unnecessary damage.

- Always ensure that the tyre pressures are correctly adjusted.
- Always observe the posted speed limits and advisory speeds for bends.
- Avoid pulling away quickly and hard acceleration.
- Avoid making fast turns or braking sharply.
- Wherever possible, avoid potholes and obstacles on the road.
- Do not drive up kerbs or rub the tyres against them when parking.

Wear indicators



LAN0330G

WARNING

Wear indicators show at the point of minimum tread. Tyres which have worn to this point will have reduced grip and poor water displacement characteristics.

Caution: If tread wear is uneven across a tyre, or if the tyre wears excessively, the vehicle should be checked by your Land Rover Dealer/Authorised Repairer as soon as possible.

Note: Tyre condition should be checked after the vehicle has been used off-road. As soon as the vehicle returns to a normal, hard road surface, stop the vehicle and check for damage to the tyres.

When the tread has worn down to approximately 1.6 mm, wear indicators start to appear at the surface of the tread pattern. This produces a continuous band of rubber across the tread as a visual indicator.

The tyre must be replaced as soon as the wear indicator becomes visible, or sooner, if legislation requires replacement.

Note: Tread depth should be checked regularly, in some cases more frequently than the service intervals.

Tyres

Age degradation

Tyres degrade over time, even when they are not being used. It is recommended that tyres generally be replaced after six years of normal service. Heat caused by hot climates or frequent high loading conditions can accelerate the ageing process.

You should replace the spare tyre when you replace the other road tyres, due to ageing of the spare tyre.

Punctured tyres

WARNING

Do not drive the vehicle with a punctured tyre. Even if the punctured tyre has not deflated, it is unsafe to use as the tyre may deflate suddenly at any time.

Not all punctures result in the tyre deflating immediately. Therefore, it is important to check the tyres for damage and foreign objects regularly.

When driving, if a sudden vibration or change to the vehicle's handling is noticed, reduce speed immediately. Do not brake or make any sudden manoeuvres or direction changes. Drive slowly to an area away from the main highway and stop the vehicle.

Note: Driving the vehicle to a safe area may cause damage to the punctured tyre, but occupant safety is far more important.

Inspect the tyres for signs of punctures, damage or under-inflation. If any damage or deformity is detected, the tyre should be replaced. If a spare tyre is not available, then the vehicle should be recovered to a tyre repair centre or Land Rover Dealer/Approved repairer.

Replacement tyres

WARNING

Do not fit cross-ply tyres.

Do not fit tubed tyres.

Do not swap tyres around the vehicle. Tyres bed in to the specific characteristics of each wheel position. Swapping them around may affect the vehicle's handling and traction.

Always fit replacement tyres of the same type, and wherever possible, of the same make and tread pattern.

Replacement wheels should be genuine Land Rover parts. This will maintain the designed driving characteristics, both on and off road.

If the use of tyres not recommended by Land Rover is unavoidable, ensure that you read and fully comply with the tyre manufacturer's instructions.

Ideally, tyres should be replaced in sets of four. If this is not possible, replace the tyres in pairs (front and rear). When tyres are replaced, the wheels should always be re-balanced and alignment checked.

The correct tyre specification for your vehicle can be found on the tyre information label. See **Tyre information label, 251**. For an explanation of the label information, see **WHEELS AND TYRES, 297**.

Tyres

Directional tyres

Directional tyres are designed to operate correctly when rotating forwards (when the vehicle is travelling forwards).



LAN0331G

Typical directional tyre indicators

Temporary spare tyre

WARNING

If a temporary spare is in use, the vehicle must be driven with caution at reduced speed (80 km/h [50 mph] maximum). A standard wheel and tyre should be fitted as soon as possible, and only one temporary spare wheel should be fitted to the vehicle at any one time.

Tyre 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.

Under-inflation causes excessive flexing and uneven wear to the tyre. This can lead to sudden failure. Over-inflation causes a harsh ride, uneven tyre wear and poor handling.

A hot tyre, at or below the recommended cold inflation pressure, is dangerously under-inflated.

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 and wear unevenly.

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.

It is impossible to determine if a tyre is properly inflated just by looking at it.

The recommended tyre pressures are listed on a label on the B pillar on the driver's side (visible with the driver's door open). See **Tyre information label, 251**.

Tyre pressures listed on the tyre information label are considered to be the recommended cold tyre inflation pressure, at maximum gross vehicle weight condition, measured when the tyres are **cold**, after the vehicle has been parked for at least 3 hours or driven less than 5 km (3 miles).

Tyres

Check the pressures (including the spare wheel) when the tyres are cold - be aware that it only takes 1.5 km (1 mile) of driving to warm up the tyres sufficiently to affect the tyre pressures.

When you drive for more than 5 km (3 miles), the tyres and the air inside them, warm up and it is normal for the tyre pressure to increase above the recommended cold pressure. When checking tyre pressure in this condition, never reduce air pressure.

Note: *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 by up to 30 - 40 kPa (0.3 - 0.4 bar/4 - 6 lbf/in²). In this circumstance, do not let air out of the tyres in order to match the recommended cold tyre pressures.*

Note: *The pressure for your spare tyre should be set to the highest value given for your vehicle's wheel/tyre size combination, and adjusted after fitment.*

Note: *When towing heavy trailers or with the tow vehicle loaded, the additional imposed nose weight may cause the GVW tyre loading to be exceeded. This is permissible provided that road speeds are limited to 100 km/h (60 mph) and rear tyre pressures are increased by at least 20 kPa (3 lbf/in²). This excludes the temporary spare, where 80 km/h (50 mph) is the maximum permitted speed and tyre pressure should be maintained at the pressures shown on the tyre information label. See **Tyre information label, 251**.*

Checking tyre pressures

Where possible, always check the tyre pressures when the tyres are cold, using the following procedure:

1. Remove the valve cap.
2. Firmly attach a tyre pressure gauge/inflator to the valve.
3. Read the tyre pressure from the gauge. If required add air to the tyre.
4. If air is added to the tyre, remove the gauge from the valve and re-attach it before checking that the pressure is correct.

Failure to remove and re-attach the gauge to the valve could cause the gauge to show an incorrect reading.

5. If too much air is added, remove the gauge from the valve and allow air out of the tyre by pressing the centre of the valve.

Reconnect the gauge to the valve and check that the air pressure is correct. If the pressure is still not correct, repeat this process and re-check.

6. Refit the valve cap.

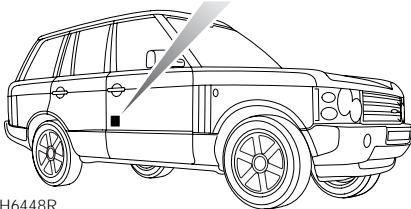
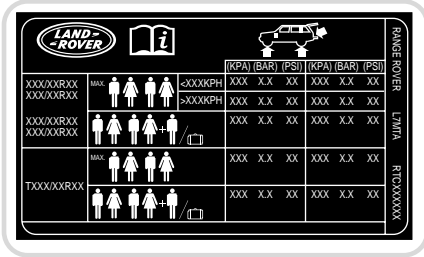
Note: *It is an offence in certain countries to drive a vehicle with tyres that are not properly inflated in accordance with the vehicle's proper use.*

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.

Tyres

Tyre information label

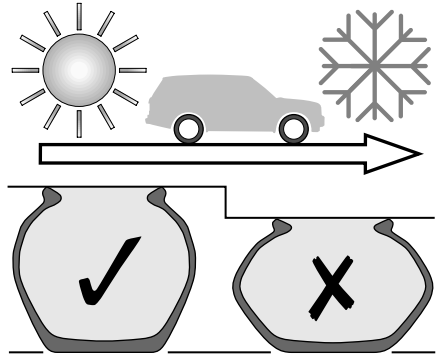


H6448R

The tyre label is visible on the pillar behind the drivers door (also known as the B pillar), giving information specific to the wheel and tyre equipment fitted to the vehicle when it was built.

This label contains information relating to tyre and wheel sizes along with recommended pressures for all wheel and tyre combinations.

Pressure compensation for ambient temperature changes



LAN0599G

If the ambient temperature drops, the tyre pressures will decrease, which may cause under-inflation. This should be borne in mind when travelling to, or through, areas of lower temperature.

Under-inflation causes the tyre side wall height to reduce which, in turn, results in uneven tyre wear and a risk of tyre failure.

Tyre pressures may be adjusted before setting off on a journey to, or through, areas of low temperature. Alternatively, the tyre pressures can be adjusted when low temperature areas are reached.

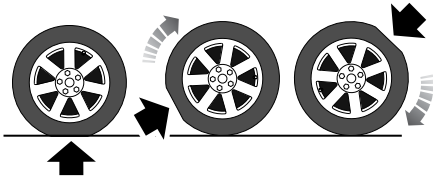
Note: *If the tyre pressures are to be adjusted in the lower temperature area, the vehicle should be left standing for at least one hour prior to adjustment.*

Tyre pressures should be increased by 0.14 bar/14 kPa (2 lbf/in²) for each 10°C (20°F) temperature decrease.

Tyres

Flat spots

If the vehicle is stationary for a long period when the ambient temperature is high, the tyres may form flat spots. When the vehicle is driven, these flat spots will cause a vibration, which will steadily disappear as the tyres regain their original shape.



LAN0600G

In order to minimise flat-spotting, the tyre pressures can be increased.

Tyre pressures should be increased by 0.14 bar/14 kPa (2 lbf/in²) for each 10°C (20°F) temperature increase.

Long-term storage

Flat-spotting can be minimised during long-term storage, by increasing the tyre pressures to the maximum indicated on the tyre sidewall.

Note: The tyre pressures should be reduced to the correct pressure, before the vehicle is driven.

High performance tyre and wheel combinations

Caution: This vehicle may be fitted with a high performance wheel and low profile tyre combination, designed to give enhanced dry road performance, with consideration for aquaplaning resistance.

Low profile, high speed rated tyres have a softer tread compound. If driven aggressively, they may suffer increased tread wear and a shorter life than can be expected from other tyre types. This wheel and tyre combination is susceptible to damage if driven off-road. This combination has less performance in snow and ice conditions than M and S tyres. High performance tyres must be replaced with winter tyres when weather conditions dictate.

Tyres

USING WINTER TYRES

Winter tyres are more suitable during extremes of low temperatures, snow and ice and will considerably improve the vehicle's handling during these conditions.

Winter tyres must be fitted on all four wheels.

Approved winter tyres

19 inch wheels:

255/55 R19 111H Goodyear Ultra Grip

Winter tyre pressures:

The cold tyre inflation pressures for winter tyres are the same as those for normal tyres of the same size.

SNOW CHAINS

WARNING

Only use snow chains in heavy snow conditions, on hard road surfaces.

Dynamic Stability Control (DSC) must be switched off when using snow chains. DSC limits wheel spin which is required to maintain traction in deep snow conditions.

Do not exceed 50 km/h (30 mph) when snow chains are fitted.

Do not fit snow chains to a temporary use spare wheel.

Snow chains are designed for use on hard-surface 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.

- **Rear wheels:** Snow chains can only be fitted to 19 and 20 inch rear wheels, provided the wheels and tyres conform to the specifications of the original equipment. See **WHEELS AND TYRES, 297**.
- Snow chains **must not** be fitted to a temporary spare wheel.
- 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/Authorised Repairer.
- Always adhere to the snow chain fitting and retensioning instructions and the speed limitations recommended for varying road conditions. Never exceed 50 km/h (31 mph).
- Only fit snow chains in pairs.
- Avoid tyre damage by removing the chains as soon as the road is free from snow.

Caution: 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.

Tyres

TYRE PRESSURE MONITORING (TPM) SYSTEM

WARNING

The Tyre Pressure Monitoring (TPM) system is not a substitute for manually checking tyre pressures.

The TPM system only provides a low tyre pressure warning and does NOT re-inflate the tyres.

Tyre pressures should be checked regularly, when cold, using an accurate pressure gauge.

Failure to properly maintain your pressures could increase the risk of tyre failure, with consequential loss of vehicle control and personal injury.

The TPM system cannot register damage to a tyre. Regularly check the condition of your tyres, especially if the vehicle is driven off-road.

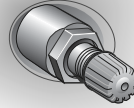
*Note: Non-approved accessories may interfere with the system. If this occurs, **TYRE MONITORING SYSTEM FAULT** is displayed in the message centre.*

*Different types of tyre may affect the performance of the TPM system. Always replace tyres in accordance with recommendations. See **Tyre information label, 251**.*

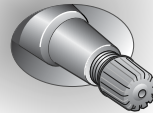
Your vehicle may be equipped with a TPM system which monitors pressure in each tyre, including the full-size spare tyre. Temporary spare tyres are not fitted with sensors and are consequently not monitored.

*Note: The TPM system only provides a low tyre pressure warning and does **NOT** re-inflate the tyres.*

1



2



LAN0544G

Wheels fitted with a TPM system can be easily visually identified by the external metal lock nut and valve (1). All Land Rover non-TPM system wheels have a rubber valve fitted (2).

TPM system operation

The TPM system monitors the pressure of the tyres via sensors located in each wheel and a receiver located within the vehicle.

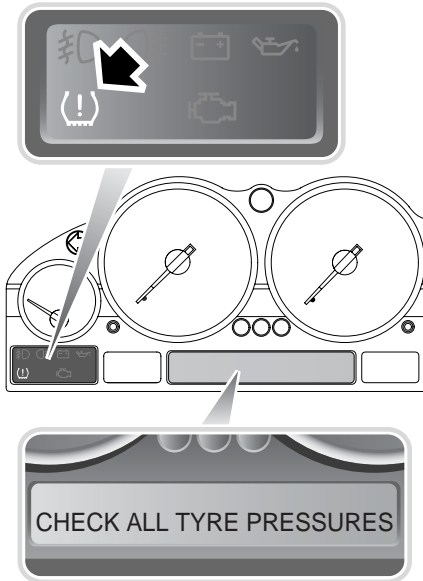
Communication between sensor and receiver is via Radio Frequency (RF) signals.



The tyre pressure warning comprises a yellow warning indicator (telltale) within the instrument pack and an associated message within the message centre.

Each tyre, including the spare (if provided), should be checked regularly, when cold, and inflated to the recommended pressure. The appropriate section of this Owner's Handbook should be consulted for the recommended tyre inflation pressures. When the low tyre pressure warning is indicated, one or more of your tyres is significantly under-inflated.

Tyres



LAN0566ENG

If the telltale light illuminates, you should stop and check your tyres as soon as possible and inflate them to the recommended pressure. See **Tyre information label, 251**. If low pressure warnings occur frequently, the cause must be determined and rectified. Driving on a significantly under-inflated tyre causes the tyre to overheat and can lead to tyre failure. Under-inflation also reduces fuel efficiency and tyre tread life, and may affect the vehicle's handling and stopping ability.

The TPM system also monitors the full size spare tyre pressure. If the pressure for the spare tyre is incorrect, the message **CHECK SPARE TYRE PRESSURE** will be displayed, accompanied by illumination of the warning telltale.

When driving through variable climatic conditions, the TPM system warnings may be intermittent.

Caution: When inflating tyres, care should be taken to avoid bending or damaging the TPM system valves. Always ensure correct alignment of the inflation head to the valve stem.

Your vehicle will also indicate a TPM system malfunction by initial flashing and subsequent continuous illumination of the warning telltale. A text message will accompany the system malfunction and will display **TYRE MONITORING SYSTEM FAULT**. The TPM system fault sequence will be activated at every ignition cycle until the fault is rectified. When a malfunction occurs, the system may not be able to detect or signal low tyre pressure as intended.

TPM system malfunctions may occur for a variety of reasons which may include other radio frequency systems that could cause interference or the installation of incompatible replacement tyres on the vehicle.

Spare tyre pressure

The full size spare tyre should be inflated to the highest pressure for the specified tyre size, when not in use on the vehicle.

Full size spare wheel and tyre change

Should it be necessary to change a wheel and tyre with the spare then the system will automatically recognise the change in wheel positions. The vehicle needs to be stationary for 15 minutes during the wheel and tyre change, before the system is ready to detect the change in positions. After driving above 25 km/h (18 mph) any deflation warning will clear typically within 5 minutes.

Tyres

Temporary spare wheel and tyre change

If the temporary spare wheel is fitted, the system will automatically recognise the change in wheel positions. Then, after approximately ten minutes of driving above 25 km/h (18 mph), the message **TYRE FRONT (REAR) RIGHT (LEFT) NOT MONITORED** will be displayed, accompanied by illumination of the warning telltale.

The warning telltale will initially flash and will subsequently revert to continuous illumination. Extended use of the temporary spare wheel, will produce an additional text message **TYRE MONITORING SYSTEM FAULT**.

This TPM system display sequence will be activated at every ignition cycle until the temporary spare wheel is replaced by a fully operational full size wheel and tyre assembly.

Always replace the temporary spare wheel before having TPM system faults investigated. The fault may well be rectified with the fitment of a fully operational full size running tyre in lieu of the temporary spare wheel assembly.

Tyre pressure warning with speed

If the vehicle is to be driven at speeds in excess of 160 km/h (100 mph), the tyre pressures should be increased as stated on the tyre information label. Failure to increase the tyre pressures and driving in excess of 160 km/h (100 mph), will illuminate the yellow warning telltale and display the message **TYRE PRESSURES LOW FOR SPEED**. In the event of this warning being displayed, vehicle speed should be reduced.

If a tyre needs to be changed

It is recommended that you should always have your tyres serviced by a dealer or qualified technician. If a TPM system is fitted, each wheel and tyre assembly, with the exception of a temporary spare is equipped with a tyre pressure sensor connected to the tyre valve stem.

In order to avoid damage to the sensor, the tyres must be removed and refitted to the road wheel in a specified manner. Care must be taken to avoid contact between the bead of the tyre and the sensor during removal and refitting of the tyre, otherwise the sensor may become damaged and/or inoperable.

Caution: Valve stem seal, washer, nut, valve core and cap should be replaced at every tyre change.

Valve stem seal, washer and nut must be replaced if valve retention nut is loosened. Sensor units and nuts must be refitted using the correct torque figures and associated profile.

Sensors can be removed from the wheel by the unscrewing of the valve retention nut.

Damage to the vehicle may result if these precautions are not taken.

Replacement sensor fitment procedure

Sensor replacement should be carried out by a Land Rover Dealer/Authorised Repairer.

A replacement sensor must be fitted to a running wheel in order to be recognised by the TPM system. Recognition only occurs when the vehicle is driven above 25 km/h (18 mph) for approximately ten minutes.

Should the TPM system warning for any wheel not clear, even after ensuring correct inflation and driving for more than ten minutes above 25 km/h (18 mph), consult your Land Rover Dealer/Authorised Repairer.

Cleaning and Vehicle Care

CLEANING THE EXTERIOR



H6538G

Caution: Some high pressure cleaning systems are sufficiently powerful to penetrate door/window seals and damage trim and door locks. Never aim the water jet directly at the engine air intake, heater air intakes, body seals (doors, sunroof, windows etc.) or at any component which may be damaged (lamps, mirrors, exterior trim etc.).

Do not use a power wash system in the engine bay area, as it may damage fragile components, electrical systems etc.

Ensure that you read and comply with all warnings and instructions supplied with any cleaning products. Never use cleaning products which are not approved for use on vehicles.

Washing the vehicle

Remove heavy deposits of mud and dirt with a hose, before washing the vehicle.

Wash your vehicle frequently, using a sponge and generous quantities of cold or lukewarm water containing a suitable car shampoo. Rinse thoroughly and dry with a chamois leather, or synthetic substitute.

When washing the vehicle:-

- Do not use hot water.
- Only use cleaning products approved for use on vehicles.
- During hot weather, do not wash the vehicle in direct sunlight.

Caution: Substances which are corrosive, such as bird droppings, tree resin, dead insects, tar spots, road salt and industrial fall-out, can damage the vehicle's paintwork. Any such deposits should be removed as soon as possible, to prevent damage to the vehicle's paintwork.

Removing tar spots

Use white spirit to remove tar spots and stubborn grease stains from paintwork. Ensure that after using white spirit, the area is washed immediately with soapy water to remove all traces of spirit.

Underbody maintenance

Corrosive materials used on highways to control snow and ice, as well as accumulations from off-road driving or wading in salt water, can collect on the vehicle's underbody. If these materials are not removed, accelerated corrosion can occur. Regularly flush the underbody with plain water and pay particular attention to areas where mud and debris collect.

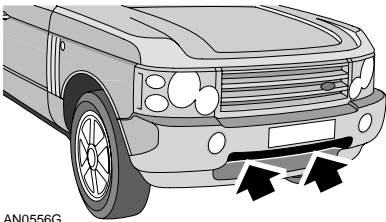
If damage or corrosion is detected, have the vehicle checked by a Land Rover Dealer/ Authorised Repairer as soon as possible.

Cleaning and Vehicle Care

Cleaning after driving off-road

Caution: After driving off-road, ensure that areas around air intakes and the front grille are clean and clear of debris. Failure to do so may cause the engine to overheat.

Ensure that the vehicle and underside is cleaned soon after off-road driving, taking particular care to clean areas where mud and debris has compacted.



LAN0556G

This should include using a low pressure hose to flush water through the lower grille area (arrowed in illustration), to clean the cooling system components.

Repairing minor paint damage

Regularly inspect the paintwork for damage. and any stone chips, fractures or deep scratches in the paint/bodywork should be repaired promptly. Bare metal will corrode quickly and, if left untreated, can result in expensive repairs.

Minor chips and scratches can be touched-up using materials available from a Land Rover Dealer/Authorised Repairer. Larger areas of damage will require professional repair and you should consult a Land Rover Dealer/Authorised Repairer.

Plastic and cloth

Clean plastic or cloth faced surfaces with warm

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

The rear screen and mirror glass should only be cleaned using soapy water and a soft cloth. This will avoid damaging the reflective surface of the mirror and the heating elements and antenna in the rear screen.

Never use abrasive cleaning products or metal ice scrapers on the mirrors or the front/rear screens.

CLEANING THE INTERIOR

WARNING

Ensure that you read all of the information and instructions for use, which are provided with cleaning products. Some products contain substances that are harmful and can cause health problems if used incorrectly.

Caution: Ensure that you read all of the information and instructions for use, which are provided with cleaning products. Some products, if used incorrectly, can cause damage to the interior surfaces of the vehicle.

water and non-detergent soap, then wipe clean with a soft cloth.

Cleaning and Vehicle Care

WARNING

Do not polish the instrument panel. Polished surfaces are reflective and may interfere with the driver's view.

Leather

Caution: Only use cleaning products specifically designed for use on leather. Do not use chemical, alcohol or abrasive materials, as they will cause rapid deterioration of the leather. The use of products which are not approved, will invalidate your warranty.

If you are in any doubt as to which products to use, consult your Land Rover Dealer/ Authorised Repairer.

It is recommended that leather is cleaned and protected at least every six months.

Land Rover recommend the use of later cleaning kit BAC500490. Use only in accordance with the instructions.

Note: Some materials/fabrics are prone to dye transfer, which can cause unsightly discolouration to lighter coloured leathers. Affected areas should be cleaned and re-protected as soon as possible.

Carpets and fabrics

Only clean with a dilute solution of an approved upholstery cleaner. It is advisable to test all cleaners on a concealed area before use.

Instrument pack, clock and audio equipment

Only use a soft, dry cloth to clean the instrument pack, clock and audio equipment. Do not use cleaning fluids or sprays.

Seat belts

Extend the seat belts fully, then use warm water and a non-detergent soap to clean. Allow the seat belts to dry naturally while fully extended.

WARNING

Do not allow any water, cleaners or fabric from cloths, to enter the seat belt mechanism. Any substance which enters the mechanism may affect the performance of the seat belt in an impact.

Note: When cleaning the seat belt, take the opportunity to examine the webbing for damage/wear. Any wear or damage should be reported to, and rectified by, a Land Rover Dealer/Authorised Repairer.

Airbag module covers

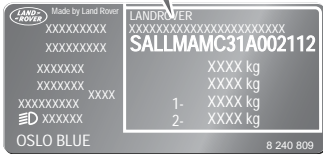
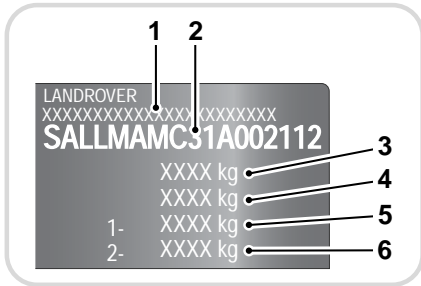
WARNING

Airbag covers should only be cleaned using a slightly dampened cloth and a small amount of upholstery cleaner.

Do not allow the airbag covers or surrounding areas, to become contaminated with liquids. Any substance which enters the mechanism, can prevent correct deployment of an airbag during an impact.

Identification Numbers

VEHICLE IDENTIFICATION NUMBER (VIN)



LAN0479G

VEHICLE BUILT DATE (Australia only)

This is the calendar month and year in which the body and power train assemblies were conjoined and the vehicle was driven from the production line.

The vehicle built date is printed on a label in the engine compartment.

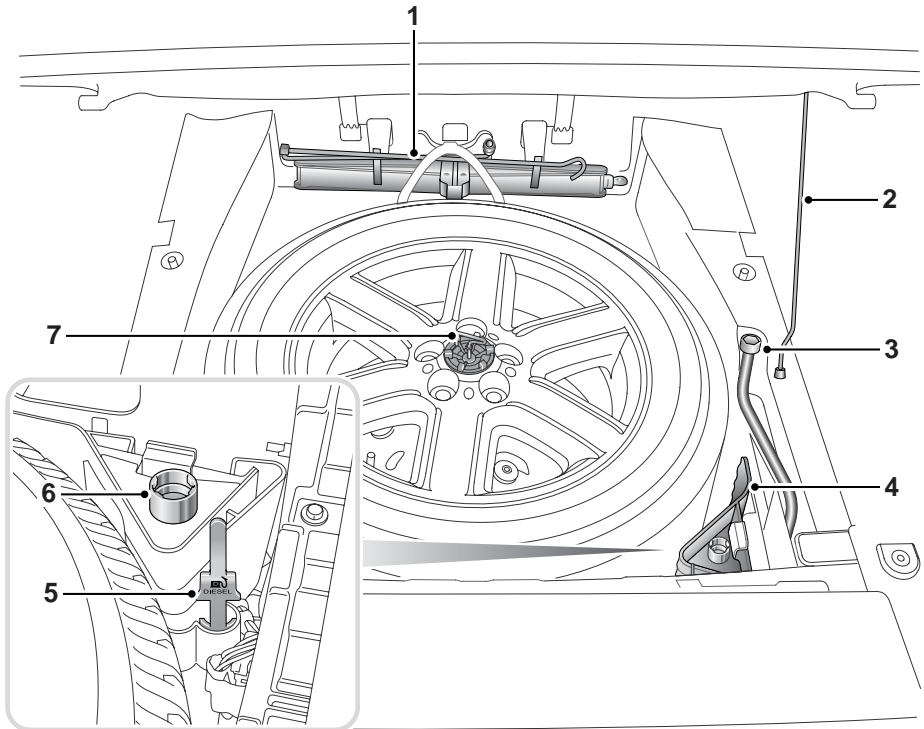
1. Type approval (where required).
2. Vehicle Identification Number (VIN).
3. Gross vehicle weight (where required).
4. Gross train weight (where required).
5. Maximum front axle load (where required).
6. Maximum rear axle load (where required).

If you need to communicate with a Land Rover Dealer/Authorised Repairer, you may be asked to quote the Vehicle Identification Number (VIN).

The VIN is stamped on a plate which is visible through the lowest part of the left side of the windscreen (this should match the VIN recorded in the Service Portfolio book). VIN information may also be found in areas such as: Bonnet locking platform, suspension tower and door shut faces.

Wheel Changing

TOOL KIT



LAN0480G

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. Petrol fuel guard reset tool.
6. Locking wheel nut adaptor.
7. Spare wheel retaining bolt.

WARNING

After wheel changing, always secure tools, chocks, jack and replaced wheel in their correct storage positions. Such objects if not properly stowed can become flying missiles in a crash or roll-over, potentially causing injury or death.

Wheel Changing

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.

WHEEL CHANGING

If a wheel change is required, pull off the road completely. Park on ground which is as level and solid as possible. Ensure that the vehicle is clear of any objects that will obstruct the safe removal of the wheel. Switch on the hazard warning lights, and where legally required, display a warning triangle.

Always ask your passengers to get out of the vehicle and wait in a safe area away from other traffic. Disconnect any attached trailer or caravan.

Before changing a wheel, ensure the front wheels are in the straight ahead position (if possible), apply the parking brake, 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 the wheels. See **Using wheel chocks**.
- Never raise the vehicle with passengers inside, or with a caravan or trailer connected.

Tilt sensor

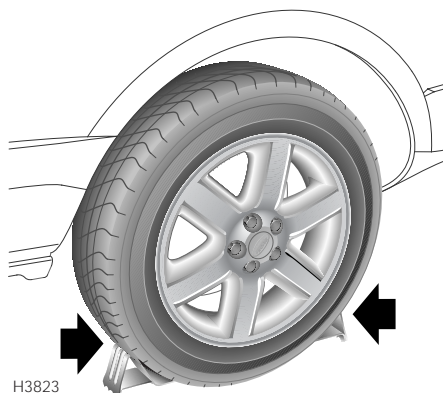
Your vehicle is fitted with a tilt sensor which activates the alarm if the vehicle is tilted fore and aft, or side to side, after it has been locked.

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.



H3823

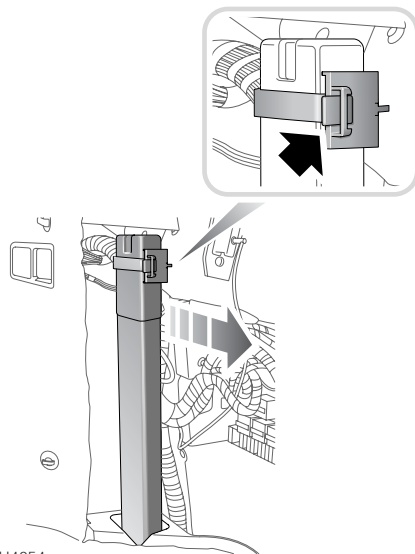
If possible, position the vehicle on level ground, chocking both sides of the wheel diagonally opposite the one to be removed.

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, as shown in the **TOOL KIT, 261**.

Wheel Changing

Using the warning triangle



H4054

The warning triangle may be located behind the rear loadspace access hatch. See **REAR LOADSPACE ACCESS HATCH, 162**, 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.

Place the warning triangle at a suitable distance behind the vehicle, to warn other drivers of a possible obstruction.

TEMPORARY SPARE WHEEL

Some vehicles, while fitted with alloy road wheels, have a reduced size steel or alloy wheel as a spare.

This is designated a **temporary use spare** and is shown by having a speed restriction label attached to the wheel. See the warnings below.

WARNING

The following precautions must be observed when the temporary spare wheel is in use:

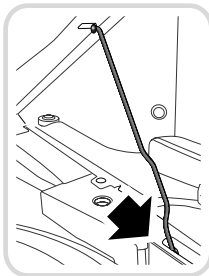
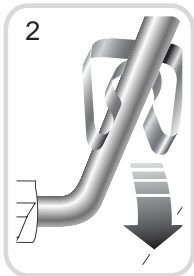
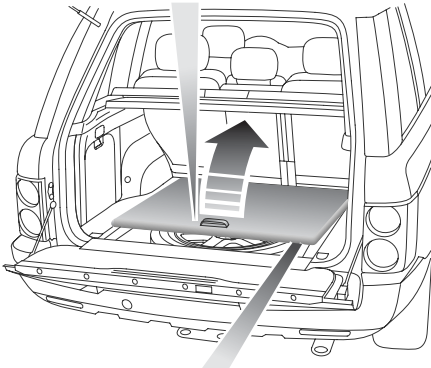
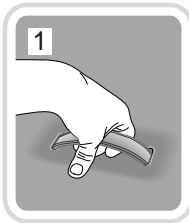
- Drive cautiously; the temporary spare wheel tyre is smaller in size and higher in pressure than a regular tyre. It will cause a harsher ride and may have less traction on some road surfaces. If driving off-road on a temporary spare wheel, drive with extra caution.
- The temporary spare wheel is for temporary use only. It must be replaced by a normal-sized wheel and tyre as soon as possible.
- Only one temporary spare wheel is to be used on the vehicle at any one time.
- Do not drive at a speed exceeding 80 km/h (50 mph).
- The tyre pressure in the temporary use spare wheel/tyre should be as specified in the wheels and tyres section. See **WHEELS AND TYRES, 297**.
- The temporary spare wheel has a shorter life than a regular tyre. Replace the tyre with one of the same type and specification.
- The use of snow chains is not permitted on a temporary spare wheel.

Wheel Changing

REMOVING THE 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.

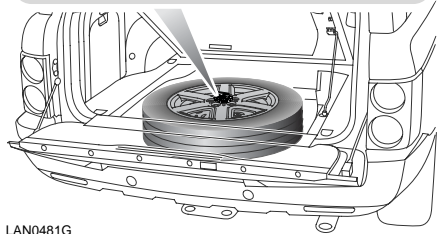
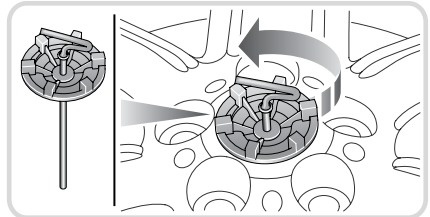


To access the spare wheel well, it is necessary to fold the rear edge of the loadspace cover forward. See **LOADSPACE COVER, 164**.

With the tailgate open:

1. Lift the handle (1) to open the spare wheel access hatch.
2. Unclip the support stay (2) 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. Remove the wheel chocks and wheel nut brace. See **TOOL KIT, 261**.



3. Loosen the spare wheel retaining bolt, remove bolt and spare wheel.

H3824

Wheel Changing

CHANGING A WHEEL

Positioning the jack

WARNING

The vehicle jack supplied with your vehicle should only be used when changing a wheel in emergency situations.

Before using the vehicle jack, check that it is not damaged or deformed and that the thread is lubricated and free from foreign matter.

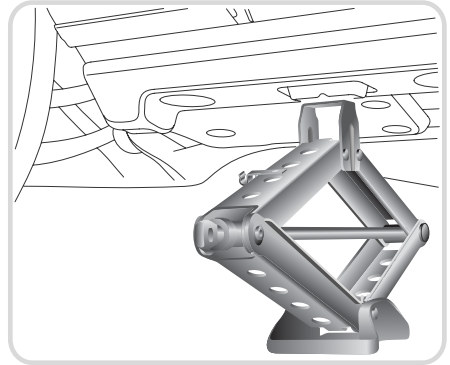
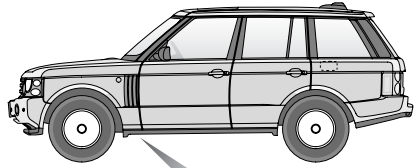
Never place anything between the jack and the ground, or the jack and the vehicle.

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

Always:

- Place the jack on firm, level ground.
- Position the jack from the side of the vehicle, in line with the appropriate jacking point.
- Raise the jack so that the pin in the head of the jack engages with a hole in the chassis rail at the points shown in the illustrations.

Caution: Use only the specified jacking points. If you use other positions, you may damage the body, steering, suspension, engine, braking system or the fuel lines.

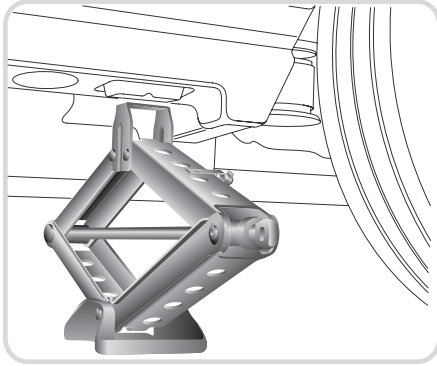
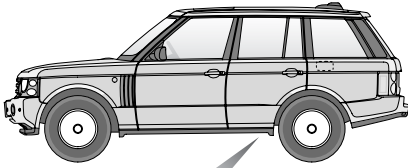


H6521G

Front jacking point

Always position the jack from the side of the vehicle in line with the appropriate jacking point. Ensure the jack is positioned on firm, level ground.

Wheel Changing

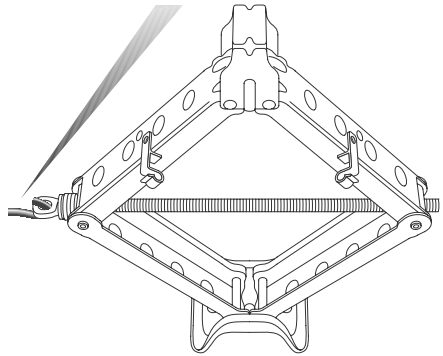
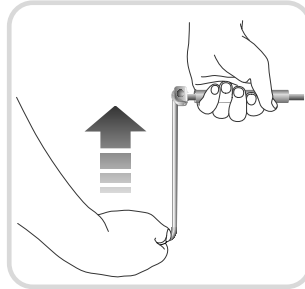


H6522G

Rear jacking point

Caution: Jack the vehicle using only 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.

WARNING

Always use the jack lever throughout to minimise any chance of accidental damage or injury.

Wheel Changing

Changing a wheel

WARNING

Make sure that the vehicle is on firm, level ground with the wheels pointing straight ahead.

Make sure that the jack is vertical to the jacking point and the base is flat on the ground.

Have the passengers leave the vehicle.

Do not work underneath the vehicle when it is supported only by a jack.

1. Before raising the vehicle, use the wheel nut brace to slacken the wheel nuts half a turn anticlockwise.
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.

Caution: 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 and result in an accident.

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.

Road wheel nut torque	140 Nm (103 lbf.ft)
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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 spare wheel removal procedure in the reverse order.

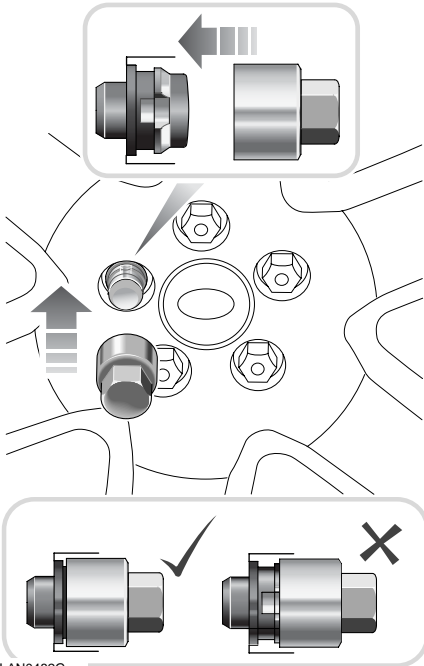
10. Remember to change to High range before driving.
11. Finally, check the tyre pressure at the earliest opportunity, see **WHEELS AND TYRES, 297**.

For additional information on your tyres, see **TYRE CARE, 247**.

Wheel Changing

LOCKING WHEEL NUTS

Vehicles may be equipped with a locking wheel nut on each wheel. These are similar to standard wheel nuts but can only be removed using the adaptor provided in the tool kit.



LAN0482G

Note: A code number is stamped on the locking nut. 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.

Insert the adaptor firmly onto the locking wheel nut. Using the wheel nut brace, unscrew the wheel nut and adaptor.

Return the locking wheel nut adaptor to the correct storage position.

Emergency Starting

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

Always wear appropriate eye protection when working with batteries

During normal use, batteries emit explosive hydrogen gas - ensure sparks and naked lights are kept 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.

Boosting from another vehicle

Caution: If using a donor vehicle, under no circumstances should the vehicles come into contact with each other. This could establish an earth connection, which may cause sparks and damage.

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.

On both vehicles, apply the parking brake and ensure that the transmission is set in neutral (P - 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.

WARNING

Do not use a 24 volt booster start system.

These produce excessive voltage and can damage the vehicle's electrical system.

Emergency Starting

Booster cable connection points

WARNING

Always use the recommended connection points.

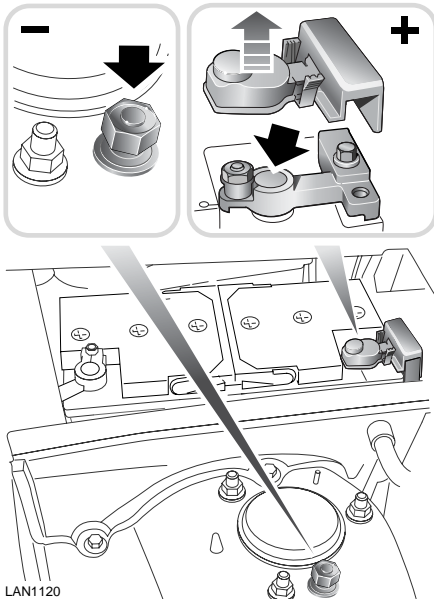
Do not connect the Black cable to the negative (-) terminal of the discharged battery, this could cause sparking, which could lead to fire or explosion. Always use the negative (-) connection point - if in doubt, seek qualified assistance.

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.

The positive (+) connection point on the battery terminal, shown in the right inset of the illustration, is protected by a cover to prevent an inadvertent connection and to avoid contamination. Remove the cover before attempting to connect a booster cable.

The negative (-) connection point is a special nut, located on the suspension turret (see illustration).

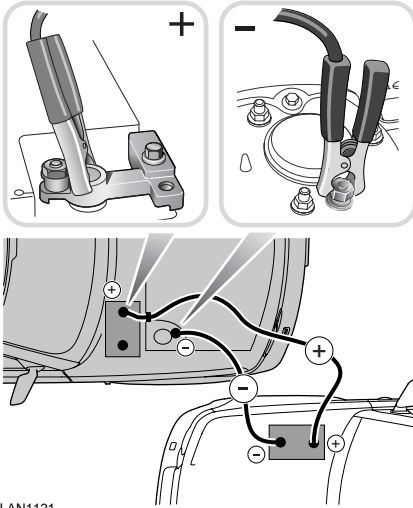
Always use these connection points when connecting booster cables and ensure the cables are kept clear of any moving parts in the engine compartment.



LAN1120

Emergency Starting

BOOSTING PROCEDURE



LAN1121

Caution: 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, 269, Boosting from another vehicle, 269 and Booster cable connection points, 270, before attempting to give or receive a booster start.**

Always adopt the following procedure, ensuring the booster cables are connected in the order shown below:

1. On the donor vehicle, connect one end of the Red booster cable to the positive (+) connection point (if fitted) in the engine compartment, or to the positive (+) terminal of the battery.
2. On the disabled vehicle, connect the other end of the Red booster cable to the positive (+) connection point (if fitted), or to the positive (+) terminal of the battery.

3. On the donor vehicle, connect one end of the black booster cable to the vehicle's negative (-) connection point (if fitted), or the negative (-) terminal of the donor battery.
4. On the disabled vehicle, connect the other end of the black booster cable to the vehicle's negative (-) connection point or to a good earth point (e.g. an engine mounting or other unpainted surface) at least 0.5 m (20 in.) from battery and well away from fuel and brake lines.
5. 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.
6. Start the disabled vehicle. When both engines are running normally, allow them to idle for two minutes before switching off the donor vehicle engine.

Caution: 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.

If the vehicle power supply has been interrupted, ABS and DSC will be deactivated (the relevant warning indicators 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 indicators will extinguish when the systems are reactivated.

Fuses

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

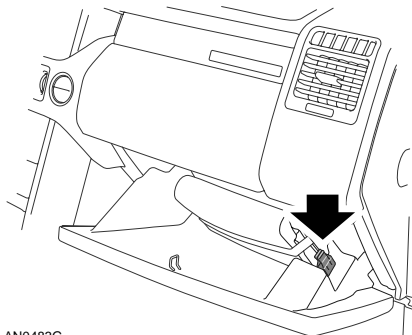
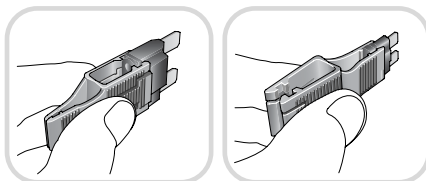
Checking or renewing a fuse

Always turn the starter switch off and switch off the affected electrical circuit, before removing a fuse.

WARNING

Fit only Land Rover approved replacement fuses of the same rating and type. Always rectify the cause of failure before replacing a fuse. Incorrect fuse ratings may overload a system and cause a fire or malfunction. Seek qualified assistance if necessary. No attempt should be made to repair a fuse that has blown.

Failure of any fuses or relays not detailed on the following pages, should only be investigated by a qualified technician.



LAN0483G

The fuse removal tweezers are located in the lower 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.

Engine compartment fuses

WARNING

Failure of any fuses or relays contained within the engine compartment, should only be investigated by a qualified technician.

Some fuses are located in the engine compartment, including the glow plug fuses (located adjacent to the battery) and engine management fuses (located in the electronic control box).

These fuses should only be accessed or replaced by a qualified technician.

Fuses

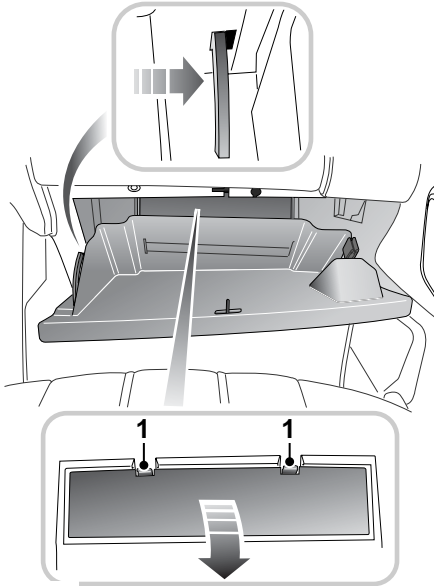
PASSENGER COMPARTMENT FUSE BOX

The passenger compartment fuse box is fitted behind the lower glove box; to access the fuses, open the glove box, then release the left-hand support stay as shown (see upper inset). This allows the glove box to open to the service position.

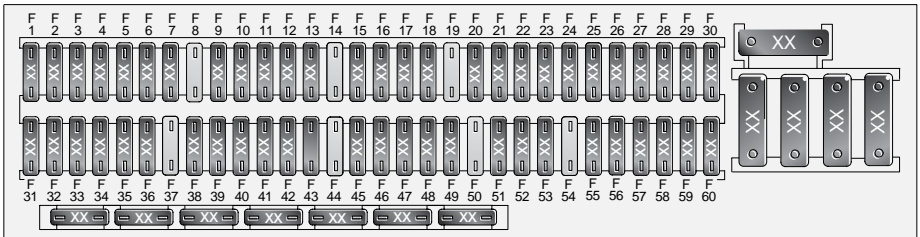
Remove the fuse box cover by pressing down on the catches (1) while pulling the cover rearwards. The solid arrow in the illustration indicates the location of the fuse removal tool.

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.



LAN0515G



LAN0516G

Fuses

Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	5	Instruments, Passenger airbag disable indicator
2	5	Heated rear window, Rear blower, Heated seats - rear, Cigar lighter/Front accessory socket, Trailer socket
3	5	Airbag DCU, Occupancy sensor
4	5	Exterior lamps, Instrument illumination, Approach lamps
5	7.5	Diagnostics, Transmission
6	5	Rear view mirror, Parking distance control, TPM system
7	5	Air suspension
8	-	Spare
9	5	Brake lamps, Exterior lamps, Instrument illumination, Cruise control, Steering wheel audio controls, Dynamic Stability Control (DSC)
10	20	Climatic seats
11	30	Central locking, External mirrors, Electric window - driver's
12	10	Air conditioning, Heated seats - front
13	10	Lumbar pumps, Analogue clock
14	5	Transit relay - transit only
15	5	Central locking, Diagnostic socket, Power assisted steering
16	5	TPM system
17	5	Approach lamps
18	10	Immobilisation
19	-	Spare
20	30	Seat memory, Electric seat switches, Steering column adjust
21	30	Electric seat switches
22	5	Telephone, Traffic messaging (TMC)
23	-	Spare
24	30	Central locking, Exterior mirrors, Electric window - front passenger's
25	5	Immobilisation
26	30	Windscreen wipers
27	20	Glove box lamp, Interior lamps, Body Control Unit (BCU)
28	30	Headlamp washers
29	10	Heated steering wheel
30	5	Alternator
31	5	Engine management, Immobilisation
32	5	Active Front lighting System (AFS)

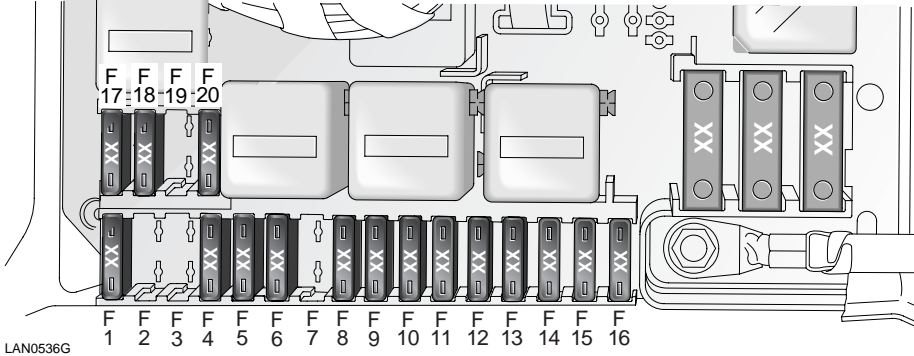
Fuses

Fuse number	Rating (amps)	Circuit protected
33	5	Transmission, Centre console switches, Electronic differential
34	7.5	Air conditioning, Blower, Heated front screen, Heated/cooled seats
35	5	Hill Descent Control (HDC), Dynamic Stability Control, Steering angle sensor
36	5	Electronic Parking Brake (EPB)
37	-	Spare
38	5	Anti-lock Braking System (ABS), Yaw rate sensor
39	5	Immobilisation
40	5	CD autochanger
41	5	Rain sensor, Rear window wash/wipe, Headlamp wash/wipe
42	5	Vanity mirror illumination
43	5	Alarm, Interior mirror (Infra red), Glove box lock control
44	-	Spare
45	5	Instruments
46	5	Instruments
47	15	Heated screen washers, Heated wiper blades
48	15	Active Front lighting System (AFS) - LH
49	30	Navigation system, On-board computer, On-board monitor, Audio system
50	-	Spare
51	5	Interior illumination
52	20	Heated/cooled seats - front
53	15	Active Front lighting System (AFS) - RH
54	-	Spare
55	25	Anti-lock Braking System, Dynamic Stability Control
56	25	Heated seats - rear
57	20	Air suspension
58	20	Sunroof
59	20	Auxiliary heater (diesel models only), Independent heater
60	30	Central locking, Electric windows - rear

Fuses

REAR LOADSPACE FUSE BOX

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, 162**.



Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	15	Trailer socket
2	-	Spare
3	-	Spare
4	20	Accessory socket - rear
5	20	Rear screen wiper
6	30	Electronic Parking Brake (EPB)
7	-	Spare
8	30	Rear rear window
9	30	Audio system amplifier
10	10	Rear seat entertainment, Vehicle Information Communication System
11	10	Telephone, Navigation, Message centre, Television, Radio, Headphones
12	5	Rear view camera
13	5	Air suspension
14	15	Rear blower motor
15	10	Tailgate
16	5	Remote control receiver, glove box switch
17	20	Cigar lighter - front, Accessory socket - rear
18	20	Cigar lighter - rear, Accessory socket - front
19	-	Spare
20	20	Trailer socket

Bulb Replacement

REPLACING BULBS

Check the operation of all exterior lamps before you drive the vehicle.

Caution: Before attempting to replace a bulb, ensure that both the affected lamp and the vehicle's ignition are turned off. If the circuit remains live a short circuit can occur which may damage the vehicle's electrical system.

Always replace bulbs with the correct type and specification. If you are in any doubt contact your Dealer/Authorised Repairer for advice.

Replacement bulbs

Note: All bulbs must be rated at 12 Volts.

Bulb	Watts
Headlamps dipped beam (Halogen)	55 (H7)
Headlamps main beam	55 (H7)
Front side lamps	5
Direction indicators	21
Front fog lamps	55 (H11)
Side repeater lamps	5
Reverse lamps	6 (H6)
Rear fog lamps	21
Tail lamps	5
Number plate lamps	5
Door/puddle lamps	5
Interior lamps	6
Luggage/footwell lamps	5
Luggage/tailgate lamps	6
Glovebox lamp	5
Vanity mirror lamp	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/Authorised Repairer.

Halogen bulbs

Halogen bulbs are used for high beam, low beam, front fog lamps and reverse lamps. 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 lamps

WARNING

Replacement or maintenance of Xenon lamps should only be carried out by suitably qualified personnel.

High voltage is required to ignite the gas and metal vapour which are used to power Xenon lamps. Contact with this voltage can cause serious injury.

Bi-Xenon lamp units operate at a very high temperature. Ensure that the lamp units have cooled before attempting to touch them.

Xenon lamp units contain Mercury which is highly toxic and can be extremely harmful.

Some vehicles are fitted with Bi-Xenon headlamp units. Xenon lamps provide significantly improved visibility, especially during adverse weather.

The operational life of a Xenon lamp is significantly longer than that of a conventional or halogen bulb.



Seek advice about the proper disposal of Bi-Xenon lamp units from a Land Rover Dealer/Authorised Repairer or your local authority.

Bulb Replacement

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.

Bulb Replacement

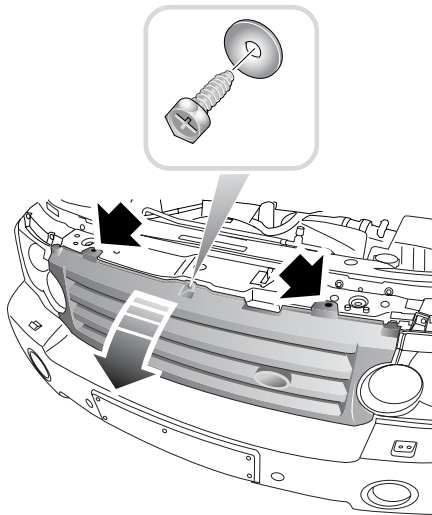
HEADLAMP UNIT

The headlamp unit contains four lamps and it is necessary to completely remove the unit from the vehicle in order to change any of the bulbs.

WARNING

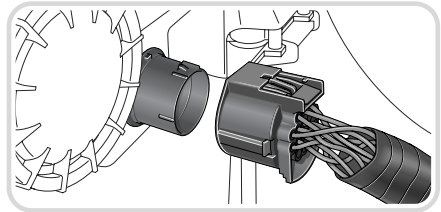
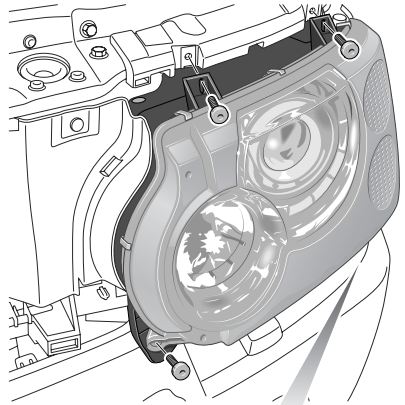
Do not attempt to change any bulb with the lighting switched on. If the lighting has just been switched off, give the bulbs time to cool. Handling them when hot may cause personal injury.

Removal of headlamp unit



H6450G

1. Remove the grille by removing the three screws securing the grille to the vehicle body. Tilt the grille forward and lift clear of the vehicle. Place the grille where it will not sustain any damage.



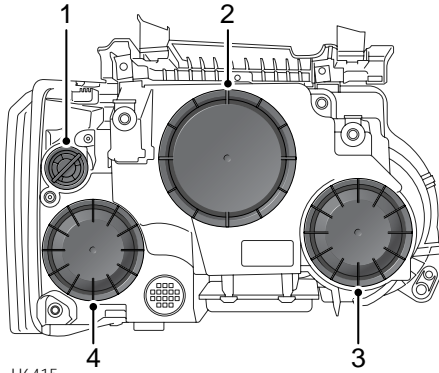
H6414

2. Remove the three screws securing the headlamp unit to the vehicle body.
3. Disconnect the wiring plug from the back of the unit and remove the unit from the vehicle. Place the unit face down on a flat surface covered in a soft material to prevent damage to the unit's lenses.

Caution: Do not place the lamp unit face down on hard or abrasive surfaces. Doing so may scratch the surface of the lens.

Bulb Replacement

Bulb access



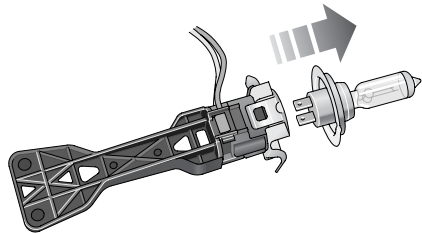
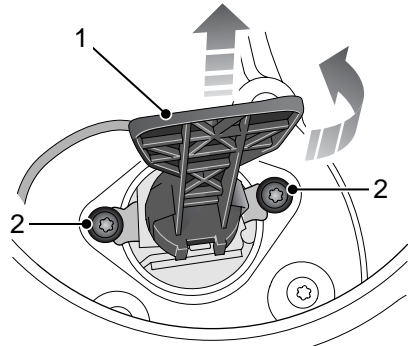
H6415

The four bulbs within the headlamp unit are:

1. Direction indicator.
2. Halogen low beam/xenon bi-functional.
3. Halogen high beam.
4. Side lamp and static bending lamp.

The type of bulb to be used in each case is marked on the back of the headlamp unit. See **Replacement bulbs, 277**.

To change a halogen high beam bulb

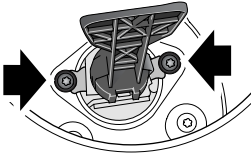
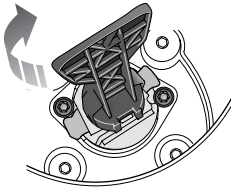
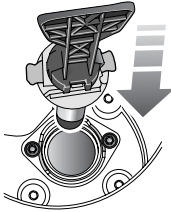
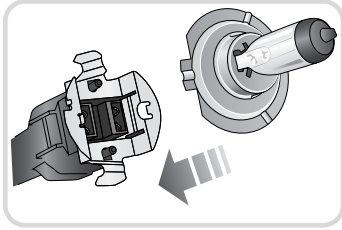


H6542G

1. Twist and lift off the domed cap.
2. Note the position of the bulb locator extension (1). Two locking tabs (2) at the sides of the locking ring locate under small bolt heads.
3. Turn the locator extension anticlockwise and withdraw it, complete with bulb, from the headlamp unit.
4. Prise the bulb from the holder.

Bulb Replacement

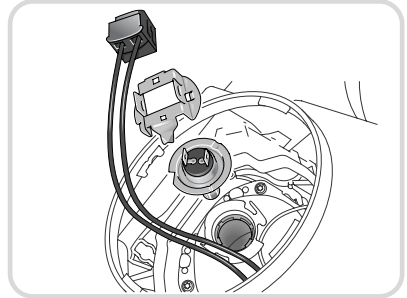
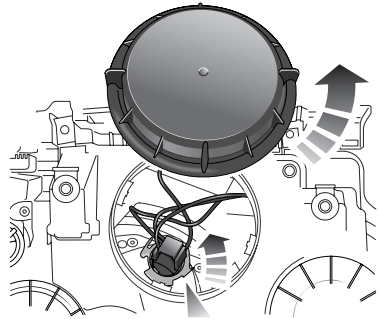
To change a halogen low beam bulb



H6543G

5. The new bulb will only fit in one position. As you press the new bulb into the electrical connections, squeeze the locking ring so that the two protruding pins locate correctly with the bulb.
6. Replace the bulb holder and locator extension into the headlamp unit and turn it clockwise, ensuring that the two locking rings locate under the small bolt heads.

Note: After the replacement of any high or low beam bulb, the alignment of the headlamps should be checked by a Land Rover Dealer/ Authorised Repairer.



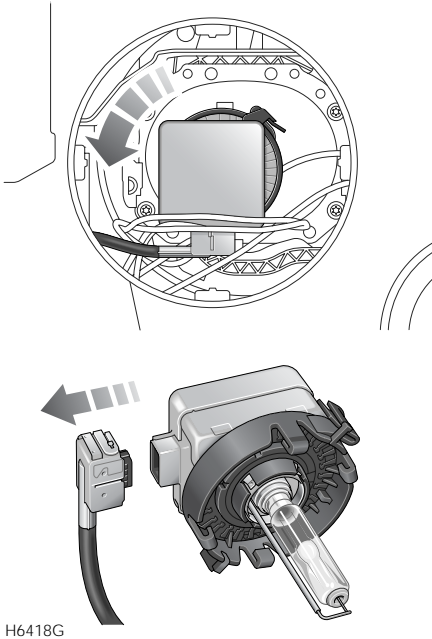
H6689G

1. Twist and lift off the domed cap.
2. Pull off the electrical connector.
3. Release the spring clip holding the bulb in place and lift out the bulb.
4. Insert the new bulb and repeat the above procedure in reverse order. When replacing the cap, align the arrowheads on the cap and the body of the unit.

Note: After the replacement of any high or low beam bulb, the alignment of the headlamps should be checked by a Land Rover Dealer/ Authorised Repairer.

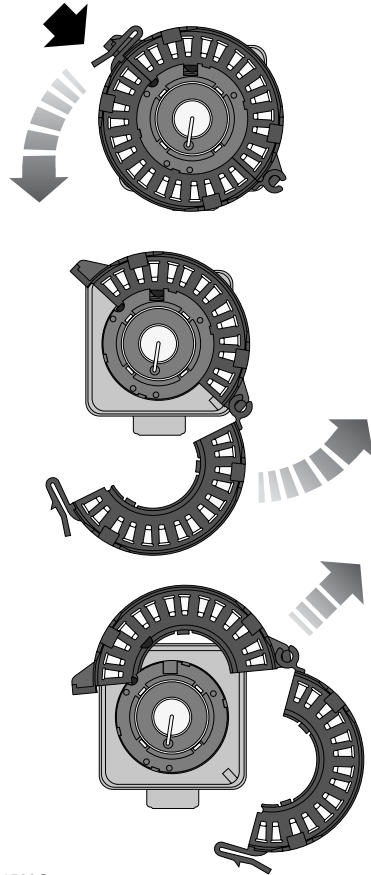
Bulb Replacement

To change a xenon bi-function bulb



H6418G

1. Twist and lift off the domed cap.
2. Twist the connector cap anticlockwise to unlock it and carefully withdraw the bulb assembly, taking care not to bring the bulb into contact with the unit casing.
3. Disconnect the electrical connector and pull it clear of the bulb.

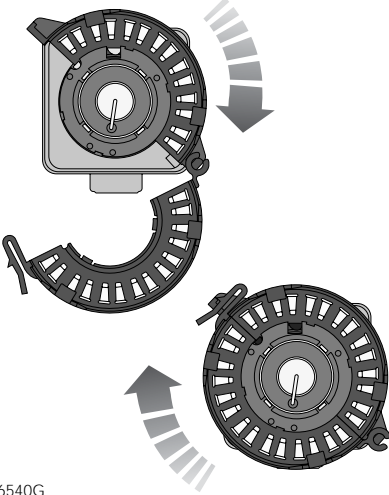
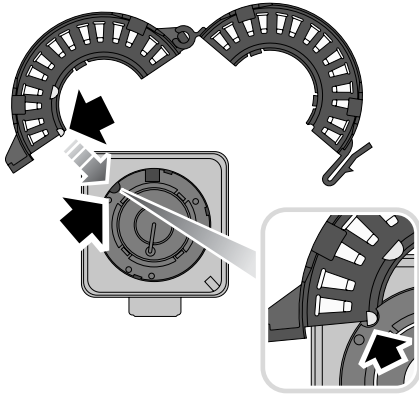


H6539G

4. Press the retaining catch to unlock the mounting collar and open out half of the collar. The complete ring can now be removed from the bulb unit.

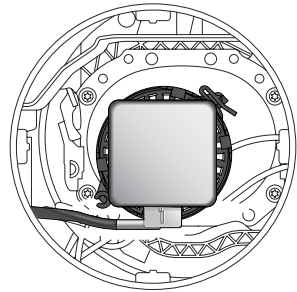
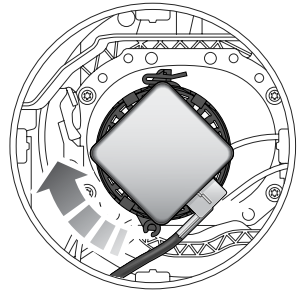
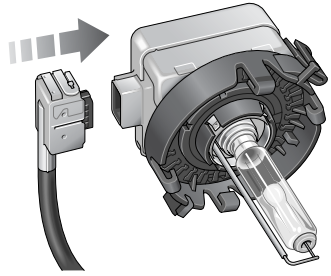
Note: The mounting collar surrounding the bulb must be removed and retained for fitting to the replacement bulb.

Bulb Replacement



H6540G

5. Refit the mounting collar to the new bulb unit by first engaging the lug into the corresponding slot in the bulb unit, see inset.
6. Close the collar around the bulb unit until the spring catch clicks into place.

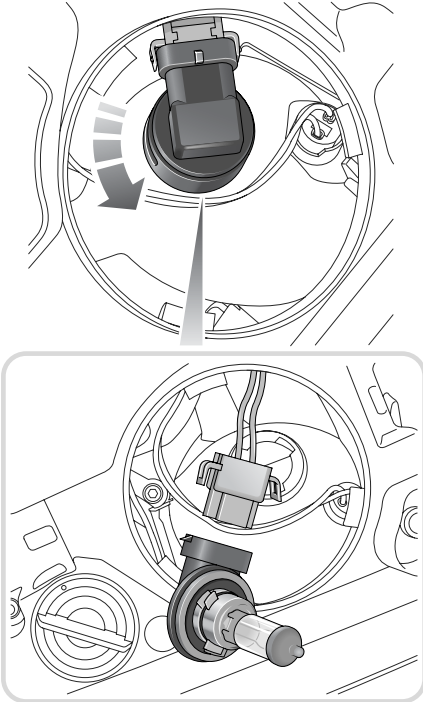


H6541G

7. Reconnect the electrical connection and carefully insert the bulb unit into the lamp unit.
8. Twist the bulb unit clockwise to lock it in place.

Bulb Replacement

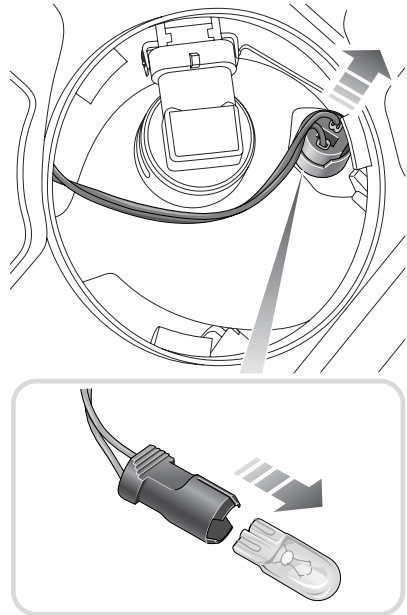
To change a static bending lamp bulb



H6420

1. Twist and lift off the domed cap.
2. Twist the bulb holder anticlockwise to unlock it, then pull out the bulb complete with the electrical connector. Pull the connector clear of the bulb.
3. To release the bulb, depress the two catches, then pull to remove the bulb from the bulb holder.
4. Insert a new bulb and repeat the above process in reverse order. When replacing the cap, align the arrowheads on the cap and the body of the unit.

To change a front side lamp bulb

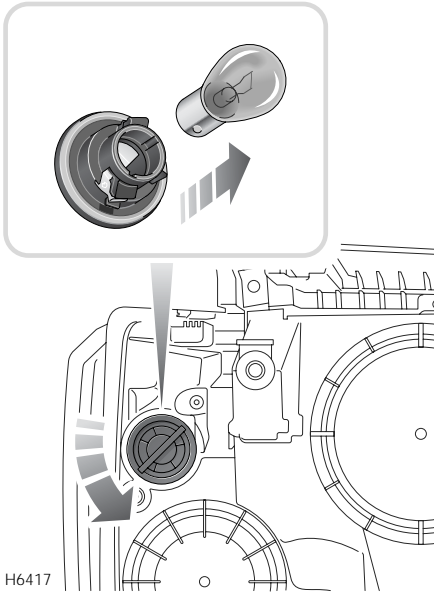


H6419

1. Twist and lift off the domed cap.
2. Pull out the bulb complete with the electrical connector.
3. Pull the bulb out of the electrical connector.
4. Insert a new bulb and repeat the above process in reverse order. When replacing the cap, align the arrowheads on the cap and the body of the unit.

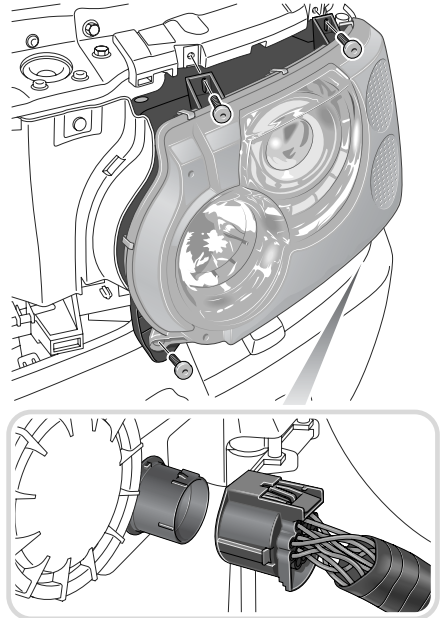
Bulb Replacement

To change a front indicator lamp bulb



1. Twist and lift off the domed cap.
2. Twist the bulb holder anticlockwise to unlock it, then pull out the bulb complete with the electrical connector.
3. Pull the bulb out of the electrical connector.
4. Insert a new bulb and repeat the above process in reverse order. When replacing the cap, align the arrowheads on the cap and the body of the unit.

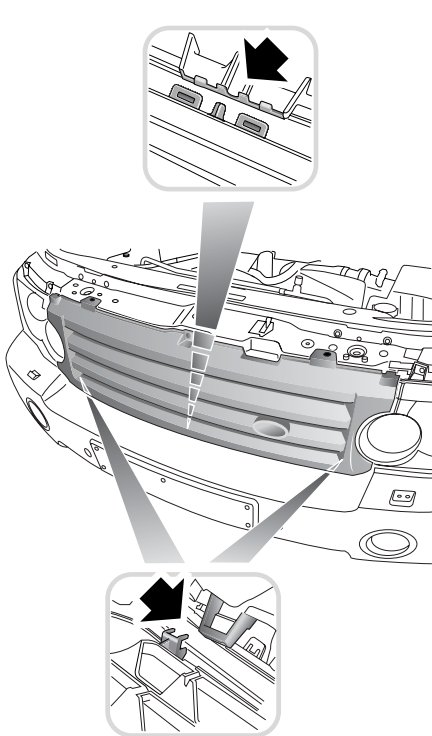
Refitting the headlamp unit



1. Reconnect the wiring plug.
2. Relocate the headlamp unit by first engaging the hole in the inner lower corner of the unit over the datum peg in the vehicle bodywork. Next ensure that the locating strip at the outer lower edge of the unit drops into the channel in the vehicle bodywork.
3. Replace the three screws.

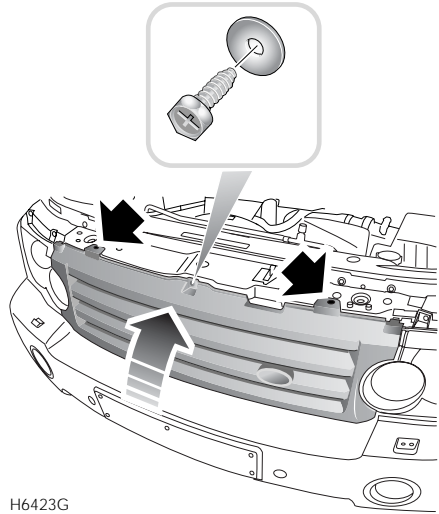
Bulb Replacement

Refitting the grille



H6422G

1. Ensure that the channel on the lower edge of the grille drops over the locating edge in the vehicle bodywork.

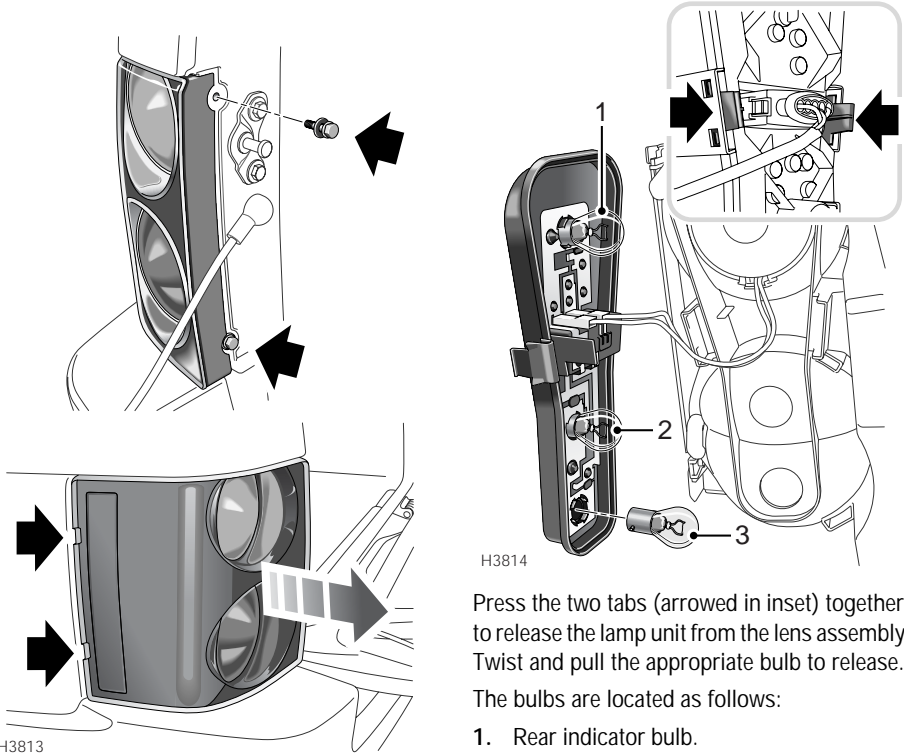


H6423G

2. Replace the three screws in the top edge of the grille.

Bulb Replacement

REAR LAMP UNIT



The rear lamp unit contains three lamps and it is necessary to completely remove the unit from the vehicle to change any of the bulbs.

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 Land Rover Dealer/Authorised Repairer.

Press the two tabs (arrowed in inset) together, to release the lamp unit from the lens assembly. Twist and pull the appropriate bulb to release.

The bulbs are located as follows:

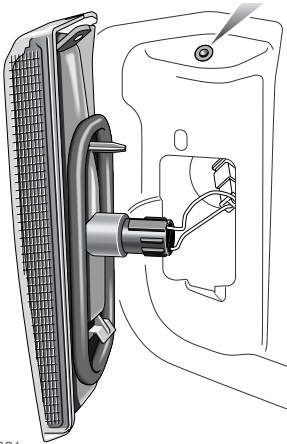
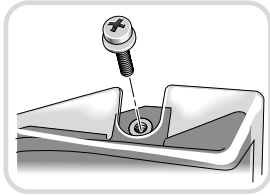
1. Rear indicator bulb.
2. Tail lamp bulb.
3. Rear fog lamp bulb.

Note: The brake lamps and high mounted stop lamp fitted to your vehicle, are LEDs and should be replaced by your Land Rover Dealer/ Authorised Repairer if they fail.

Caution: Do not place the lamp unit face down on hard or abrasive surfaces. Doing so may scratch the surface of the lens.

Bulb Replacement

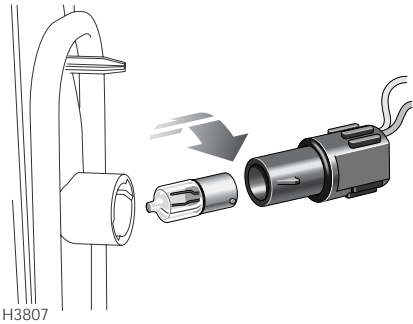
REVERSE LAMPS



H3806

The reverse lamps 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 lamp unit from the tailgate.

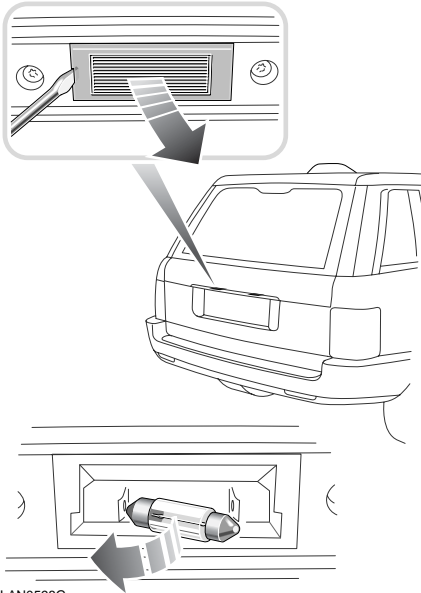


Twist and pull the bulb holder to release from the rear of the lamp unit, then pull the bulb to remove.

Note: Do not touch the replacement bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.

Bulb Replacement

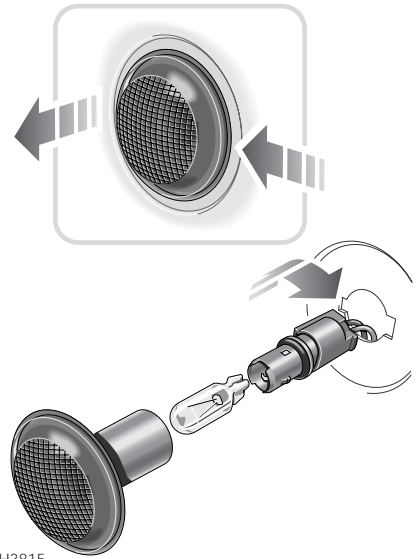
NUMBER PLATE LAMPS



LAN0598G

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 LAMP



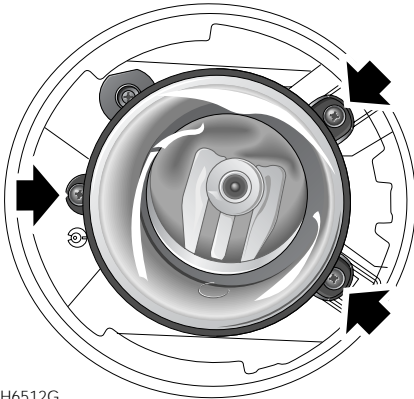
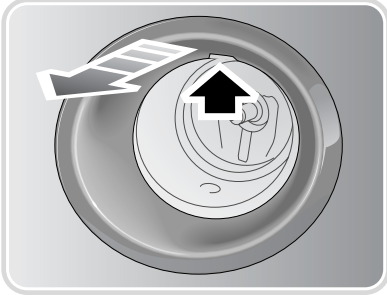
Push the lens firmly towards the front of the vehicle and withdraw the lamp unit from the wing. Twist to release the bulb holder from the lens unit, then pull the bulb from its socket.

Bulb Replacement

FRONT FOG LAMPS

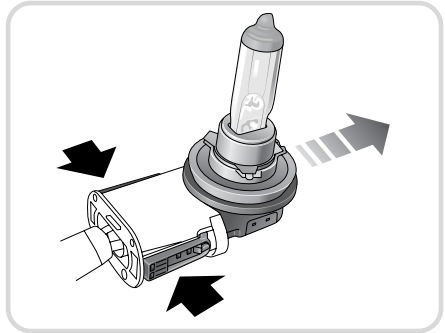
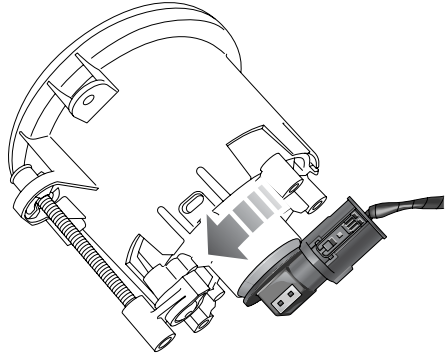
To change a front fog lamp bulb

1. To gain access, use the finger slot at the top of the fog lamp surround and pull it forward to remove.



H6512G

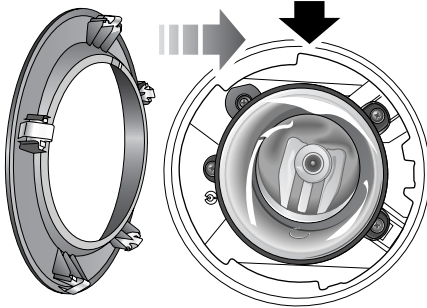
2. Remove the three securing screws to release the lamp unit. Ease the unit out of the front bumper.
3. Twist the bulb holder counter-clockwise to unlock, then pull out the bulb complete with electrical connector.



H6537G

4. To release the bulb, depress the two catches (solid arrows in inset), then pull to remove the bulb from the holder.
5. Before fitting the replacement bulb, note the flat area 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.
6. Insert the new bulb and repeat the above procedure in reverse order.

Bulb Replacement



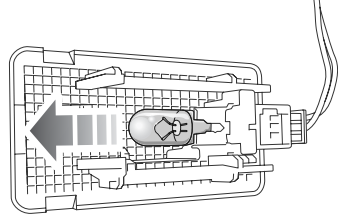
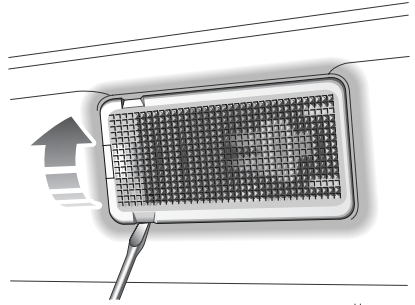
H6513G

7. The fog lamp surround is uniquely shaped and will only fit in one position.

Align the spring clip above the finger slot with the upper receiver shape in the bumper and push it into place. Now push the lower part of the fog lamp surround into place, applying some upward pressure.

Note: After the replacement of a fog lamp bulb, the alignment of the lamp should be checked by a Land Rover Dealer/Authorised Repairer.

DOOR/PUDDLE/LOWER FOOTWELL LAMPS

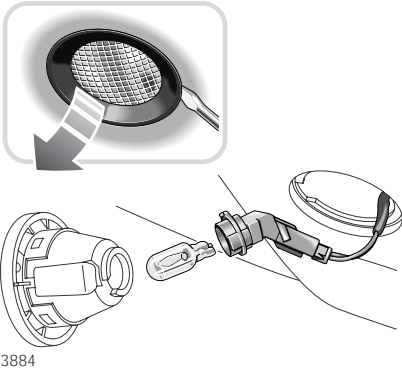


H4081

With the relevant door open, insert a small flat-bladed screwdriver under the forward edge of the lens, to lever the lamp unit out of the door. Pull the bulb out to remove.

Bulb Replacement

UPPER FOOTWELL LAMPS

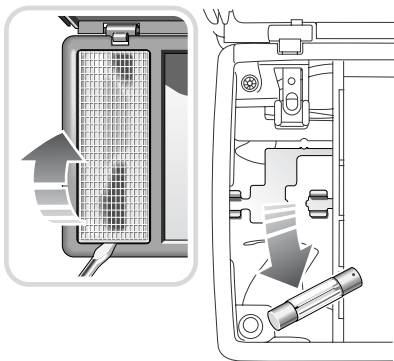


H3884

Insert a small flat-bladed screwdriver under the side of the lamp 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.

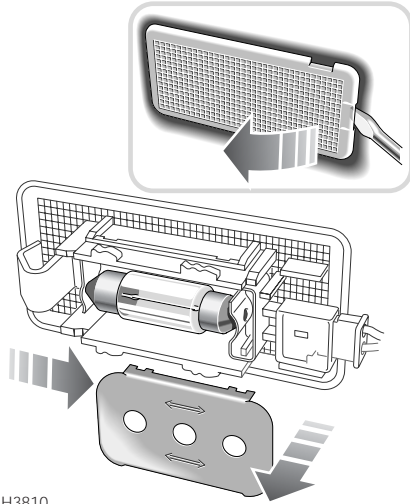
VANITY MIRROR LAMP



H3882

With the vanity mirror cover open, use a small flat-bladed screwdriver to lever the relevant lens from the mirror/lamp unit. Pull out bulb to remove.

LUGGAGE LAMP



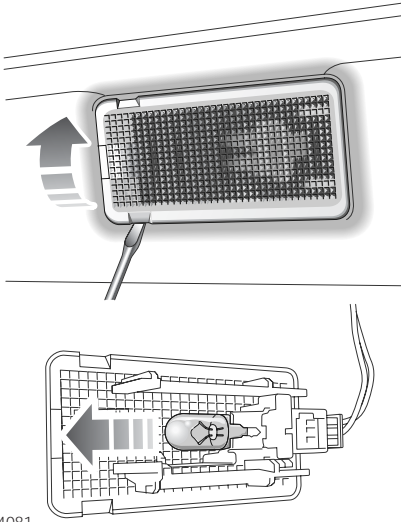
H3810

Insert a small flat-bladed screwdriver into the indent on the side of the lens and carefully prise the lens from the lamp unit (see inset).

Slide the metal plate to the right and then pull away from the back of the lamp unit (see main illustration). Pull the bulb to remove.

Bulb Replacement

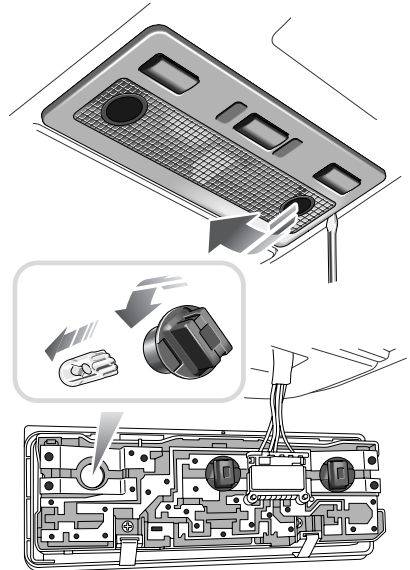
TAILGATE LAMP



H4081

Insert a small flat-bladed screwdriver under the lens and carefully prise the lens from the lamp unit. Pull the bulb to remove.

MAP LAMP



H3883

Insert a small flat-bladed screwdriver into the indent on the side of the lens (as illustrated) and prise the lens from the lamp unit. Twist the relevant bulb holder anticlockwise and withdraw from the lamp unit, then pull the bulb out to remove.

Lubricants and Fluids

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 - V8 Petrol vehicles

Use a 5W/30 oil meeting specification ACEA: A3 (with API SL or SM).

Land Rover WSS-M2C913-B preferred.

Engine oil - V8 Petrol Supercharged vehicles

Use a 5W/30 oil meeting specification ACEA: A3 (with API SL or SM).

Land Rover WSS-M2C913-B preferred.

Engine oil - Diesel vehicles

Use a 5W/30, 5W/40, 10W/30 or 10W/40 oil meeting Land Rover WSS-M2C913-B only.

Engine oil temperature ranges

5W/30 will protect from -30°C to 35°C (-22°F to 95°F)

5W/40 will protect from -30°C to 50°C (-22°F to 122°F)

10W/30 will protect from -10°C to 35°C (-14°F to 95°F)

10W/40 will protect from -10°C to 50°C (-14°F to 122°F)

Main gearbox

Petrol: Shell ATF M1375.4

Diesel: Filled for life

Transfer gearbox

Use Shell TF 0753.

Front differential

All vehicles: Castrol SAF XO.

Rear differential

Non-locking: Castrol SAF XO

Locking: Castrol SAF Carbon Mod Plus

Power steering

Texaco Cold Climate PAS fluid 14315.

Brake reservoir

Use Shell DOT4 ESL or a low viscosity DOT 4 brake fluid that meets ISO 4925 class 6 requirements.

Windscreen washers

Screen washer fluid.

Engine cooling system

Antifreeze: Use Havoline XLC to WSS-M97B44 (Texaco XLC) - orange colour, with one part antifreeze to one part water for protection down to -40°C (-40°F).

Capacities

CAPACITIES

With the exception of the front and rear differential 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. The front and rear differentials must be filled to the volume listed below.

Fuel tank	104.5 litres (23 gallons)
Engine oil refill and filter change: - Diesel vehicles - Petrol vehicles	9.5 litres (16.7 pints) 7.7 litres (13.5 pints)
Front differential: - Dry fill - Refill	0.8 litres (1.4 pints) 0.75 litres (1.32 pints)
Rear differential - non-locking: - Dry fill - Refill	1.2 litres (2.1 pints) 1.14 litres (2 pints)
Rear electronic locking differential: - Dry fill - Refill	1.6 litres (2.82 pints) 1.55 litres (2.73 pints)
Washer reservoir	6.3 litres (11.1 pints)
Cooling system (refill): - Diesel vehicles - V8 NA Petrol vehicles - V8 SC Petrol vehicles	14 litres (24.6 pints) 9.5 litres (16.7 pints) 12 litres (21.1 pints)

Engines

ENGINES

Diesel

Recommended fuel	Diesel or Automotive Gas Oil (AGO) to EN 590 specification only. Maximum allowable Bio-diesel mix is 5%.
Capacity	3 630 cm ³
Firing order	1-5-4-2-6-3-7-8
Bore	81.0 mm
Stroke	88.0 mm
Number of cylinders	8
Compression ratio	17.3:1

V8 Petrol

Recommended fuel	UNLEADED 95 RON to EN 228 specification Unleaded with a RON no lower than 90 may be used
Capacity: - Normally aspirated - Supercharged	4 394 cm ³ 4 197 cm ³
Firing order	1-5-4-2-6-3-7-8
Bore: - Normally aspirated - Supercharged	88.0 mm 86.0 mm
Stroke	90.3 mm
Number of cylinders	8
Compression ratio: - Normally aspirated - Supercharged	10.5:1 9.1:1
Spark plugs	NGK IFR5N10
Spark plug gap	Non-adjustable

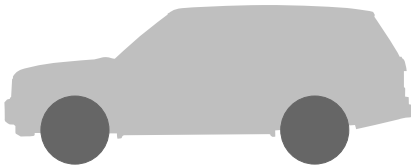
Wheels and Tyres

WHEELS AND TYRES

Wheel size and tyre specification

Wheel size	Tyre
5.5J x 19	T175/80 R19 122M - (Temporary spare tyre)
8J x 19	255/55 R19 111 H or V- All terrain tyre
8.5J x 20	255/50 R20 109 Y- All terrain and all terrain sport tyre

Accessory wheels and tyres - insert details



1 _____ 2 _____

3 _____

LAN0518G

1. Front tyre pressure.
2. Rear tyre pressure.
3. Wheel/tyre size, type and specification

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 (100 mph), T-rated tyres should not be used at speeds greater than 190 km/h (118 mph).

Tyre pressures

Tyre pressures are listed on a label on the B pillar on the driver's side (visible with the driver's door open). See **Tyre information label, 251**.

Temporary spare tyre pressure	kPa	bar	lbf/in ²
Any position or load condition	420	4.2	60

Weights

WEIGHTS

Approximate EEC kerb weights (full fuel tank):	
- Petrol engine vehicles	2 590 - 2 680 kg (5 710 - 5 908 lb)
- Diesel engine vehicles	2 710 kg (5 975 lb)
Maximum Gross Vehicle Weight (GVW):	
- Petrol engine vehicles	3 100 kg (6 834 lb)
- Diesel engine vehicles	3 200 kg (7 055 lb)
Maximum front axle load	1 530 kg (3 373 lb)
Maximum rear axle load	1 850 kg (4 079 lb)
Maximum roof rack load	100 kg (220 lb)

Note: Axle weights are non-additive; i.e. maximum GVW is not calculated by adding together maximum front and rear axle loads. The above individual maximum axle weights and gross vehicle weight must not be exceeded, except when towing.

Note: The weight of Land Rover approved roof bars and cross rail roof rack is allowed for before further weight calculations are made. However, if an alternative roof rack system is to be used, the weight of the system must be included as part of the load weight.

Weights

TOWING

	On-road	Off-road
Maximum trailer weight:		
Unbraked trailer	750 kg (1 653 lb)	750 kg (1 653 lb)
Trailer with over-run brakes	3 500 kg (7 716 lb)	1 000 kg (2 204 lb)
Gross Train Weight:		
- Petrol engine vehicles	6 600 kg (14 550 lb)	-
- Diesel engine vehicles	6 700 kg (14 771 lb)	-

	Australia	All other markets
Maximum tow hitch load (Nose weight):		
- V8 NA Petrol vehicles	350 kg (772 lb)	150 kg (330 lb)
- V8 SC Petrol vehicles	350 kg (772 lb)	140 kg (309 lb)
- V8 Diesel vehicles	350 kg (772 lb)	150 kg (330 lb)

Note: To increase stability when loading to the maximum trailer weight, it is advised that trailer load distribution is adjusted to achieve the recommended nose weight. See **TOWING, 216**.

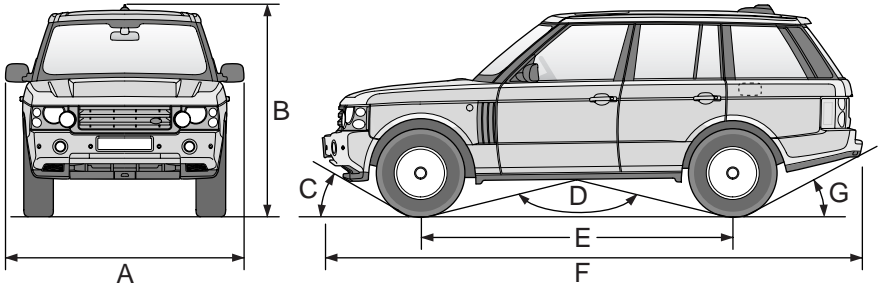
Note: Gross Train Weight (with over-run brakes) = GVW plus maximum weight of trailer.
Europe only - the GVW used for calculation of GTW includes a legislated extra allowance of 100 kg (220 lb).

Note: For trailers with over-run brakes only, if a greater nose weight is necessary, the recommended 140 kg (309 lb) or 150 kg (330 lb) can be increased up to a maximum of 250 kg (550 lb) total nose weight. However, vehicle payload **must be restricted** by at least the same weight to ensure that the GVW and rear axle load are not exceeded. This does not apply to the Australian market.

Note: The gross vehicle weight can be increased to a maximum of 3 150 kg (6 945 lb) for petrol vehicles or 3 250 kg (7 165 lb) for diesel vehicles, and the rear axle load can be increased to a maximum of 2 050 kg (4 519 lb) when towing, provided road speed is limited to 100 km/h (60 mph) or 80 km/h (50 mph) when temporary spare wheel is in use.

Dimensions

VEHICLE DIMENSIONS



H6517G

A	Overall width	2 216 mm	87.2 in
	Overall width (mirrors folded)	2 034 mm	80.1 in
B	Overall height		
	- Access height	1 820 mm	71.7 in
	- Motorway height	1 840 mm	72.4 in
	- Standard height	1 865 mm	73.4 in
	- Off-road height	1 913 mm	75.3 in
E	Wheelbase	2 880 mm	113.4 in
F	Overall length	4 967 mm	195.6 in
	Overall length (including tow hitch - to centre of tow ball)	5 015 mm	197.4 in
	Track: - Front	1 629 mm	64.1 in
	Track: - Rear	1 625 mm	64.0 in
	Brake pedal free travel	No adjustable free travel	
	Turning circle	12 metres	39.4 feet

Tracking adjustment (Minutes):	V8 Diesel	V8 NA Petrol	V8 SC Petrol
- Front	+9	0	-9
- Rear	+12	+20	+12

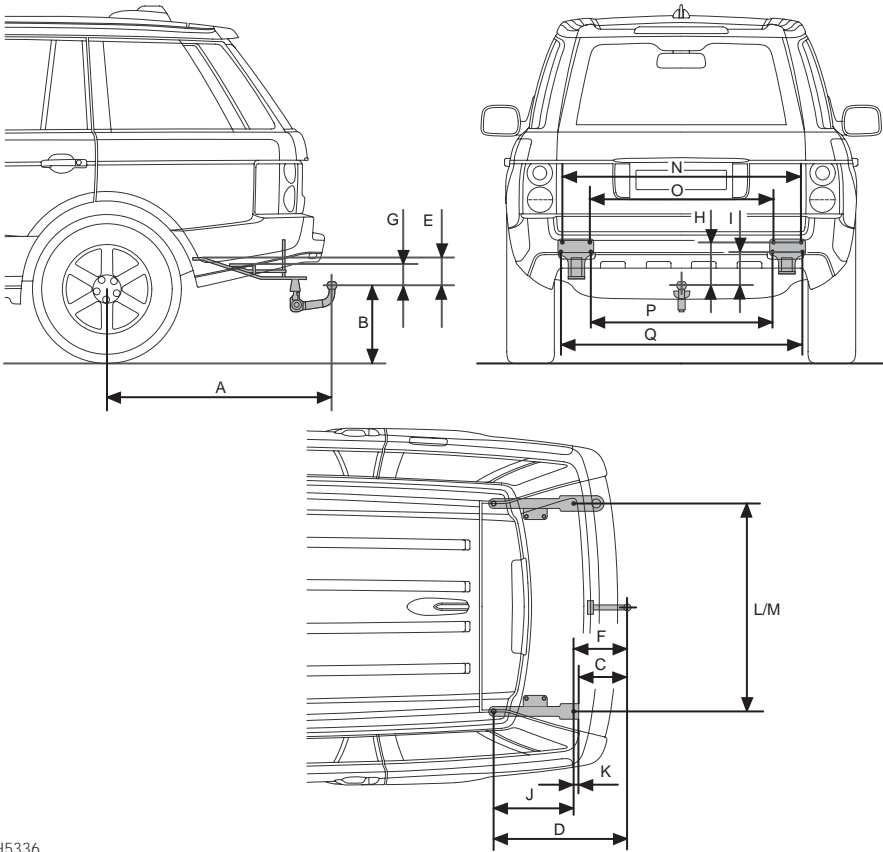
Dimensions

Off road performance

C	Approach angle - Off-road ride height (at EEC kerb weight):		
	- Standard ride height	29 degrees	
	- Off-road ride height	34 degrees	
D	Breakover angle (at EEC kerb weight):		
	- Standard ride height	130 degrees	
	- Off-road ride height	120 degrees	
G	Departure angle without tow hitch (at EEC kerb weight)		
	- Standard ride height	24.2 degrees	
	- Off-road ride height	26.6 degrees	
	Departure angle with tow hitch (at EEC kerb weight):		
	- Standard ride height	15.2 degrees	
	- Off-road ride height	17.4 degrees	
	Wading depth	700 mm	27.6 in
	Minimum ground clearance (off-road height)	283 mm	11.1 in

Dimensions

TOW BAR DIMENSIONS



H5336

Note: Dimensions refer to towing equipment officially released by Land Rover.

Dimensions

A	Wheel centre to centre of towball	1 235 mm	48.62 in
B	Ground to centre of towball	397 mm	15.63 in
C	Centre of outer attachment points to centre of towball	252.7 mm	9.95 in
D	Centre of rear inner attachment points to centre of towball (horizontal)	713.5 mm	28.09 in
E	Centre of rear inner attachment points to centre of towball (vertical)	152.7 mm	6.01 in
F	Centre of inner attachments to centre of towball (horizontal)	286 mm	11.26 in
G	Centre of inner attachments to centre of towball (vertical)	138.2 mm	5.44 in
H	Centre of outer No. 1, 2 attachments to centre of towball	236.4 mm	9.31 in
I	Centre of outer No. 3, 4 attachments to centre of towball	184.2 mm	7.25 in
J	Rear inner attachments to inner attachments	427.5 mm	16.83 in
K	Inner attachments to outer attachments	33.3 mm	1.31 in
L	Distance between the rear inner attachments	1 092 mm	42.99 in
M	Distance between the inner attachments	1 092 mm	42.99 in
N	Distance between the outer No. 1 attachments	1 230.6 mm	48.45 in
O	Distance between the outer No. 2 attachments	953.4 mm	37.55 in
P	Distance between the outer No. 3 attachments	940 mm	37.01 in
Q	Distance between the outer No. 4 attachments	1 244 mm	48.98 in

Note: Dimensions refer to towing equipment officially released by Land Rover.

Fuel Consumption

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	mpg	l/100km	mpg	l/100km	mpg
Petrol	21.2	13.4	11.4	24.9	14.9	18.9
Petrol - Supercharged	22.4	12.6	12.2	23.1	16.0	17.7
Diesel	14.4	19.6	9.2	30.1	11.3	25.0

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 (30 mph) with an average speed of 19 km/h (12 mph).

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 (75 mph) and the average speed 63 km/h (39 mph). The test is carried out over a distance of 7 km (4.3 miles).

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.*

Conformity

DECLARATIONS OF CONFORMITY

The Declarations of Conformity are from manufacturers of RF (Radio Frequency) equipment, whose components are used in the manufacture of your Range Rover Sport.

These manufacturers state that their components comply with relevant rules of the R and 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 and TTE Directive.*

Conformity

Declaration of Conformity appropriate to the Directive 1999/5/EC (R&TTE) Annex IV

Visteon Deutschland GmbH
.....

Manufacturer,

Notified Body consulted: **Phoenix Test-Lab, Königswinkel 10, D-32825 Blomberg**
ID-Number of Notified Body: **0700**

declare under our responsibility that the product: **RKE Transmitter**

Type: **TXRETS**

Telecommunications Terminal Equipment Radio Equipment

Remote Keyless Entry System Transmitter **2**

.....
Intended Purpose Equipment Class

complies with the appropriate essential requirements of the Article 3 of the R&TTE and the other relevant provisions, when used for its intended purpose.

Health and Safety requirements contained in Article 3 (1) a)

EN 60 950: 2001 Information technology equipment – Safety --
EN 50 371: 2002, Generic standard to demonstrate the compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz – 300 GHz) – General public.

Protection requirements with respect to electromagnetic compatibility Article 3 (1) b)

EN 301 489-03 V1.4.1: 08/2002, Electromagnetic Compatibility and radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services, Part 3: Specific conditions for Short Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz.

Means of the efficient use of the radio frequency spectrum

Air interface specification of the radio path contained in Article 3(2)

EN 300 220-3 V1.1.1: 09/2000, Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 3: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

Address:

Visteon Deutschland GmbH
Visteonstrasse 4 - 10
50170 Kerpen
Germany
URL: www.visteon.com



Dr. Wilfried Janke
Managing Director Visteon Deutschland GmbH

CE 0700

Conformity

Certification
Technological Center

Campus de la UAB
Apt. Correo 28
08193 Bellaterra (Barcelona)
T 93 557 2000
F 93 557 2001
ctc@appluscorp.com
www.applusctc.com



LEAR AUTOMOTIVE (EEDS) SPAIN, S.L.

C/ Fusters, 54 P.I.
43800 VALLS
Barcelona- SPAIN
Represented by:
Mr. Jordi Garcès

LGAJ TECHNOLOGICAL CENTER, S.A. is pleased to acknowledge receipt of the equipment below described to perform the tests requested by the detailed standards:

Device under test:
L322 immobilizer module

Directive:

1999/05/CE on radio equipment and telecommunications terminal equipment.

Standards to apply:

ETSI-EN 300330-2 v1.1.1; Electromagnetic compatibility and radio spectrum matters (ERM); Short - range devices (SRD); Radio equipment in the frequency range 9KHz to 25MHz and inductive loop systems in the frequency range 9KHz to 30MHz.

ETSI-EN 301489-3 v1.4.1; Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) estándar for radio equipment and services. Part 3; Specific conditions for short - range devices (SRD) operating on frequencies between 9KHz and 40GHz.

Performance date of tests:

Reception date: 14/09/2004
Date of beginning of tests: 14/09/2004
Date of end of tests: 20/09/2004

Results: PASS

Yours sincerely,

Sr. Jesús Díaz de Fez
EMC Center

Bellaterra, September 23rd 2004

Conformity

DECLARATION OF CONFORMITY

Trade Name: Connaught Electronics Ltd. Model No: LQN5752



Tested to comply
FCC Standards 15B

FOR HOME OR OFFICE USE

Canadian 2306A-5752

Model 5752 by Connaught Electronics

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This declaration is the responsibility of the manufacturer / authorised representative within the Community:

Supplier
Connaught Electronics Ltd.
Supplier Address
Dunmore Road,
Tuam
Co. Galway,
Ireland

This certifies that the following designated product
T5 RECEIVER 315MHZ PART NO. 5752
.....
(Product identification)

complies with the essential protection requirements of R&TTE Directive 1999/5/ EC on the approximation of the laws of the Member States relating to **Radio Spectrum Matters, EMC and Electrical Safety.**

This declaration applies to all specimens manufactured in accordance with the technical documentation described in the annex II. Connaught Electronics Ltd. keep this documentation at the proposal of the relevant national authorities of any Member State for inspection purpose.

Assessment of compliance of the product with the requirements relating to the essential requirements acc. to Article 3 R&TTE was based on Annex IV of the Directive 1999/5/ EC and the following standards:

Radio Spectrum : EN 300 220-1
(Identification of regulations / standards)

EMC : EN 300 683
(Identification of regulations / standards)

Safety : EN 60950
(Identification of regulations / standards)

(Place, date)

Tuam, Ireland
16/03/2004

(Signature)

.....
(Signature)
Alan Hogan
Alan Hogan

LAN0506G

Conformity

DECLARATION OF CONFORMITY

CE 0682

This declaration is the responsibility of the manufacturer / authorised representative within the Community:

Supplier
Connaught Electronics Ltd.
Supplier Address
Dunmore Road,
Tuam
Co. Galway,
Ireland

This certifies that the following designated product
T5 RECEIVER 433MHZ PART NO. 5751
.....
(Product identification)

complies with the essential protection requirements of R&TTE Directive 1999/5/ EC on the approximation of the laws of the Member States relating to *Radio Spectrum Matters, EMC* and *Electrical Safety*.

This declaration applies to all specimens manufactured in accordance with the technical documentation described in the annex II. Connaught Electronics Ltd. keep this documentation at the proposal of the relevant national authorities of any Member State for inspection purpose.

Assessment of compliance of the product with the requirements relating to the essential requirements acc. to Article 3 R&TTE was based on Annex IV of the Directive 1999/5/ EC and the following standards:

Radio Spectrum : EN 300 220-1.....
(Identification of regulations / standards)

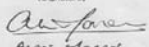
EMC : EN 300 683
(Identification of regulations / standards)

Safety : EN 60950.....
(Identification of regulations / standards)

(Place, date)

Tuam, Ireland
16/03/2004

(Signature)

(Signature)

Alan Moran

LAN0507G

Conformity

SIEMENS VDO

A u t o m o t i v e

Siemens VDO Automotive AG - Postfach 10 09 43 - 93009 Regensburg

Name	Regina Quegwer
Abteilung	SV C CE AIS LF
Tel.	+49(0)941/790-3554
Fax	+49(0)941/790-133554
E-Mail	Regina.Quegwer@siemens.com
Internet	www.siemensvdo.de
Ihr Schreiben	
Unser Zeichen	Decl_variant_8883_6.doc
Datum	22.08.2002

Declaration of Conformity

We, the undersigned, declare that the

Receiver type 5WK4 8883 and 5WK4 8886 are based on receiver type 5WK4 8812.

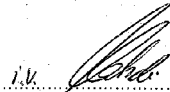
The assembly and layout differs in the following items:


**Data Filter
Data Slicer
VCC blocking capacitor
ESD protection**

The changed assembly and layout does not influence the RF characteristics.

Yours truly,

Siemens VDO Automotive AG


.....
Helmut Matschi
Vice President and CEO
Carbody Electronics


.....
Norbert Müller
Director
Access & Immobilisation Systems

Siemens VDO Automotive AG Carbody Electronics

Helmut Matschi
Dr. Raymund Müller

Briefadresse:
Siemens VDO Automotive AG

Postfach 10 09 43
93009 Regensburg

Hausadresse:
Siemensstraße 12
93055 Regensburg
Tel. +49(0)941/790-02

Siemens VDO Automotive AG - Vorsitzender des Aufsichtsrates: Professor Dr. Edward G. Krubsack - Vorstand: Wolfgang Döhrer, Vorsitzende Mitglieder: Dr. Klaus Egger,
Günter Hauptmann, Johann Löffler - Sitz der Gesellschaft: München - Registergericht: München, HRB 132037

S:\POST\ZLA\EMOD\DL\3rd\siemensvdo-Laserdeclent_variant_8883_6.doc

Conformity

SIEMENS

Name Regina Quegwer
Department AT BE AS SI 3
Tel. +49(0)941/202-35 54
Fax. +49(0)941/202-95 35 54
Email: regina.quegwer@at.siemens.de
Your Letter
Our Ref. ECD0C_RF_RX3Gen433.doc
Date 2000-12-01

EC Declaration of Conformity according to Annex II of Directive 1999/5/EC

Manufacturer: Siemens Automotive AG
Access Control & Security Systems

Address: Wernerwerkstrasse 2
D-93049 Regensburg
Germany

Product type designation: 5WK4 8812

Intended use: radio receiver for vehicle locking/unlocking systems

The product mentioned above complies with the following European Directive:

1999/5/EC: Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity, dated 9th March 1999.

We, the undersigned, hereby declare that our above-mentioned product complies with all essential radio test suites according to Annex II of Directive 1999/5/EC. Proof is shown by:

- test report no. 00001036, issued by the accredited test laboratory M. Dudde
Hochfrequenz-Technik, according to EN 300 220-1
- test report no. 00001038, issued by the accredited test laboratory M. Dudde
Hochfrequenz-Technik, according to EN 301 489-1, -3

Siemens Automotive AG
Regensburg, 01.12.2000


.....
Helmut Matschi
Vice President and General Manager
Access Control & Security Systems


.....
Ulrich Schrey
Director Development
Access Control & Security Systems

Siemens Automotive AG

Postal Address: Siemens Automotive AG
AT BE AS SI 3
P.O. Box 10 09 55
93009 Regensburg
Federal Republic of Germany

Office Address: Wernerwerkstraße 2
93049 Regensburg
Phone
+49(0)941/202-0

Siemens Automotive AG • Chairman of the Supervisory Board: Edward G. Knubauk • Managing Board: Franz Wroessig, Chairman, President and Chief Executive Officer • Member: Jürgen Macho • Registered Office: München • Commercial Register: München, HRG 132957

Conformity

SIEMENS VDO

A u t o m o t i v e

Siemens VDO Automotive AG - Postfach 10 09 43 - 93009 Regensburg

Name Schneider Tanja
Department SV C BC P2 RF TG
Phone +49(0)941/790-6622
Fax +49(0)941/790-90921

E-Mail tanja.schneider@siemens.com

Internet www.siemensvdo.de

Your Letter

Our Ref. DoC_5WK45685_4

Date. 07.04.2004

Declaration of Conformity

We, the undersigned, declare that

-the transmitter S120123001 is manufactured for different customers. All transmitters use the same schematic, pcb and assembly. The following type designation is used:

5WK4 5685 for customer Land Rover and Jaguar.

-the transmitter S120123002 is manufactured for different customers. All transmitters use the same schematic, pcb and assembly. The following type designation is used:

5WK4 5684 for customer Land Rover and Jaguar.

Yours truly,

Siemens VDO Automotive AG



Jean-Francois Tarabbia
Executive Vice President
Body & Chassis Electronics Operations



Norbert Müller
Vice/President
Wireless Products and Modules

Siemens VDO Automotive AG Body & Chassis Electronics

Helmut Malscht
Klaus Müller

Postal Address:
Siemens VDO Automotive AG

Postfach 10 09 43
93009 Regensburg

Office Address:
Siemensstraße 12
93055 Regensburg
Tel. +49(0)941/790-02

Siemens VDO Automotive AG - Chairman of the Supervisory Board: Professor Dr. Edward G. Kuzasik - Managing Board: Wolfgang Dethen, Chairman - Members: Dr. Klaus Egger, Günter Hauptmann, Reinhard Pinzer - Registered Office: München - Commercial Registry: München, HRB 132637

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Conformity

SIEMENS VDO
A u t o m o t i v e

SiemensVDO Automotive AG - P.O. Box 10 09 43 - D-93009 Regensburg

Name Regina Quegwer
Department SV C BC P2 RF TG
Tel. +49(0)941/790-3554
Fax +49(0)941/790-133 554
E-Mail Regina.Quegwer@siemens.com
Internet www.siemensvdo.de
Our Ref. Doc_S120123.doc
Date. 4/03/2004

Declaration of Conformity in accordance with Directive 1999/5/EC (R&TTE Directive)

Manufacturer: Siemens VDO Automotive AG
Body & Chassis Electronics

Address: Dep. SV C BC P2 RF TG
Siemensstrasse 12
D-93055 Regensburg
Germany

Product type designation: S120123

Intended use: Radio frequency transmitter used Tire Pressure Monitoring system

The product mentioned above complies with the essential requirements and other relevant provisions of Directive 1999/5/EC, when used for its intended purpose:

Health and safety pursuant to §3.1.a: *Applied standard(s):*
EN 60950: 2000

Electromagnetic compatibility pursuant to § 3.1.b: *Applied standard(s):*
EN 301 489 -1,-3: V1.4.1 (2002-08)

Efficient use of spectrum pursuant to § 3.2: *Applied standard(s):*
EN 300 220 -1: V1.3.1 (2000-09)

The following marking applies to the above mentioned product:



Siemens VDO Automotive AG
Regensburg, 2004-03-04

Jean-Francois Tarablia
Executive Vice President
Body and Chassis Electronics Operations

Norbert Müller
Vice President
Wireless Products and Modules

SiemensVDO Automotive AG	Body & Chassis Electronics	Postal Address:	Office Address:
		SiemensVDO Automotive AG	Siemensstraße 12
			D-93055 Regensburg
			Tel. +49(0)941/790-0
	Helmut Matschi	P.O. Box 10 09 43	
	Klaus Müller	D-93009 Regensburg	

SiemensVDO Automotive AG - Chairman of the Supervisory Board: Edward G. Kraback - Managing Board: Franz Wessing, Chairman - Members: Klaus Egger, Günter Hauptmann, Johann Löcher - Registered Office: München - Commercial Registry: München, HRB 132637

Conformity

SIEMENS VDO

A u t o m o t i v e

SiemensVDO Automotive AG · P.O. Box 10 09 43 · D-93009 Regensburg

Name Regina Quegwer
Department SV C BC P2 RF TG
Tel. +49(0)941/790-3554
Fax +49(0)941/790-133 554
E-Mail Regina.Quegwer@siemens.com
Internet www.siemensvdo.de
Our Ref. Doc_5WK47593.doc
Date. 31/03/2004

Declaration of Conformity in accordance with Directive 1999/5/EC (R&TTE Directive)

Manufacturer: Siemens VDO Automotive AG
Body & Chassis Electronics

Address: Dep. SV C BC P2 RF TG
Siemensstrasse 12
D-93055 Regensburg
Germany

Product type designation: 5WK4 7593

Intended use: Tire Pressure Monitoring system

The product mentioned above complies with the essential requirements and other relevant provisions of Directive 1999/5/EC, when used for its intended purpose:

Health and safety pursuant to §3.1.a: *Applied standard(s):*
EN 60950: 2000

Electromagnetic compatibility pursuant to § 3.1.b: *Applied standard(s):*
EN 301 489 -1,-3: V1.4.1 (2002-08)

Efficient use of spectrum pursuant to § 3.2: *Applied standard(s):*
EN 300 330 -1: V1.3.2 (2002-12)

The following marking applies to the above mentioned product:



Siemens VDO Automotive AG
Regensburg, 2004-03-31

J. V. Tarabba

Jean-Francois Tarabba
Executive Vice President
Body and Chassis Electronics Operations

N. Müller

Norbert Müller
Vice President
Wireless Products and Modules

SiemensVDO Automotive AG Body & Chassis Electronics

Helmut Matschl
Klaus Müller

Postal Address:
SiemensVDO Automotive AG
P.O. Box 10 09 43
D-93009 Regensburg

Office Address:
Siemensstraße 12
D-93055 Regensburg
Tel. +49(0)941/790-0

SiemensVDO Automotive AG · Chairman of the Supervisory Board: Edward G. Krubask · Managing Board: Franz Wressnig, Chairman · Members: Klaus Egger, Günter Hauptmann, Johann Lötner · Registered Office: München · Commercial Registry: München, HRB 132637

Conformity

SIEMENS VDO
A u t o m o t i v e

Siemens VDO Automotive AG · Postfach 10 09 43 · 93009 Regensburg

Name Thomas Heselberger
Department SV C BC P2 RF
Phone +49(0)941/790-3554
Fax +49(0)941/790-90821
E-Mail thomas.heselberger@siemens.com
Internet www.siemensvdo.de
Your Letter
Our Ref. DoC_5WK45791.doc
Date 23.06.2005

Declaration of Conformity

We, the undersigned, declare that

The Control Unit (ECU) 5WK45791 uses the same schematic, layout and pcb as Control Unit 5WK45686.

They only differ in:

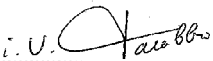
At Control Unit 5WK45791 there was made a software change to adapt several car lines.

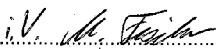
These modifications do not influence the RF characteristics of the Body Controller.

Yours truly,

Siemens VDO Automotive AG

Regensburg, 23.06.2005


.....
Jean-Francois Tarabbia
Executive Vice President
Body and Chassis Electronics Operations


.....
Dr. Martin Fischer
Vice President
Wireless Products and Modules

Siemens VDO Automotive AG Body & Chassis Electronics

Helmut Matschl
Klaus Müller

Postal Address:
Siemens VDO Automotive AG
Postfach 10 09 43
93009 Regensburg

Office Address:
Siemensstraße 12
93055 Regensburg
Tel. +49(0)941/790-02

Siemens VDO Automotive AG · Chairman of the Supervisory Board: Professor Dr. Edward G. Krubask · Managing Board: Wolfgang Dehan, Chairman · Members: Dr. Klaus Egger, Günter Haspimann, Reinhold Finzer · Registered Office: München · Commercial Registry: München, HRB 152237

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Conformity

SIEMENS VDO
A u t o m o t i v e

Siemens VDO Automotive AG - Postfach 10 09 43 - 93009 Regensburg

Name	Schneider Tanja
Department	SV C BC P2 RF TG
Phone	+49(0)941/790-6622
Fax	+49(0)941/790-90921
E-Mail	tanja.schneider@siemens.com
Internet	www.siemensvdo.de
Your Letter	
Our Ref.	DoC_5WK45686
Date.	07.04.2004

Declaration of Conformity

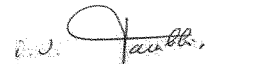
We, the undersigned, declare that

- the ECU 5WK4 7594 is manufactured for different customer. All variants use the same schematic, pcb and assembly. The following type designation is used:

5WK4 5686 for customer Jaguar.

Yours truly,

Siemens VDO Automotive AG



Jean-Francois Tarabbia
Executive Vice President
Body & Chassis Electronics Operations



Norbert Müller
Vice President
Wireless Products and Modules

Siemens VDO Automotive AG Body & Chassis Electronics

Helmut Matschi
Klaus Müller

Postal Address:
Siemens VDO Automotive AG

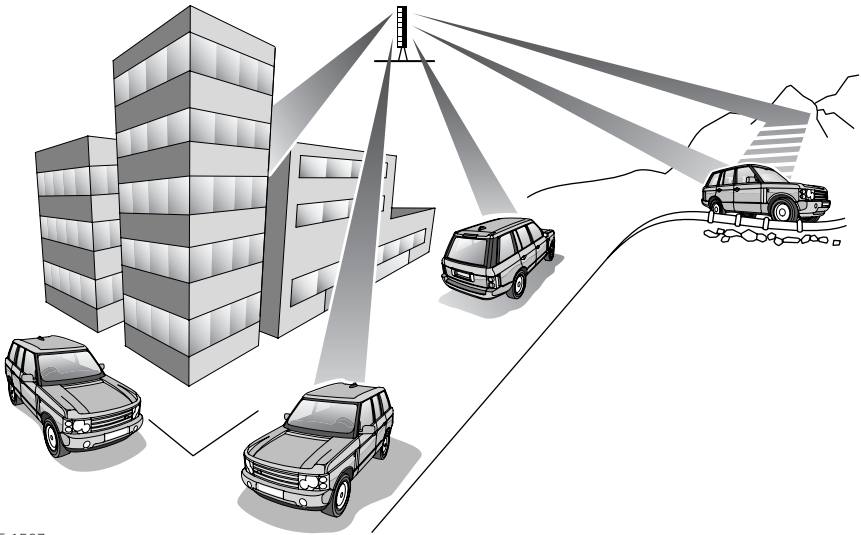
Postfach 10 09 43
93009 Regensburg

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Siemensstraße 12
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Radio Reception



ICE 1527

RADIO RECEPTION

A car radio receives signals whilst on the move and may experience widely differing reception characteristics. Because of this, some interference is to be expected from time to time during a journey.

FM transmitters can only broadcast over a limited range and good clear signals will only be received in the immediate area of the transmitter. When travelling, occasionally it may be necessary to re-tune the radio to offset the effects of moving from one transmitter area to another.

While RDS automatic retuning helps to reduce the effects of signal changes, some manual retuning may still be required (especially for local stations) in areas of weak reception.

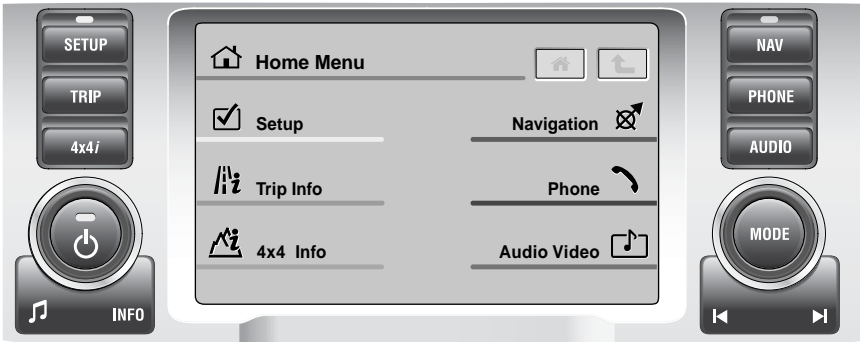
The broadcast range for good stereo reception is within approximately 48 - 64 Km (30 - 40 miles) of the transmitter.

FM Signals travel in a straight line, so large obstacles, such as tall buildings, can shield the car from the signal, causing distortion or loss of reception (known as dead spots).

Distortion can also occur if FM signals, received directly from the transmitter, mix with signals deflected by obstructions such as mountains, hills and tall buildings (this is known as multi-path distortion).

***Note:** Although distortion, interference and lack of signal clarity are sometimes attributed to a fault in the radio, this is rarely the case.*

Touch Screen Care



LAN1056 ENG

TOUCH SCREEN CARE

Care points

The touch screen allows control of the Infotainment systems from a single point. To ensure that it continues to operate correctly, some basic care points are listed below.

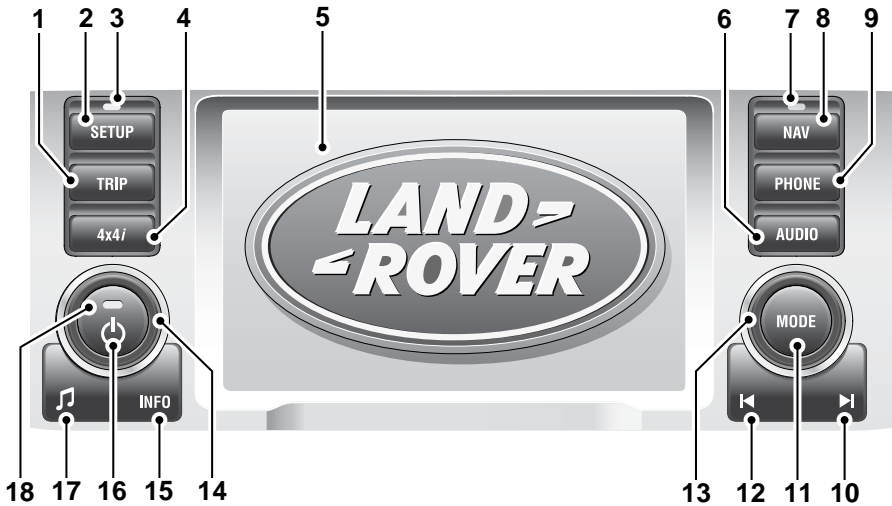
- Clean only with a lightly moistened soft cloth.
- Do not use chemical agents, or domestic cleaners, to clean any part of the touch screen or its surround.

- Only use your finger to operate the touch screen. Ensure that only one finger at a time is in contact with the screen, to prevent incorrect entries.
- A short, light press is sufficient to operate functions. Do not use excessive pressure.
- Do not allow any sharp, hard or abrasive objects to come into contact with the screen.
- Where possible, avoid exposing the touch screen to direct sunlight for long periods.

Note: None of the functions of the Infotainment touch screen are operated by dragging icons.

System Controls

CONTROLS



LAN1057

- | | |
|---|----------------------------|
| 1. On-road information | 10. Up/increase |
| 2. Setup | 11. Mode |
| 3. Climate set indicator (auxiliary heater) | 12. Down/decrease |
| 4. Trip information | 13. Audio |
| 5. Touch screen display | 14. Volume |
| 6. A/V (audio/video) | 15. Info |
| 7. Light sensor | 16. Audio on/off |
| 8. Navigation | 17. Tone |
| 9. Telephone | 18. Audio on/off indicator |

Note: The Infotainment system is operated by a combination of physical buttons on the touch screen surround and virtual buttons displayed on the touch screen. To avoid confusion when reading this handbook, the physical buttons are referred to as buttons and the on screen buttons as icons.

System Settings

SYSTEM SETTINGS

Switching the display screen on



To switch on the system, press the On/Off button.

The first time the system is switched on, the home menu will be displayed. Switching the system on subsequently, will display the screen or menu that was in use when the system was switched off.

Personalising the system settings

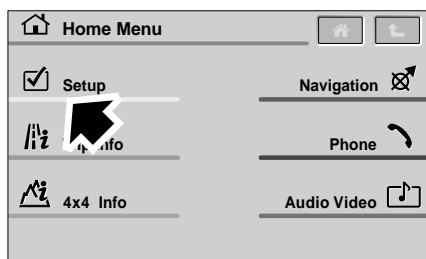
Your vehicle is delivered with the system settings (language etc.) tailored to the market for which the vehicle is intended.

These settings can be altered to suit your preferences.



LAN1058

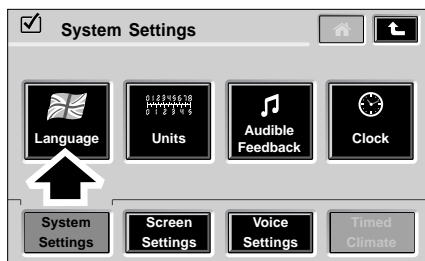
To access the System Settings screen, press the **Settings** button (arrowed) on the screen surround.



LAN1059 ENG

Alternatively, press the **Settings** icon from the Home menu.

Changing the language setting



ICE1723 ENG

To change the language used by the system, press the **Language** icon on the System Settings menu.

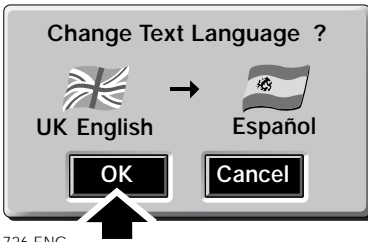


ICE1724 ENG

The language choices are displayed as a list. Scroll up or down through the list using the on-screen arrows. The current language will be indicated by an orange icon.

System Settings

Changing measurement units

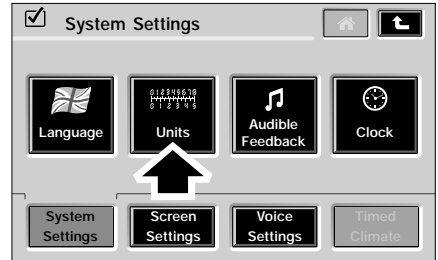


ICE1726 ENG

Touch the button icon next to the language you wish to use. A pop-up menu will appear indicating the current language, the new language and the option to cancel or accept the change.

Once your language choice has been made and you have pressed the **OK** icon, the main Settings screen will be displayed.

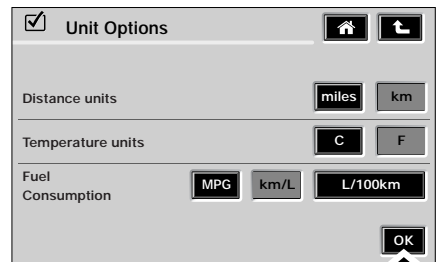
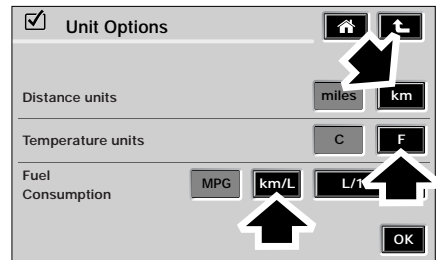
Note: If the display has been set to a language that you are unable to read, it is possible to set the system to a language of your choice by making a selection using the button positions as shown. The country of origin for the language is indicated by the national flag.



ICE1727 ENG

To change the measurement units used to display information, touch the **Units** icon on the System Settings screen.

The Unit Options screen will be displayed.

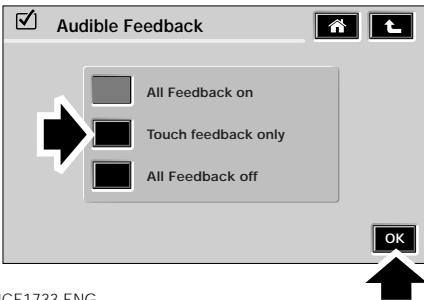
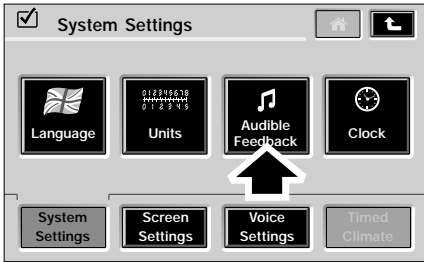


ICE1731 ENG

The units currently being used are shown as orange icons. To select a different unit, touch the relevant icon followed by the **OK** icon.

System Settings

Audible feedback on/off

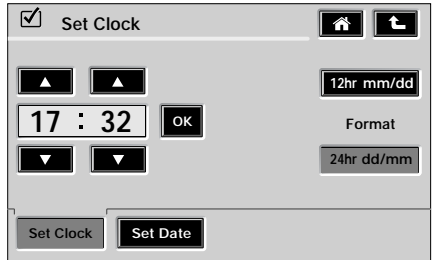
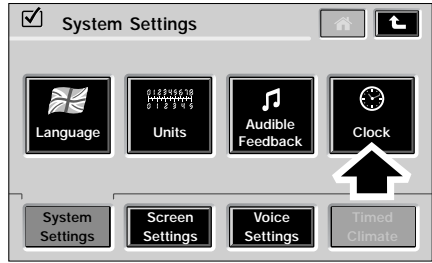


ICE1733 ENG

To change your audible feedback preferences (information messages etc.), touch the **Audible Feedback** icon on the System Settings menu.

From the Audible Feedback menu, touch the **All Feedback on**, **Touch Feedback only** or **All Feedback off** icon as required, followed by the **OK** icon to confirm your choice.

Time and date settings

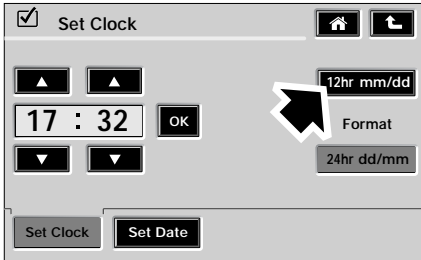


ICE2348 ENG

To set/change the time and date, touch the **Clock** icon on the System Settings menu.

System Settings

Clock setting



ICE2350 ENG

From the time/date settings screen, touch the **Set Clock** icon and select your preferred format (12 or 24 hour).

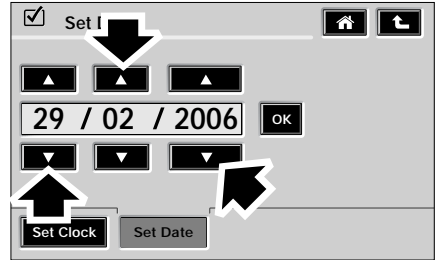
The time format selection will also set the date display format: The 24 hour clock displays the date as dd/mm (date/month) and the 12 hour clock displays the date as mm/dd (month/date).

Use the up and down arrow icons to increase or decrease the hours and minutes.

Once the correct time has been set, press the **OK** icon to save the changes.

Note: If 24 hour format is selected, the AM/PM indicator will not be shown.

Date setting



ICE2352 ENG

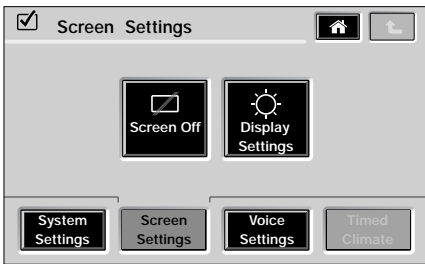
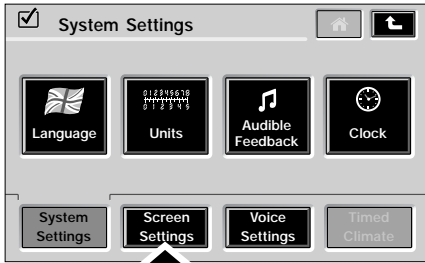
From the time/date settings screen, touch the **Set Date** icon.

Use the up and down arrows to increase or decrease the year, month and date as required.

Once the correct format and date have been set, press the **OK** icon to save the changes.

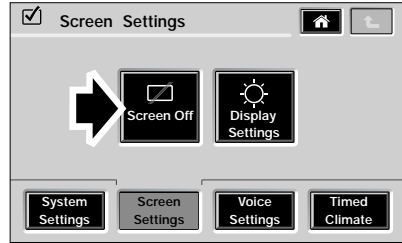
System Settings

Screen settings



ICE1742 ENG

From the main menu, touch the **Screen Settings** icon.



LAN1060 ENG

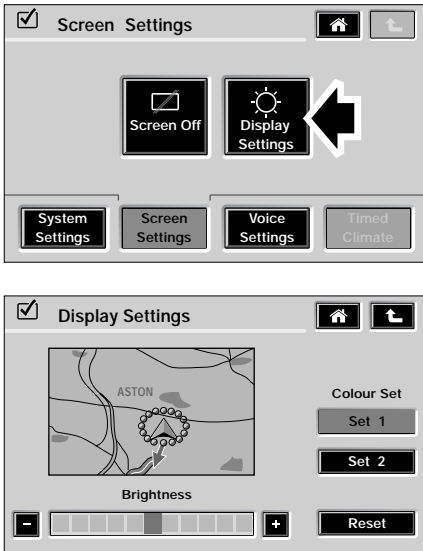
Occasionally, it may be preferable to listen to an audio source with the touch screen turned off - when driving at night for example.

To turn off the touch screen display, touch the **Screen Off** icon.

To turn the touch screen display on, touch the screen at any point.

System Settings

Display settings



ICE2387 ENG

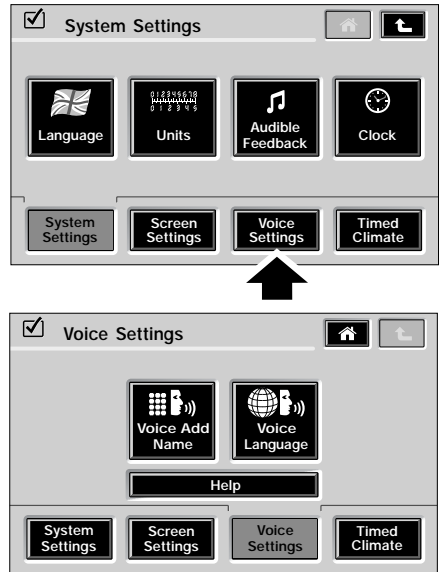
From the Screen Settings menu, touch the **Display Settings** icon.

Note: If Navigation is fitted and a map disc inserted, an example navigation screen will be displayed as a preview when adjusting the display settings. If Navigation is not fitted, the preview screen will display No Map Available.

Contrast is adjusted by touching the + or – icons, to increase or decrease the contrast. Touching the **Reset** icon will return the contrast control to the centre position.

Two colour sets can be selected by touching either the **Set 1** or the **Set 2** icon. Adjustments can be made to the contrast level for each colour set. This allows a quick change of settings with a single press, which may be useful for day and night settings, for example.

Voice settings

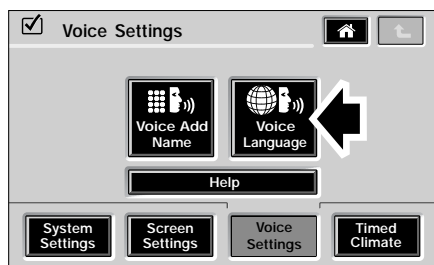


LAN1202 ENG

From the main menu, touch the **Voice Settings** icon.

System Settings

Voice language



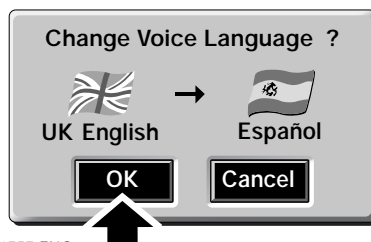
LAN1210 ENG

From the Voice Settings screen, touch the **Voice Language** icon.

It should be noted that the Voice Language icon is only available with the extended voice option and not with basic voice.

Touch the up and down arrows to scroll through the list of available languages.

Select the required language, by touching the icon alongside the relevant flag.



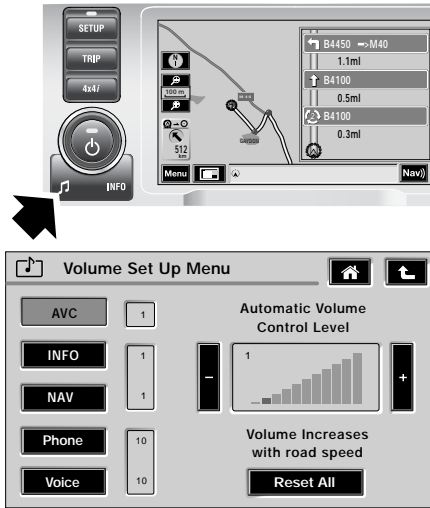
ICE1757 ENG

A pop-up menu will appear, indicating the current language, the new language and the option to cancel or accept the change.

Once your language choice has been made and you have pressed the **OK** icon, the main settings screen will be displayed.

System Volume Settings

VOLUME ADJUSTMENT



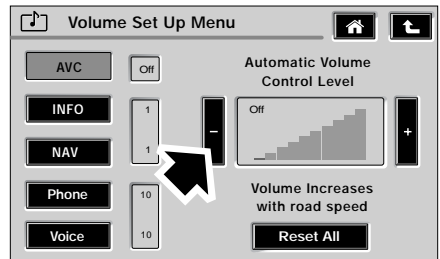
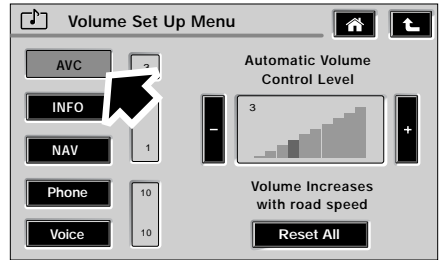
LAN1061 ENG

To access the volume set up menu, press and hold the Tone button until the volume set up menu is displayed. The icons to the left, allow you to choose a setting to adjust (**AVC**, **INFO**, **NAV**, **Phone** and **Voice**). The boxes to the right of the icons show the values currently set for each option. The bar graph and the +/- icons are used to change the settings and show the changes.

Note: *If no change is made within ten seconds, the volume set up menu will disappear.*

Automatic Volume Control (AVC)

Automatic Volume Control adjusts the volume level as the vehicle speed increases. This compensates for the increase in noise at increased speeds.



ICE2084 ENG

From the volume set up menu, press the **AVC** icon to display the settings for Automatic Volume Control.

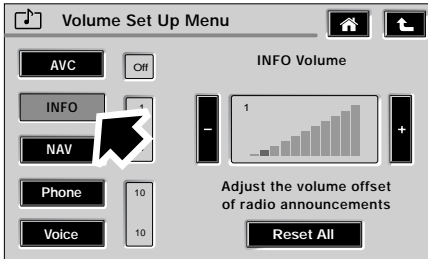
The bar graph represents the amount by which the volume level may increase. If the smallest bar is selected, the AVC function will be turned off. In this state the volume will not increase with vehicle speed. The remaining bars (from 1 to 9) will increase the volume level up to the maximum level selected.

To increase the level of volume change, press the + icon. Each press will select the next bar to the right, up to the maximum (9).

System Volume Settings

To decrease the level of volume change, press the – icon. Each press will select the next bar to the left, down to the minimum (1). A subsequent press of the – button will switch AVC off.

Information announcements



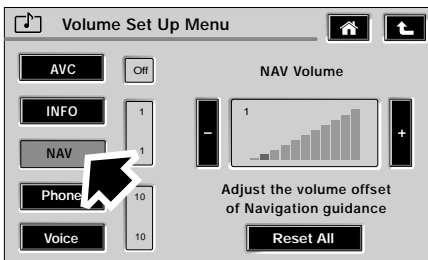
ICE2085 ENG

Press the **INFO** icon from the volume set up menu, to adjust the volume level for radio announcements, such as news broadcasts and traffic announcements on RDS.

To increase the volume level, press the + icon. Each press will select the next bar to the right, up to the maximum (9).

To decrease the volume level, press the – icon. Each press will select the next bar to the left, down to the minimum (1).

Navigation guidance



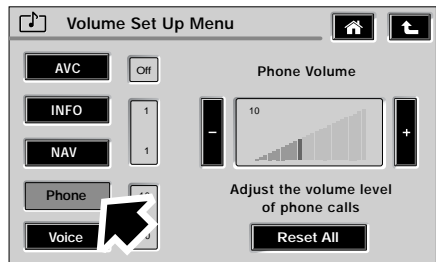
ICE2086 ENG

Press the **NAV** icon from the volume set up menu, to adjust the volume level for navigation guidance messages.

To increase the volume level, press the + icon. Each press will select the next bar to the right, up to the maximum (9).

To decrease the volume level, press the – icon. Each press will select the next bar to the left, down to the minimum (1).

Telephone volume



ICE2087 ENG

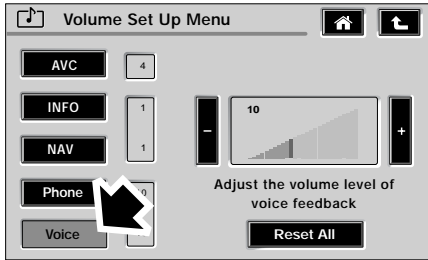
Press the **Phone** icon from the volume set up menu, to adjust the volume level for the telephone.

To increase the volume level, press the + icon. Each press will select the next bar to the right, up to the maximum (25).

To decrease the volume level, press the – icon. Each press will select the next bar to the left, down to the minimum (5).

System Volume Settings

Voice volume



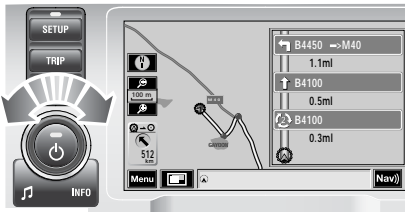
ICE2088 ENG

Press the **Voice** icon from the volume set up menu, to adjust the volume level for voice messages.

To increase the volume level, press the + icon. Each press will select the next bar to the right, up to the maximum (25).

To decrease the volume level, press the – icon. Each press will select the next bar to the left, down to the minimum (5).

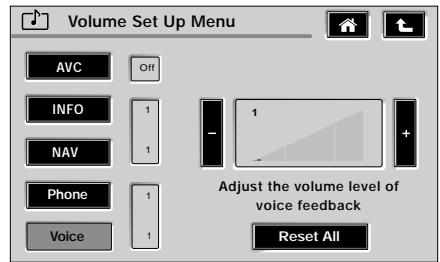
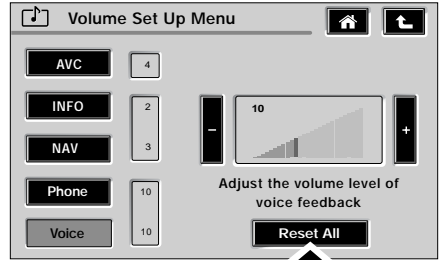
Manual volume adjustment



LAN1062 ENG

During normal audio/video playback, a news interrupt, navigation guidance, telephone interrupt or voice message, the volume level can be adjusted by turning the rotary control.

Resetting the volume settings

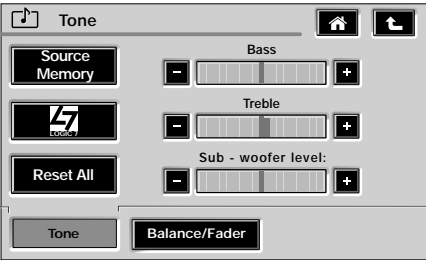
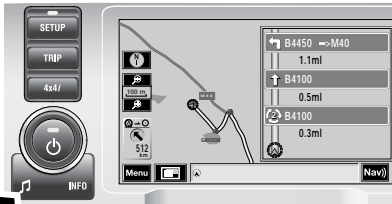


ICE2132 ENG

Press the **Reset All** icon from the volume set up menu, to move to default settings position.

System Volume Settings

TONE ADJUSTMENT



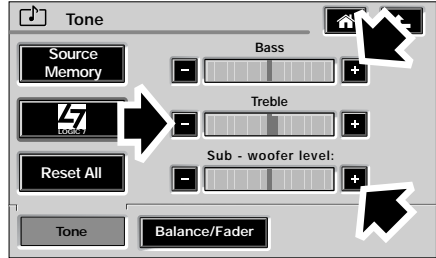
LAN1063 ENG



Press the Tone button (arrowed) to display the Tone menu. From this menu, the settings for Balance, Fade, LOGIC7, Bass, Treble and Sub-woofer can be adjusted/enabled.

Note: If no change is made within ten seconds, the screen will revert to that which was displayed prior to selecting the volume set up menu.

Bass, treble and sub-woofer

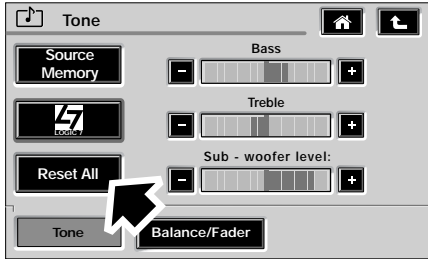


ICE2131 ENG

With the Tone menu displayed, press the **Tone** icon in the bottom left hand corner. The adjustments for Bass, Treble and Sub-woofer are made, using the + and - icons to increase or decrease the settings, as required.

System Volume Settings

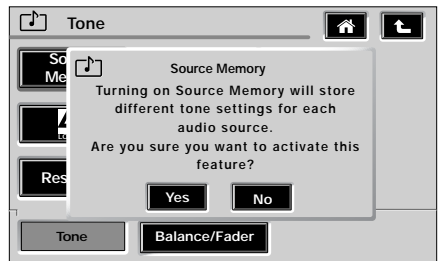
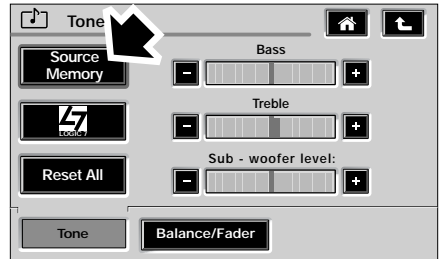
Tone reset all



ICE2093 ENG

With the Tone menu displayed, press the **Reset All** icon. The settings revert to the mid position.

Source memory

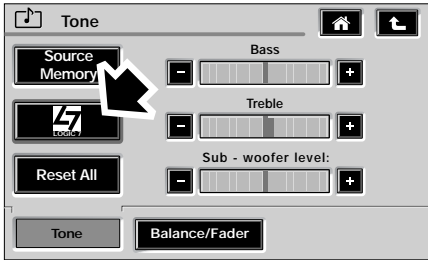


ICE2091 ENG

Source memory allows settings to be adjusted and memorized for individual audio sources. Further explanation can be obtained by pressing the **Source Memory** icon.

System Volume Settings

LOGIC7

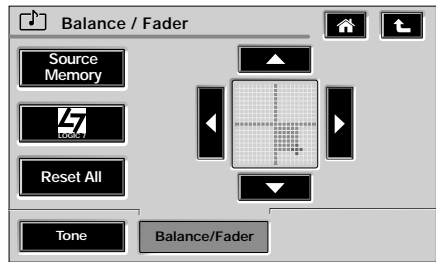


ICE2092 ENG

LOGIC7 delivers audio source output using a seven channel feed. This provides a three dimensional audio effect, by controlling the vehicle speakers individually. This allows instruments, sound effects and dialogue within recorded or broadcast audio sources, to be clearly placed around the passenger cabin.

To turn LOGIC7 on or off, press the **LOGIC7** icon.

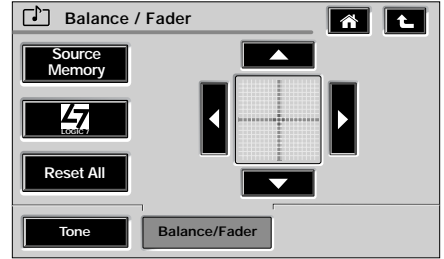
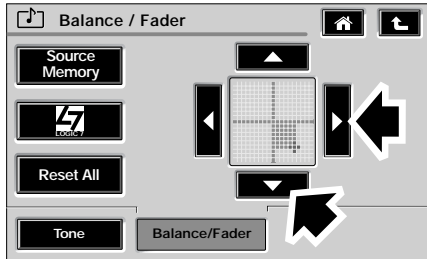
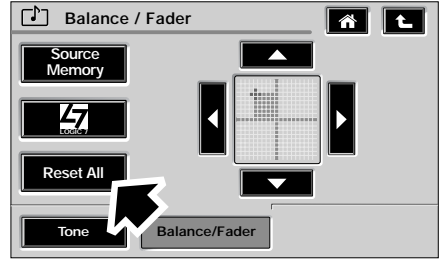
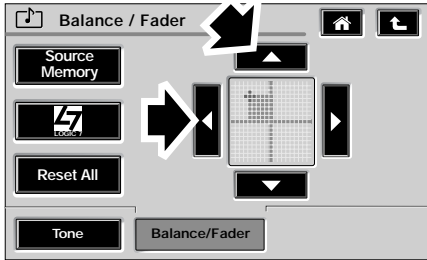
Balance and fade



ICE2094 ENG

To access the Balance and Fade adjustment screen, press the **Balance/Fader** icon on the Tone menu screen.

System Volume Settings



ICE2095 ENG

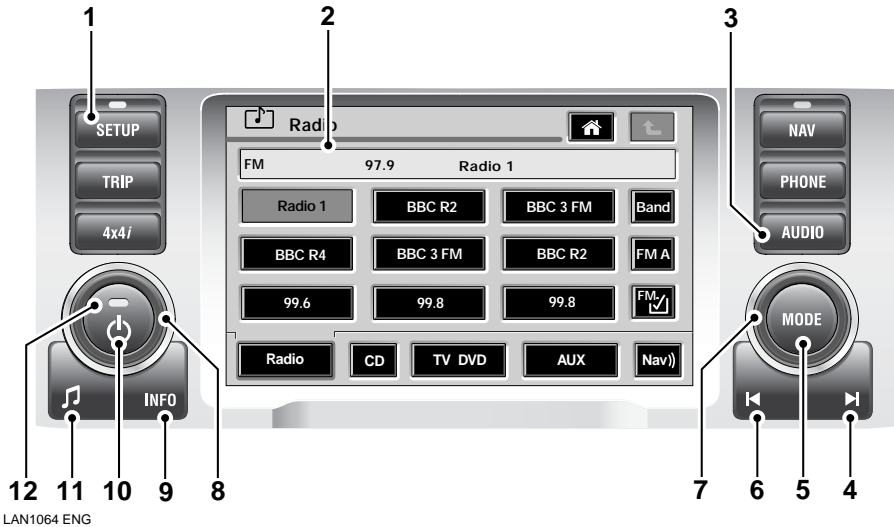
ICE2096ENG

The balance and fade adjustments are made by moving the position of the highlighted squares using the four arrow icons. The highlighted squares represent the bias direction for audio output.

To reset the balance and fade adjustments to the mid position, touch the **Reset All** icon arrowed.

Radio

RADIO CONTROLS

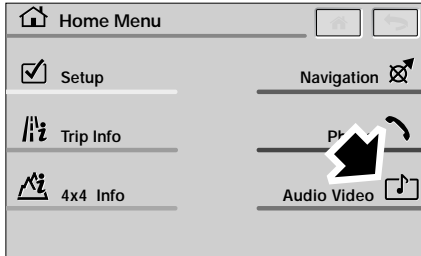


- | | |
|-------------------------|----------------------------|
| 1. Settings | 7. Audio |
| 2. Touch screen display | 8. Volume |
| 3. A/V (audio/video) | 9. Info |
| 4. Up/increase | 10. Audio on/off |
| 5. Mode | 11. Tone |
| 6. Down/decrease | 12. Audio on/off indicator |

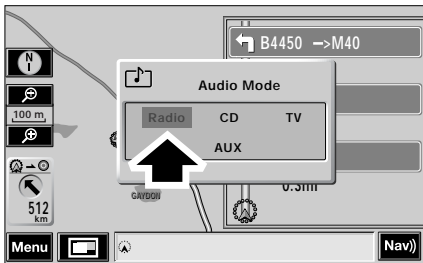
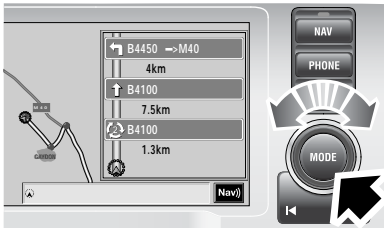
Note: The Infotainment system is operated by a combination of physical buttons on the touch screen surround and virtual buttons displayed on the touch screen. To avoid confusion when reading this handbook, the physical buttons are referred to as buttons and the on screen buttons as icons.

Radio Operation

RADIO OPERATION



LAN1065 ENG

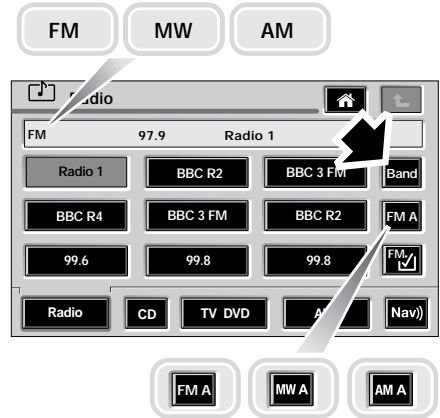


LAN1106 ENG

To access the radio mode, either touch the **Audio Video** icon on the home menu, or press the **MODE** button and turn the rotary control until **Radio** is highlighted.

Note: When the Audio system is operating in 1-HOUR mode, the audio controls on the steering wheel do not function.

Band selection

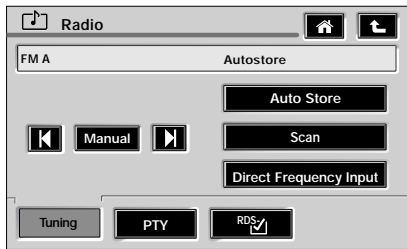


LAN1174

When in radio mode, touch the **Band** icon repeatedly, until the required band is selected (FM, MW, AM).

Radio Operation

Auto storing stations



LAN1175 ENG

When in radio mode, to auto store stations, touch the FM settings icon (arrowed). Select the tuning screen by touching the **Tuning** icon at the bottom left of the settings screen.

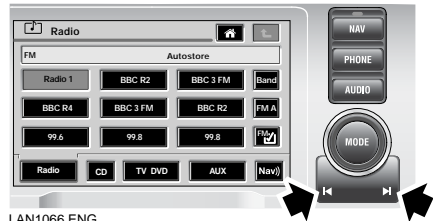
Touch the **Auto Store** icon to start storing stations. Repeat for all other wavebands.

The other auto store bands are FMA, MWA and LWA.



LAN1176 ENG

Alternatively, touch and hold the **FM A** icon to start the auto store process.



LAN1066 ENG

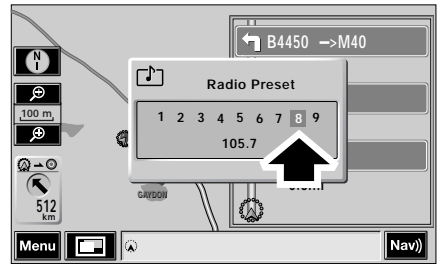
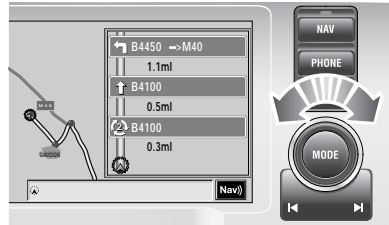
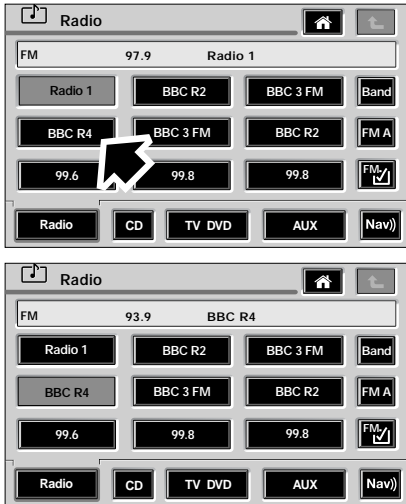
To stop auto store at any time, irrespective of the method used, press either of the seek buttons. The auto store search will stop, the preset station positions will remain as shown prior to the search beginning and the last station played will resume.

Pressing the mode button, or touching the **Radio**, **CD**, **Video** or **Aux** icons, will also cancel the auto store search and move to the relevant display.

Radio Operation

Selecting preset stations

Once the station frequencies have been auto stored, they can be selected by touching the icon for the required station.



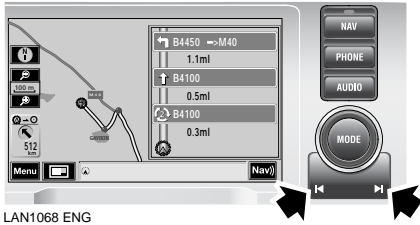
LAN1067 ENG

Alternatively, rotate the audio control. The first click displays the current station and each subsequent click moves to the next station. Clockwise rotation moves up, anti-clockwise moves down.

Note: See also **Quick Start** section at the front of this book.

Radio Operation

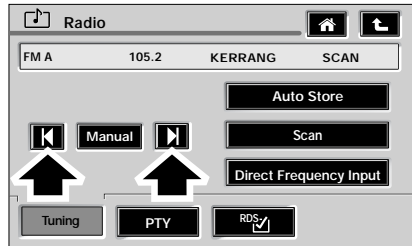
Seeking stations



LAN1068 ENG

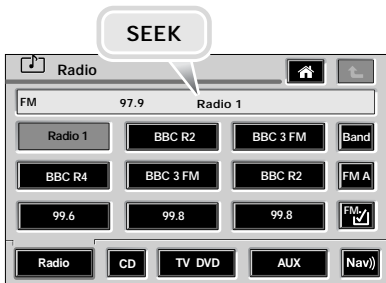
Press the up or down seek button to skip to the next available station in that direction.

Manual tuning



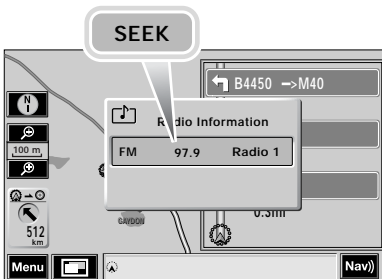
LAN1180 ENG

To manually input a frequency, touch the FM settings icon (arrowed), to display the settings screen. A new frequency may be selected by touching the icons indicated.



LAN1178 ENG

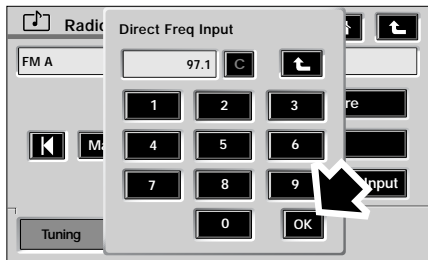
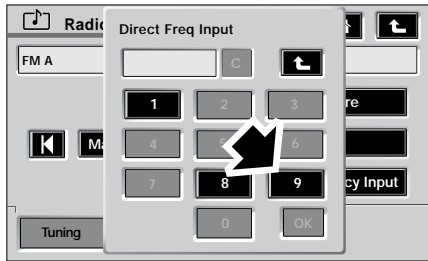
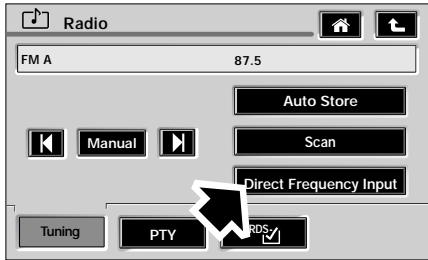
When seeking from the main radio screen, the station information will be displayed in the data display at the top of the screen.



LAN1179 ENG

When seek is enabled from any view other than audio/video, the station information is displayed briefly as a pop-up.

Radio Operation

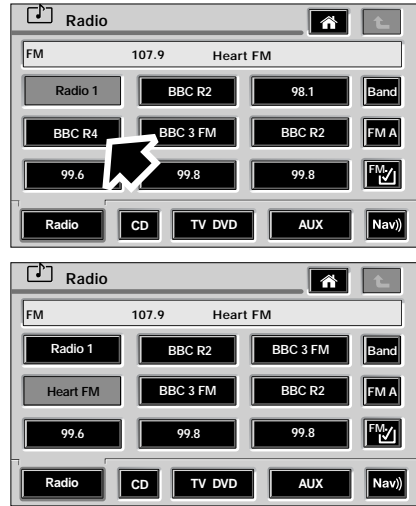


ICE2109 ENG

Touch the **Direct Frequency Input** icon and a pop-up will be displayed to allow the frequency to be entered using the numeric key pad.

Note: Only some of the digits will be enabled on the pop-up screen. These are the only digits available to start the frequency. When the first digits have been input further available digits will be displayed.

When the desired frequency has been entered, press the **OK** icon to confirm.



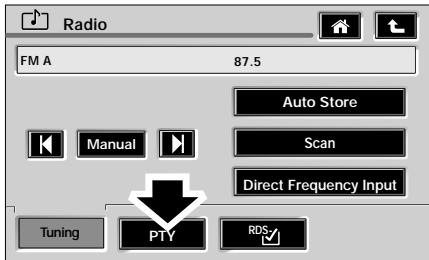
LAN1181 ENG

Once the frequency has been set, the station information (if available) will be displayed in the information display.

To save the station frequency as a preset, touch and hold a location icon for approximately three seconds. After a short delay the station name will be displayed at that preset location.

Radio Operation

Program search by type (PTY)



ICE1769 ENG

It is possible to search for stations of a certain type, for example Rock Music. From the settings screen, touch the **PTY** icon.

Note: The PTY menu is not available when the vehicle is moving.

A menu screen is displayed, which allows you to scroll up or down through a list of programme types. To select a type, touch the box icon to the left of the programme type required. **Searching** will then be displayed in the information display.

Note: To cancel the search, press either of the seek buttons.



ICE2014 ENG

Radio Operation

PTY Programme Types

The following list contains examples of programme types. Specific titles may vary.

NONE	No programme type defined
NEWS	News
AFFAIRS	Current affairs
INFO	Information
SPORT	Sport
DRAMA	Drama
SCIENCE	Science
POP M	Pop music
ROCK M	Rock music
EASY M	Easy listening music
CLASSICS	Serious classical
WEATHER	Weather
RELIGION	Religious reports
JAZZ	Jazz music
COUNTRY	Country music
FOLK M	Folk music

Note: *TEST and ALARM emergency broadcast stations may not be available currently. When the ALARM stations are available, they will broadcast important information in the event of an emergency. TEST will broadcast a test signal for the emergency information, to allow the public and emergency services to ensure that emergency procedures can be practised without causing alarm.*

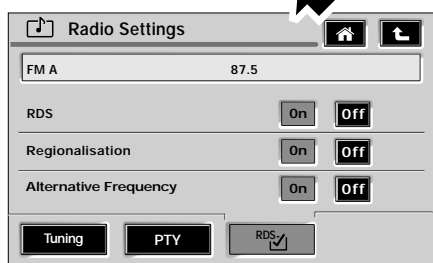
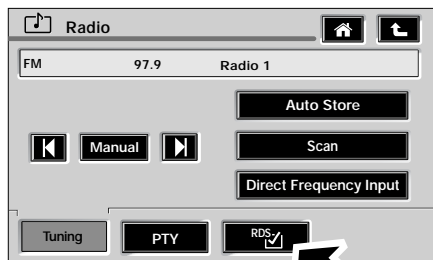
Radio Data System

RADIO DATA SYSTEM (RDS)

Your radio is equipped with RDS, which enables the audio unit to receive additional information with the normal radio signals.

Note: Not all FM radio stations broadcast RDS. If a non-RDS station is received, RDS features will not be available.

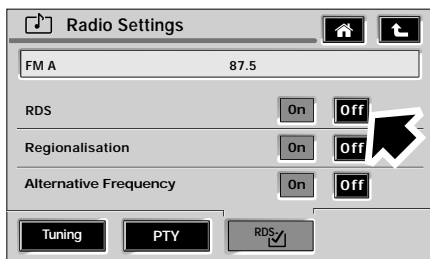
Selecting RDS



LAN1125 ENG

To access the RDS settings menu from the main radio screen, touch the FM settings icon (arrowed).

When the settings menu is displayed touch the RDS settings icon (arrowed).



ICE2112 ENG

RDS can be turned on or off as required by touching the **On** or **Off** icons.

With RDS disabled, the Regionalisation and Alternative Frequency features are also disabled. If RDS is turned on, the Regionalisation and Alternative Frequency features can be turned on or off individually, as required.

Radio Data System

ALTERNATIVE FREQUENCIES (AF)

Some radio stations broadcast on different frequencies in different parts of the country. If the selected station signal weakens, the radio will automatically re-tune to a stronger alternative frequency, if one is available. If a better alternative cannot be found, the radio returns to the original frequency (this feature is particularly useful on long journeys, where the vehicle travels through different transmitter areas serving the same radio station).

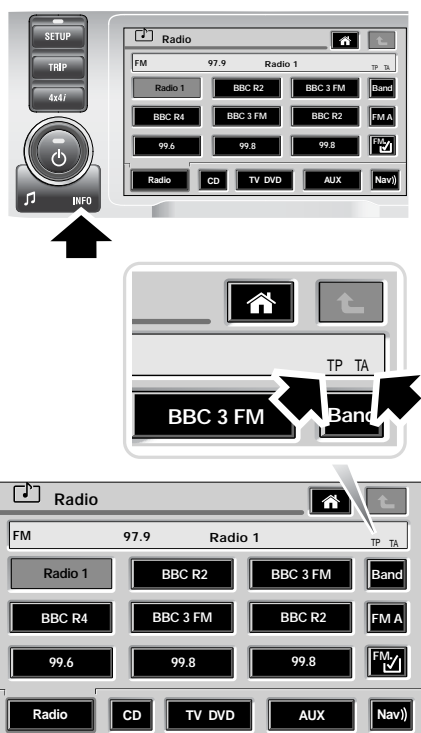
Traffic and News Information

INFORMATION BROADCASTS

On the FM waveband, RDS enables the radio to receive traffic and news information broadcasts. RDS also allows the radio to automatically re-tune to stations that are linked to the same network.

With the RDS feature selected, any available traffic and news information broadcasts can be selected automatically, as and when they occur (even during CD play).

Selecting traffic information



LAN1069 ENG

Briefly press the information button, the TA indicator appears on the right of the display.

When a radio station capable of providing traffic information is selected, the TP indicator illuminates alongside.

As soon as a traffic announcement is received, normal radio reception (or CD play) is interrupted and the word **TRAFFIC** appears briefly in the main display area, followed by the name of the station providing the information.

Tuning difficulties

- If the radio is tuned to a weak FM signal (in remote areas, for example) or a radio station that cannot provide traffic information, when the information button is pressed, the tuner will search for a good traffic information signal. **TP SEEK** will be displayed for the duration of the search.
- If a traffic information station cannot be found, the words **Not Found** will be displayed. In this case the radio will return to the previously tuned frequency.
- If the signal from a traffic information station weakens, the TP indicator in the left side of the display will start to flash. In this case, press either of the Search controls to start searching for another radio station. If the traffic information signal weakens during CD play, the radio will automatically attempt to locate and re-tune to a traffic information station with a stronger signal.

***Note:** If a non-traffic information station has been stored on one of the pre-set buttons, and is selected while the traffic information facility is switched on, the radio will remain on the selected station unless Traffic Information is turned off and on again.*

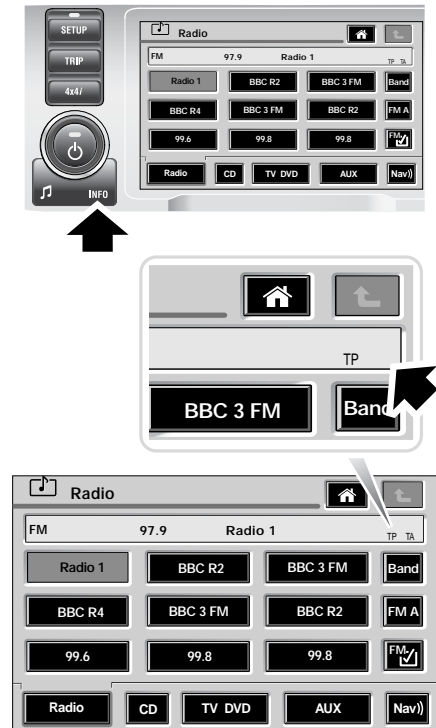
Traffic information during CD play

When traffic information is switched on, CD play will be interrupted by information broadcasts automatically, as and when they occur.

Traffic and News Information

The station name and **TRAFFIC** will alternately appear in the display. At the end of the broadcast, CD play will resume from the point on the disc at which CD play was interrupted.

Switching off traffic information



LAN1070 ENG

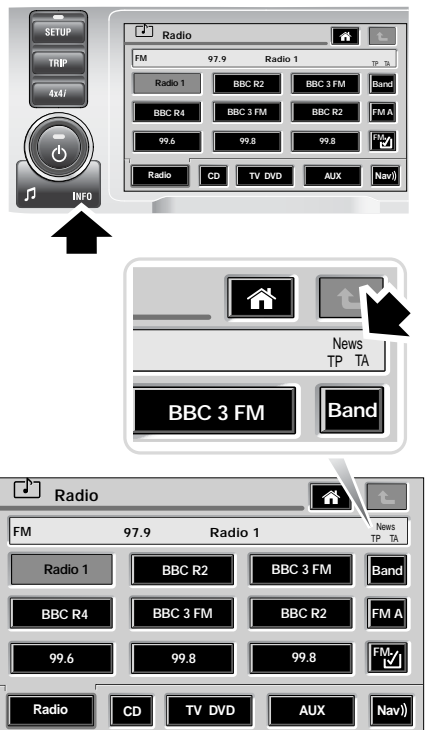
Briefly press the information button (the **TA** indicator will disappear from the left side of the display). This action will prevent traffic information broadcasts from being received until the feature is reselected.

Unwanted traffic information broadcasts can be aborted by briefly pressing the information button. In this case, because the feature is being disabled during a traffic information broadcast, disablement is only temporary - the feature will return as soon as the next traffic information bulletin is broadcast.

Briefly press the information button to restore the TA icon.

NEWS INFORMATION

Selecting news information



LAN1071 ENG

Traffic and News Information

Press and hold the information button for more than 2 seconds, to select or de-select News Information - the word **NEWS** will appear in, or disappear from, the display accordingly.

During news broadcasts, the display flashes **NEWS** alternately with the name of the radio station providing the news information.

News information during CD play

When the news information mode is active, CD play will be interrupted by news information broadcasts automatically, whenever they occur.

The station name and **NEWS** will appear in the display. At the end of each broadcast, CD play will resume from the point at which CD play was interrupted.

***Note:** Both traffic and news information can be selected at the same time. However, the radio will always give priority to traffic information.*

Switching off news information

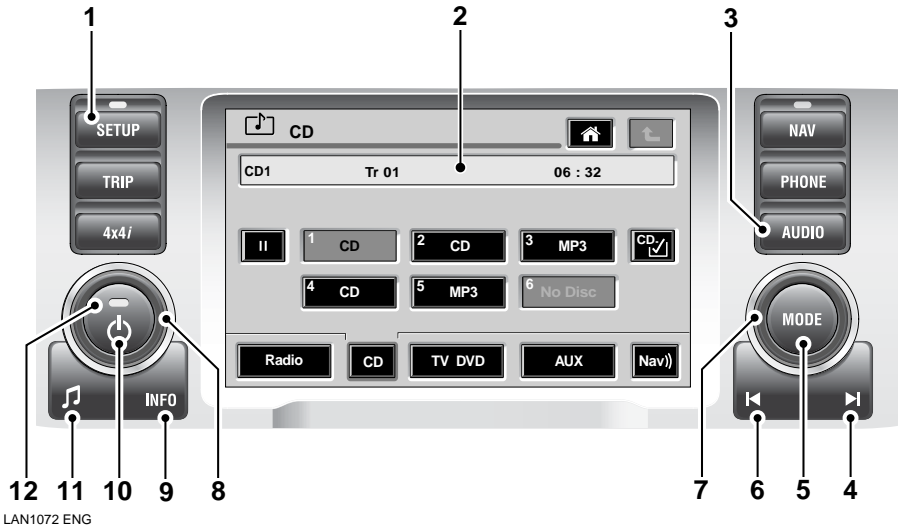
Press and hold the information button for more than 2 seconds (**NEWS OFF** appears in the display). This action will prevent future news broadcasts from being received until the feature is reselected.

Unwanted news information broadcasts can be aborted by briefly pressing the information button. In this case, because the feature is being disabled during an information broadcast, disablement is permanent and the **NEWS** icon is removed.

Press and hold the information button for 2 seconds to restore the **NEWS** icon.

Compact Disc Player

COMPACT DISC PLAYER CONTROLS



1. Settings
2. Touch screen display
3. A/V (audio/video)
4. Up/increase
5. Mode
6. Down/decrease
7. Audio
8. Volume
9. Info
10. Audio on/off
11. Tone
12. Audio on/off indicator

Note:

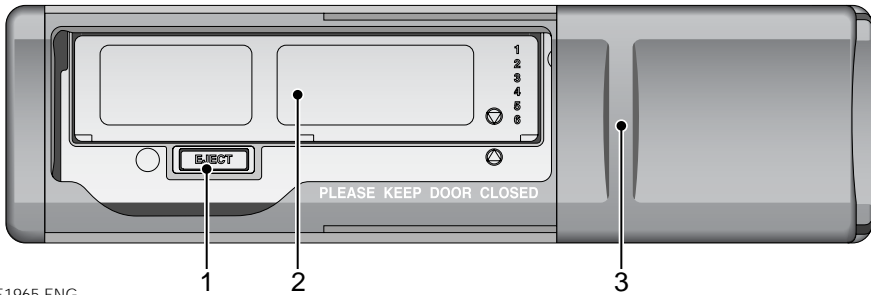
The Infotainment system is operated by a combination of physical buttons on the touch screen surround and virtual buttons displayed on the touch screen. To avoid confusion when reading this handbook, the physical buttons are referred to as buttons and the on screen buttons as icons.

Dual/DVDPlus discs

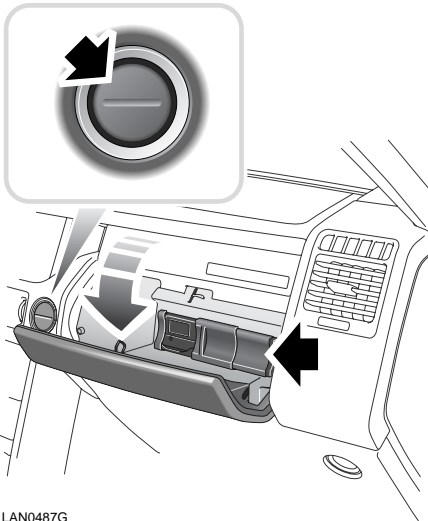
Please be aware that a new generation of DVD discs is being adopted by the music industry. They are known as **Dual Discs** or **DVDPlus** discs. They have digital music on one side and video content on the other. Current in-car audio systems with a front loading CD player may load and play this type of disc. However, it is likely that the disc will not eject and may jam the mechanism. Such damage to a CD player will not be covered under warranty.

Compact Disc Player

CD AUTOCHANGER



ICE1965 ENG



LAN0487G

The CD autochanger is located in the upper glove box on the passenger side of the vehicle. Press the release switch to open the glove box.

Fully open the sliding cover (3) to insert or remove the magazine (2).

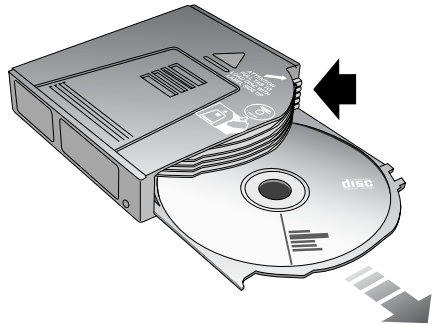
Keep the cover closed at all other times, to prevent dirt and dust from entering the CD changer unit.

Press button (1) to eject the magazine.

CD autochanger maintenance

The manufacturers do not recommend the use of lens cleaning discs.

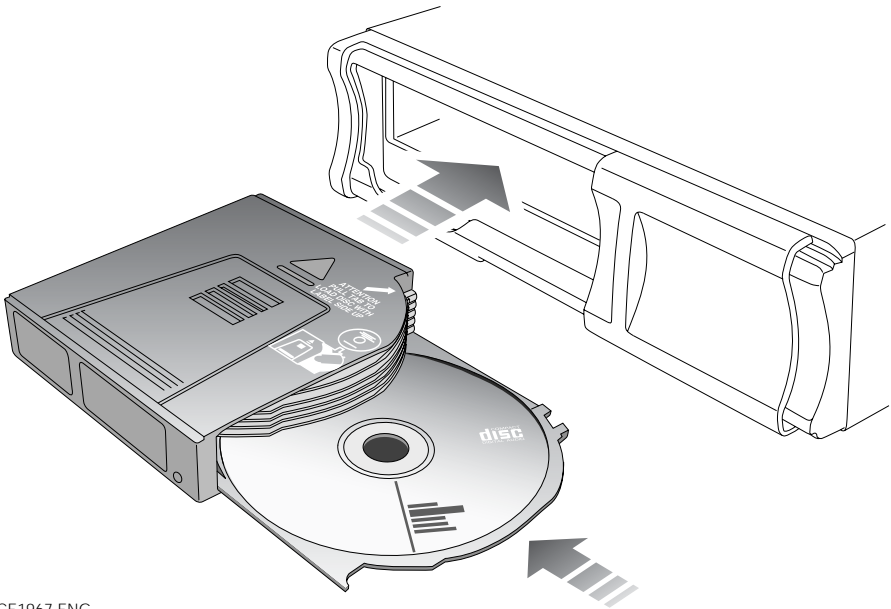
Loading and unloading the magazine



ICE1966 ENG

To unload the magazine, hold the magazine with the arrow uppermost, pull out each tray in turn by its tab (see arrow above), while holding the tray securely so as not to drop the disc. Unload one disc at a time and handle only the edge and centre of the disc.

Compact Disc Player



ICE1967 ENG

Place a disc (label side uppermost) onto each tray, holding only the outside edge and centre hole of the disc. Load only one disc in each tray. Correctly align the tray with the parallel slots on each side of the magazine and slide the tray fully into the magazine. Insert the magazine in the direction of the arrow marked on the magazine casing and push it fully into the CD changer. Close the sliding cover.

Important:

- The CD autochanger should only be used as described - any other application or method of use could result in the user being exposed to invisible laser radiation, exceeding the limit of laser Class 1.
- Use standard 12 cm CDs only.
- DO NOT use irregularly shaped or damaged CDs - these may damage the compact disc changer unit.

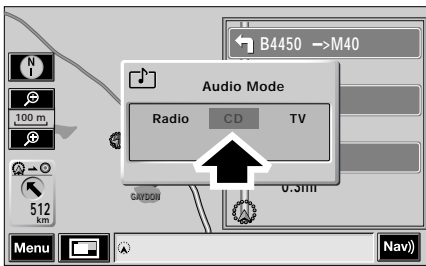
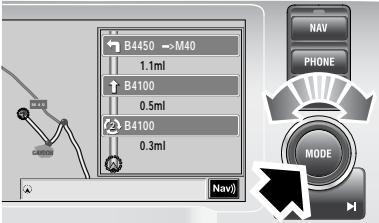
- 8 cm CD singles must not be used, even if a CD adaptor is fitted.
- Closed session CD-R and CD-RW discs can be played.
- The CD autochanger should not be used in temperatures outside the range -10°C to $+60^{\circ}\text{C}$ (14°F to 140°F). If the CD autochanger reaches temperatures higher than recommended for normal use, **HIGH TEMP** appears in the display. If this occurs, stop using the CD player, eject the magazine and allow the autochanger to cool down. If the problem persists, consult your Dealer/Authorised Repairer.

Note: Additional magazines can be obtained from a Land Rover Dealer/Authorised Repairer.

Compact Disc Player

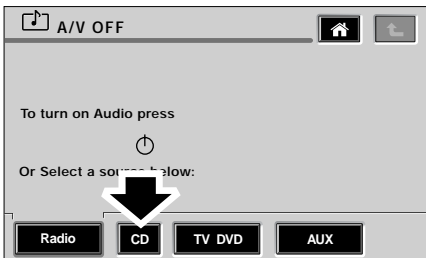
CD CONTROLS

Selecting CD audio source



LAN1073 ENG

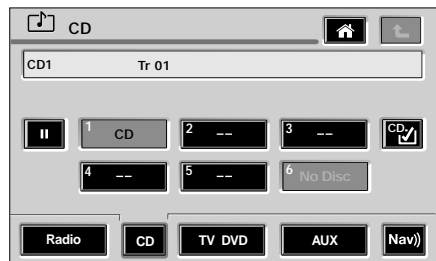
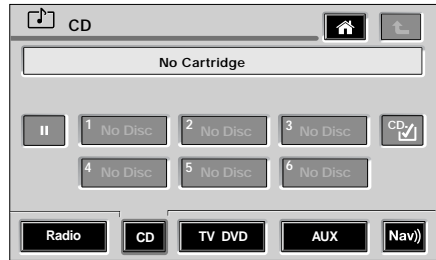
To select CD as the audio source, press the **MODE** button, which will display the Audio Mode pop-up. **CD** can be selected as the audio source by rotating the audio control, until **CD** is highlighted.



ICE2118 ENG

Alternatively, if any other audio source is currently in use, press the **CD** icon.

Playing CDs



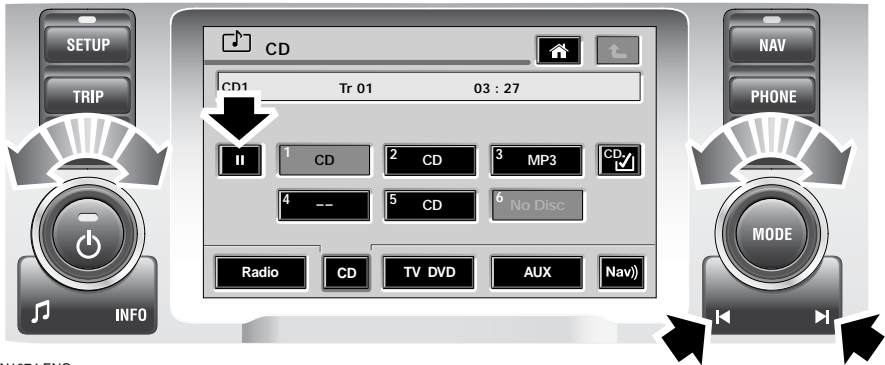
LAN1182 ENG

If CD mode is selected prior to inserting the magazine, the display will show **No Cartridge**. Once the magazine has been inserted, there will be a short delay whilst the system reads the discs, during which **Please Wait - Loading** will be displayed.

Once the magazine has loaded and the discs have been read, play will commence with disc one, track one.

Compact Disc Player

Selection/search controls



LAN1074 ENG

Track selection: With a CD playing, briefly press the right hand seek button to skip to the beginning of the next track, or the left seek button to return to the start of the current track. Press either button repeatedly, to reach the desired track.

Track search (fast forward/reverse): Press and hold either seek button to play rapidly, forward or back, through one or more tracks. Normal playback will resume when the button is released.

Pause

Touch the pause icon to suspend play; touch the icon again to resume play from the point at which it was suspended.

Disc selection icons (1-6)

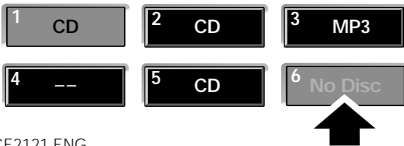
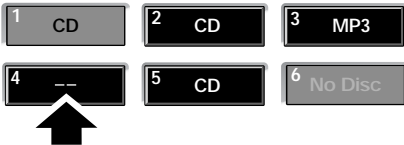
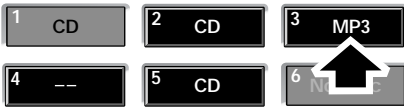
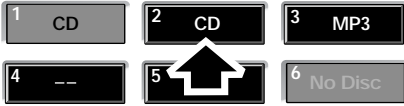
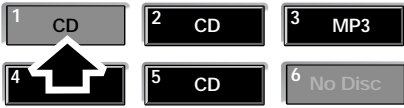
With the CD changer selected, press the appropriate icon to select a disc from the changer. Playback will start from the beginning of that disc and progress sequentially through all the discs in the disc changer.

Note: *The audio system can only recognise a disc type after it has read the disc at least once.*

An empty compartment cannot be selected because the icon will be grey. If a CD is inserted upside down or a faulty CD inserted then the icon for that compartment remains at -- and the display shows **INVALID DISC**. Another disc must then be selected.

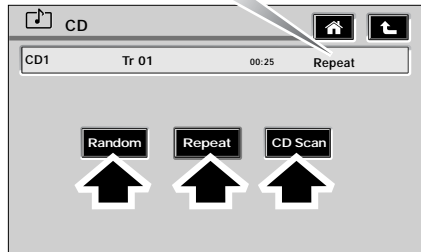
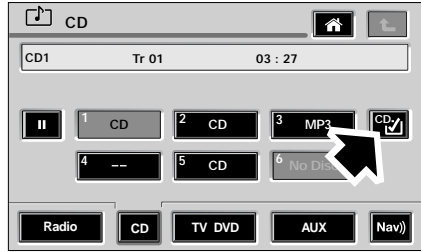
Compact Disc Player

Playback features



ICE2121 ENG

- **Icon-1**
Shows the currently playing CD.
- **Icons-2 & 5**
Position occupied by CD.
- **Icon-3**
Position occupied by MP-3 disc.
- **Icon-4**
Various reasons, e.g. disc not read yet or faulty disc or upside down disc etc.
- **Icon-6**
No disc in this position.



LAN1205 ENG

A selection of additional playback features are made available, by touching the CD settings icon (arrowed in top illustration).

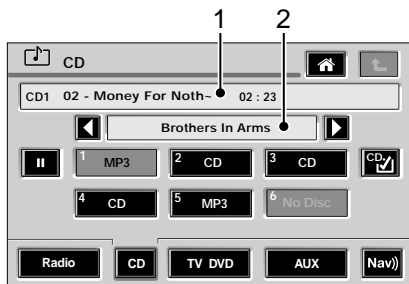
- **Random**
The track order of play from the current disc is randomly selected by the CD player.
- **Repeat**
The CD player plays the current track continuously, from start to finish, again and again until repeat is cancelled.
- **CD Scan**
CD scan will play each track on the current disc in turn for ten seconds, until all tracks have been played. Play then resumes with the track from which Scan was initiated. This enables the user to sample each track before choosing one to listen to.

Compact Disc Player

To cancel any of the playback features:-

- Touch the feature icon that is in use.
- Select another playback feature.
- Press the forward or reverse buttons.
- Switch off the audio unit or the ignition switch.
- Eject the CD magazine.

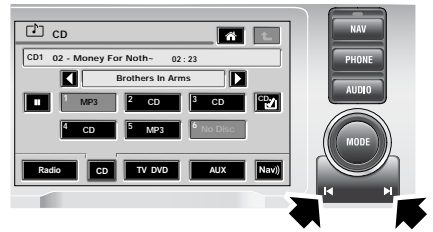
Playing MP3 discs



The CD unit is capable of playing MP3 discs, which are loaded into the magazine in the usual way.

Note: A mixture of both CDs and MP3 discs can be loaded into the magazine at the same time.

During playback of an MP3 disc (1), an additional information screen is displayed (2). If the MP3 disc has been recorded with the music files contained within folders, then the additional information screen will display folder information.



LAN1075 ENG

To move between tracks in a folder, use the up/down buttons.

Compact Disc Player



LAN1184 ENG

To move between folders, use the left/right icons alongside the additional information screen.

Track or file information is displayed in the usual way, via the top information screen.

Drivers message centre display.

When operating the radio/CD from the steering wheel mounted buttons, a message appears in the drivers message centre display below the instruments.

MP3 folder and track format

A CD-R or CD-RW can have MP3 folders and tracks recorded in many different ways, with many layers of folders and with tracks distributed throughout the folder structure. To minimise the loading on the system, a rigid folder structure is required. Therefore, only one level (or layer) of folders is permitted. Up to 20 folders, with a maximum of 20 characters per folder title, are permitted in this level. Up to 50 tracks can exist in the root directory and up to 50 tracks can exist in each folder.

Note: Any folder located within another folder will be ignored.

Note: Any CD containing a mixture of MP3 and CD-DA tracks will be treated as a CD (any MP3 tracks will be ignored).

Note: The CD autochanger may take a long time (1 minute or more) to load a disc, if the disc contains several sessions. The customer can create CDs with up to 40 sessions, but this will result in a prolonged loading time.

Note: The CD player is not guaranteed to play every disc available on the market, because of variations in the quality of discs available.

Audio Voice Recognition

VOICE CONTROL

IMPORTANT

Voice control provides a safe and convenient way of operating the audio system, without the need to operate the controls manually.

This enables you to concentrate fully on driving the vehicle and removes the need to divert your attention from the road ahead in order to change settings or receive feedback from the system.

A number of voice commands are available and with a little experience, you will find them easy and convenient to use. Whenever you issue one of the defined commands with the system active, the voice control system converts your command into a control signal for the audio system. Your inputs take the form of dialogues or commands. You are guided through these dialogues by announcements or questions.

Please familiarise yourself with the functions of the audio system, before using voice control.

***Note:** Please familiarise yourself with the operation of the Audio system, before using voice control.*

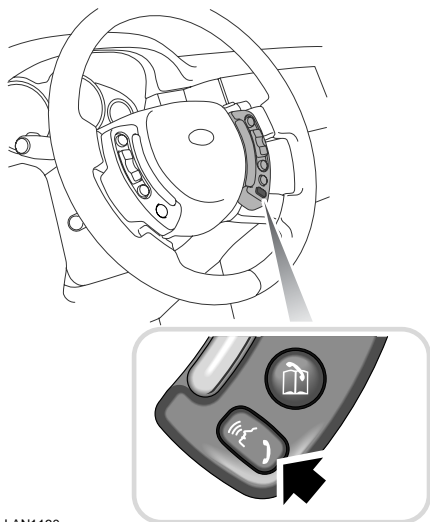
Making yourself clearly understood

The voice control system includes a hands-free microphone, mounted in the roof lining at the front of your vehicle. Although the microphone filters out some ambient noise, there are a few points to observe to ensure that the system understands your commands:

- Speak continuously and at normal volume, avoiding unnatural emphasis and pauses between words.
- Do not speak while the voice control system itself is giving an output. The voice system displays **LISTENING** on the message centre and gives a beep when it is waiting for a speech input.
- It is possible that noise interference from outside the vehicle could affect commands. To avoid this, keep the doors, windows and sunroof closed.
- If a command is not heard or is misunderstood, the voice system responds with:
"Sorry",
"Command not recognised" or
"No speech detected".
If this happens, repeat the command.
- Avoid causing background noise in the vehicle while you are speaking and ask your passengers not to talk while you are issuing voice commands.
- The hands-free microphone is positioned to pick up the driver's voice. Commands made by other occupants may be picked up, but clarity and accuracy will be reduced.

Audio Voice Recognition

Activating the system



LAN1130

To activate voice control:

- Briefly press the button (your Audio system will mute at this point). A beep will be heard and **LISTENING** will be displayed on the main message centre, to indicate that the system is now waiting for a voice command.

Note: It is only necessary to use the steering wheel voice control button at the beginning of each voice session.

Defined voice commands

The voice control system understands predefined commands, which need to be quoted word for word.

An audio reminder of voice commands is available. To activate the reminder, press and hold the voice control button for two seconds until a beep is heard, then give one of the following commands:

- **Voice help** - to list all commands.
- **Radio help** - to list Radio commands.
- **CD help** - to list CD commands.
- **Navigation help** - to list Navigation commands. Refer to Navigation Handbook for operating instructions.
- **Notepad help** - to list Notepad commands. See **Notepad, 124**.
- **Display help** - to list Display commands.

Note: It is important to recognise that the Voice Recognition Commands follow a hierarchy, as per the following example:-

Device (e.g. Radio);

followed by -

Function (e.g. Radio play);

followed by -

Setting (e.g. Radio band FM).

General Commands

GENERAL COMMANDS

Activating the user help function

Say the command **Radio help** - the audio system recites a list of Radio commands.

Say the command **CD help** - the audio system recites a list of CD changer commands.

Interrupting voice control

A command can be interrupted by saying the word **Cancel** when in listening mode, or by pressing the voice control button until the system responds by saying "Command cancelled".

If you receive a telephone call (or Navigation route guidance instruction/TA announcement) while conducting a dialogue by voice control, the Voice control dialogue is interrupted.

Command not recognised

If a command is not recognised by the speech recognition system, it responds with "Sorry".

Please say your command again.

Activating the user help function

You say	System response	Message centre display
Radio help	Quotes the list of radio commands	RADIO HELP
CD help	Quotes the list of CD commands	CD HELP

Rear Seat Entertainment Commands

REAR SEAT ENTERTAINMENT COMMANDS

Requesting auxiliaries or headphones

The following commands are only available when Rear Seat Entertainment is fitted to the vehicle.

Activating rear seat entertainment commands.

You say	System response	Message centre display
Radio auxiliary on or Radio auxiliary play	Selects auxiliary input for external device	AUXILIARY PLAY
Headphones on or Headphones play	Switches on both headphone outputs	HEADPHONES PLAY
Headphones off	Switches off both headphone outputs	HEADPHONES OFF

Radio Commands

STATION TUNING

Starting a dialogue

Hold the voice control button on the multi-functional steering wheel until the listening beep is heard. Any audio sources in the vehicle are muted.

Radio stations

Frequencies are said as in the following examples:

In place of **Tune**, you can use the command **Select**.

Tuning to a radio station

You say	System response	Message centre display
<i>Radio play</i>	Radio play	RADIO PLAY
<i>Radio tune preset one (two, three, etc)</i>	Radio tunes to preset 1 (2, 3 etc)	RADIO PRESET 1 (2, 3, etc)

Radio Commands

STORING RADIO STATIONS

Storing via voice command

Once you have tuned to a Radio station, it is possible to store that station for future use as a preset.

The command **Radio store preset** <say number> (1-9), calls up the dialogue for storing a preset station.

The command **Radio band autostore**, enters the autostore function for the selected frequency band (e.g. FM).

Name tags

Name tags are a unique name or phrase of your choice, which can be used to recall a radio station. The name tags used can be the station name or a completely separate name of your choosing.

The names are stored in a directory by using the **Radio store name** command. The system responds with "Name please". You then say the name that you have chosen (e.g. Radio 1).

The system will read out a list of current name tags when given the command **Radio directory**.

Radio tune <name tag> is used to select a station that has been previously stored.

Storing via voice command

You say	System response	Message centre display
Radio store preset <preset number> (1-9)	Radio store preset <preset number>	RADIO STORE PRESET (1-9).
(1) Radio store name(3) <name>	(2) Radio store name.....<name><frequency>	RADIO STORE NAME,NAME PLEASE.
Radio autostore	Radio autostore	RADIO AUTOSTORE

Radio Commands

RADIO PLAY DIRECTORY

Tune/delete from the radio directory

The commands **Radio play directory** or **Radio directory**, enable you to have all your radio name tag entries in your voice recognition radio directory, read out in stored order.

Commands can be entered during the system response.

Replay

After a name tag has been read out by the system, give the command **Replay** and the name tag will be repeated.

Tune

After a name tag has been read out by the system, give the command **Tune** and the radio tunes to the station saved under that name tag.

Delete

After a name tag has been read out by the system, give the command **Delete** and the name tag will be removed from the directory.

Cancel

After a name tag has been read out by the system, give the command **Cancel** and the current voice session will end.

Tuning from the radio directory

You say	System response	Message centre display
Radio play directory	Radio play directory. The system reads out radio directory entries. You can say Replay , Tune , Delete or Cancel after each entry. The system will carry out the command for the last spoken entry.	RADIO DIRECTORY <Station frequency>

Radio Commands

RADIO DELETE DIRECTORY

Deleting the directory

The command **Radio delete directory**, deletes all entries in the radio directory.

Deleting the radio directory

You say	System response	Message centre display
1. Radio delete directory	1. Radio delete directory confirm yes or no	1. DELETE DIRECTORY SAY YES OR NO
2. Yes	2. Are you sure you want to delete the whole directory?	2. SAY YES OR NO
3. Yes	3. Directory deleted	3. DIRECTORY DELETED

CD Commands

SELECTING DISC AND TRACK NUMBERS

For CD player commands, say disc and track numbers as in the following examples:

- CD play disc one.
- CD play disc six track ten.
- CD play track twenty five.
- CD play track forty seven.

Operating the CD player via voice command

You say	System response	Message centre display
CD help	List of CD commands	CD HELP
CD play	CD play	CD PLAY
CD play disc <say number> (1-6)	CD play disc <say number> (1-6)	DISC <disc number> (1-6)
CD play next disc	CD play next disc	CD NEXT DISC
CD play previous disc	CD play previous disc	CD PREVIOUS DISC
CD play track <say number> (1-99)	CD play track <say number> (1-99)	CD TRACK <track number> (1-99)
CD play disc <say number> (1-6), track <say number> (1-99)	CD play disc <say number> (1-6), track <say number> (1-99)	DISC <disc number> (1-6) TRACK <track number> (1-99)

Conformance

AUDIO SYSTEM EEC CONFORMANCE

In conformance with current EC guidelines, any person may operate this radio receiver. This unit conforms to the current valid European or harmonised national regulations. The designation is your guarantee of conformance to the applicable specifications concerning electromagnetic compatibility for the unit. This means that interference affecting other electrical/electronic devices caused by your unit, as well as interfering influences on your unit from other electrical/electronic devices, can be largely prevented.

Current valid designations are: -

CE symbol for issue according to European guideline 89/336/EEC under application of the following standards:

EN 55013

EN 55020

e symbol according to European motor vehicle EMC guideline 95/54/EU, also permits operation in motor vehicles (classes M, N and O) which received their type approval after 1st January 1996.



021473

H4371

Phone Introduction

USING THE PHONE IN THE VEHICLE

WARNING

Use of your phone handset while you are driving is dangerous as it diverts attention from the traffic situation. In some countries, use of a phone handset whilst driving is prohibited and in other countries a hands-free unit must be used. If you wish to use your phone handset, stop at an appropriate place where you are not endangering or inconveniencing other vehicles.

WARNING

Using the telephone near the car:
Do not telephone inside a garage or near an open car bonnet. The air may contain fuel vapours and the telephone could produce sparks and start a fire.

WARNING

Unusual ambient conditions:
Switch off the telephone in areas where high explosives are being used. High frequency remote controls could be interfered with and cause an explosion.
Switch off your telephone in areas with a high explosion risk. This includes filling stations, fuel storage areas or chemical factories as well as places where the air contains fuel vapour, chemicals or metal dust. The telephone might possibly produce sparks and cause a fire or explosion.

WARNING

Medical equipment:

The functioning of cardiac pacemakers or hearing aids may be impaired when the phone is in use. Check with a doctor or manufacturer whether any such devices you or your passengers are using are sufficiently protected against high-frequency energy.

Note: The Range Rover integrated phone system is designed to function with a variety of Land Rover approved bluetooth portable phones. As these phones have a wide range of audio and echo performance characteristics, it may take a few seconds for the vehicle system to adapt and deliver optimal audio performance. In some cases, it may be necessary to reduce the in-vehicle volume slightly to fully optimise audio performance and echo elimination.

For a full list of approved phones, visit the Land Rover website.

GSM NETWORKS

The GSM (Global System for Mobile communication) standard allows you to use your phone in many countries and has a uniform emergency call number (112) irrespective of the country in which you are driving.

It is possible that telephone reception may be poor or unavailable in remote regions. This will usually be due to the inadequate power of the transmitter and, therefore, to incomplete coverage. Depending on your location, you may also be using the transmitters of a network operator with which your service provider has an agreement for handling your calls.

Bluetooth Operation

BLUETOOTH OPERATION

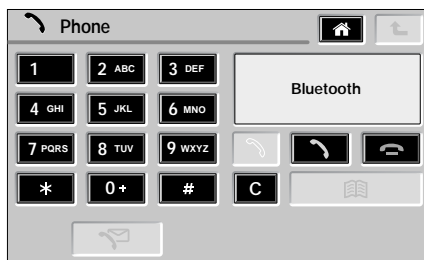
Bluetooth access code

The four digit access code required for Bluetooth pairing operation is 2121.

Pairing your phone to the vehicle

If your mobile phone supports this wireless feature, it will need to be paired to the vehicle. The pairing process will also be described in your mobile phone instructions.

1. With the vehicle ignition on, select the Bluetooth feature on your mobile phone.
2. Start the Search function on your mobile phone.
Note: This search process may vary from one handset/manufacturer to another (consult your mobile phone instructions for further details).
Note: Typically, when searching for other wireless devices the search range is 10 metres or less.
3. The text LAND ROVER will appear on your mobile phone device list. This should be selected.
Note: LAND ROVER can be personalised by the user (e.g. The vehicle registration number).
4. Your mobile phone display will now prompt you for the Bluetooth access code. Press the numeric keys 2121 on your phone.
5. When the code is accepted, the system will allow you to use the Bluetooth mode. The touchscreen Phone main display will confirm this, as shown.



LAN1097 ENG

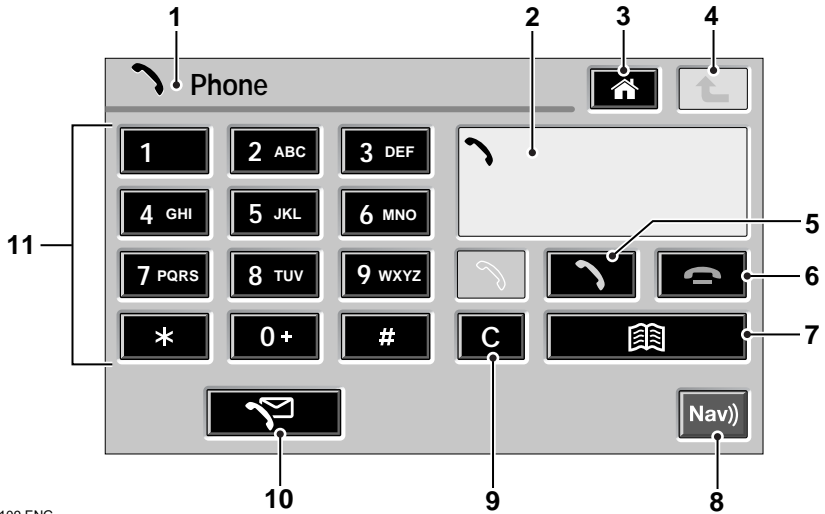
Note: A maximum of 8 mobile phones can be paired to the vehicle.

Note: If more than one paired Bluetooth phone is in range, then the system will automatically select the last phone used in Bluetooth mode (if present).

Note: If using Land Rover VentureCam, priority is given over Bluetooth operation.

Phone Main Display

PHONE MAIN DISPLAY

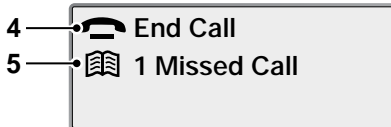
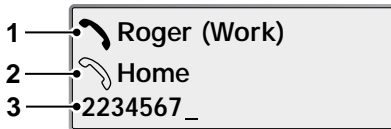
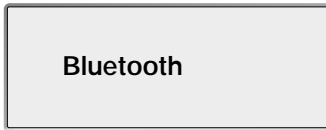


LAN1109 ENG

1. Phone function icon
2. Phone information display
3. Home softkey
4. Go back softkey
5. Send softkey
6. End softkey
7. Phone book softkey
8. Repeat navigation guidance softkey (With route set and guidance active)
9. Cancel softkey
10. Phone call stack softkey
11. Numeric keypad softkeys

Phone Information Display

PHONE INFORMATION DISPLAY



LAN1206 ENG

1. Active call icon
2. Call on hold icon
3. Scratchpad line (Max. 22 characters)
4. Call state icon
5. Missed call icon

Basic Functions

SELECTING PHONE MODE

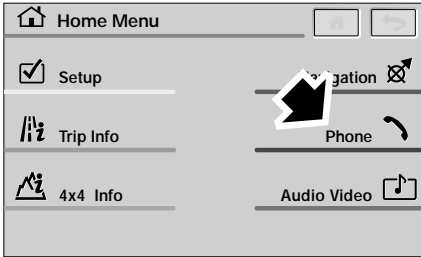
Once your phone is connected, you can select the phone system in two ways.

Either press the **Phone** hardkey as shown.



LAN1076 ENG

Or from the Home Menu display, press the **Phone** softkey as shown below.



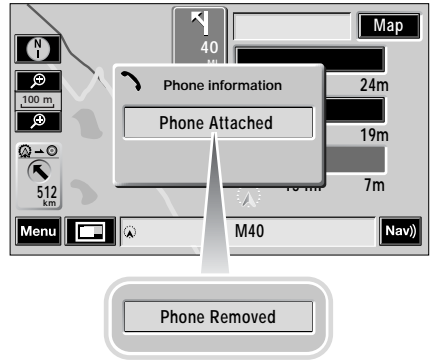
LAN1077 ENG

If your phone is not connected before either of these selection methods are used, the following display is shown.



TEL0051 ENG

Phone information Pop-up



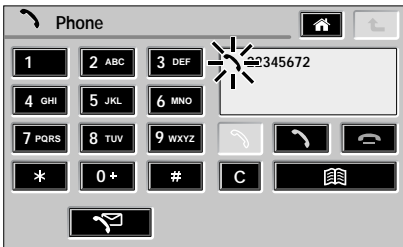
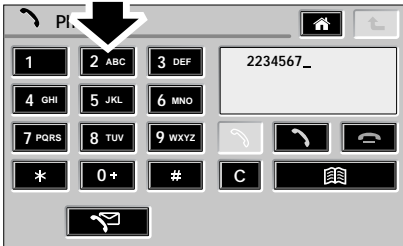
LAN1185 ENG

If the phone is connected or disconnected while in another Infotainment mode (e.g. Navigation), one of the following pop-ups will appear.

Making Calls

DIALLING

The process below should be used for making calls.

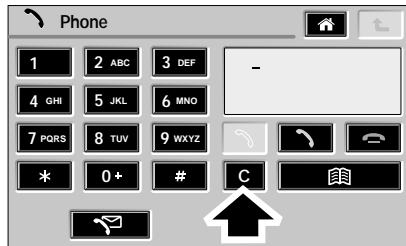
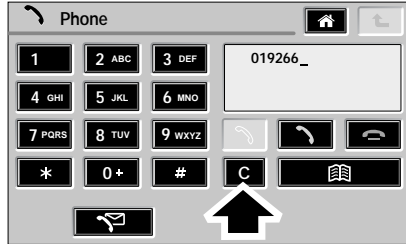


LAN1080 ENG

1. From the Phone main display, press the required numeric keypad softkeys.
2. Press the **Send** softkey.
3. When the call is active, the phone icon flashes in the Phone information display. Phone ringing will be heard.

Correcting/clearing number entries

Use the process below to correct or clear incorrect number entries.



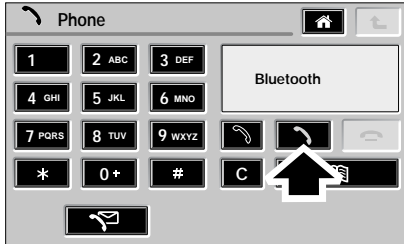
LAN1081 ENG

1. Press the **C** softkey to delete the last digit entry.
2. Continue to hold the **C** softkey to delete the entire entry.

Making Calls

Last number redial

Note: This function will only be available if your phone is capable of sending the last number redial to the vehicle.



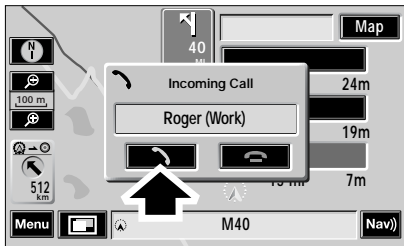
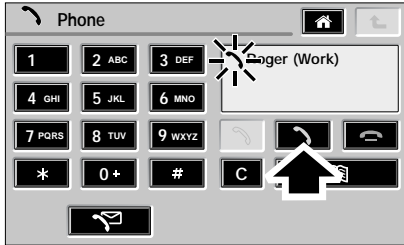
LAN1082 ENG

1. Press the **Send** softkey.
2. The last dialed number is displayed and redialled.

Receiving Calls

ANSWERING/REJECTING CALLS

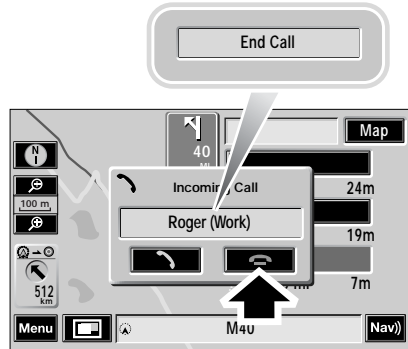
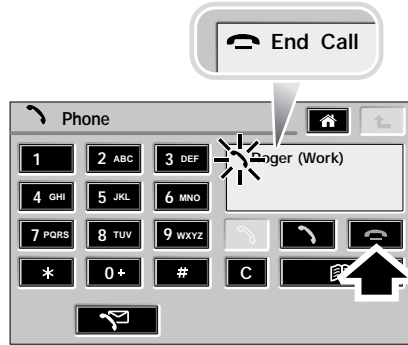
Answer incoming call



LAN1083 ENG

1. If the Phone main display is shown when there is an incoming call, press the **Send** softkey to answer the call (phone book contact name will be shown if stored, otherwise caller's phone number if available).
2. If another Infotainment mode is active and displayed (e.g. Navigation) when there is an incoming call, an information Pop-up will appear.
3. Press the Pop-up **Send** softkey to answer the incoming call.

Reject incoming call

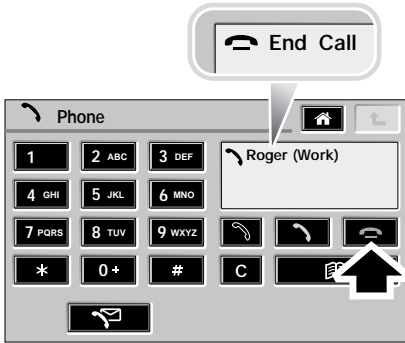


LAN1084 ENG

1. If the Phone main display is shown when there is an incoming call, press the **End** softkey to reject the call.
2. If another Infotainment mode is active and displayed (e.g. Navigation) when there is an incoming call, an information Pop-up will appear.
3. Press the Pop-up **End** softkey to reject the incoming call.

Receiving Calls

End call



LAN1085 ENG

If the Phone main display is showing when you wish to end your call, press the **End** softkey to terminate.



LAN1076 ENG

If another Infotainment mode is active and displayed (e.g. Navigation) when you wish to end your call, press the **Phone** hardkey to access the Phone main display (then follow the first step as above).

SCRATCHPAD

This function enables you to note down a number while in an active call.

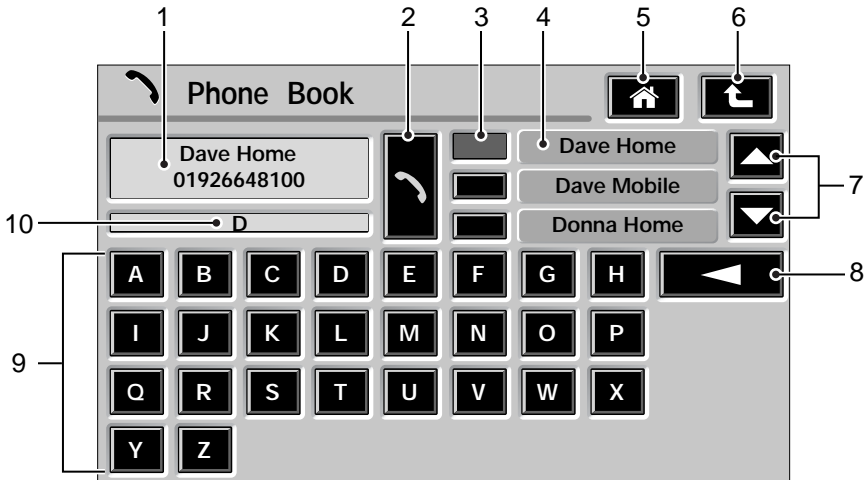


LAN1086 ENG

1. From the Phone main display, press the required numeric keypad softkeys.
2. When the active call has been terminated, the noted phone number moves to the top of the Phone information display.
3. This number can now be dialed by pressing the Send softkey or deleted by pressing and holding the **C** softkey.

Phone Book

PHONE BOOK DISPLAY



TEL0025 ENG

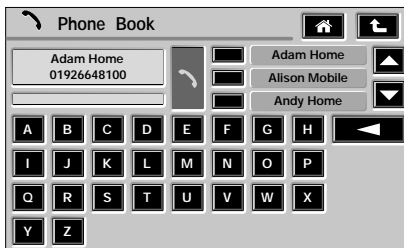
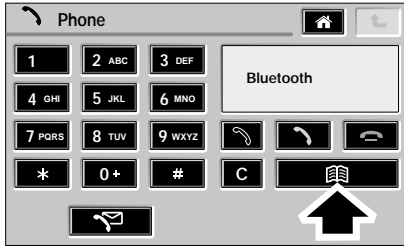
1. Phone book name/number display
2. Send softkey
3. Phone book entry softkey
4. Phone book entry list display
5. Home softkey
6. Go back softkey
7. Scroll softkeys (3 or more entries)
8. Delete softkey (hold to delete entire entry)
9. Alpha character input softkeys
10. Search text input display

Phone Book

PHONE BOOK

When your phone is paired to the vehicle, your phone/address book details are accessible via the touchscreen.

Selecting the phone book

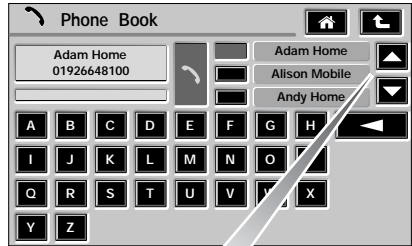


LAN1087 ENG

1. From the Phone main display, press the **Phone book** softkey.
2. The Phone Book display is shown.

Phone book scroll

There are two methods of selecting a contact name from the Phone book. This method should be used when the contact name is not known.



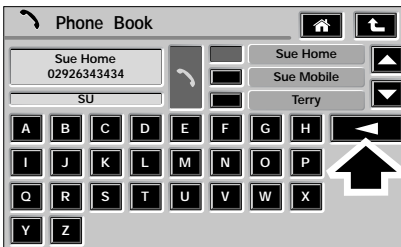
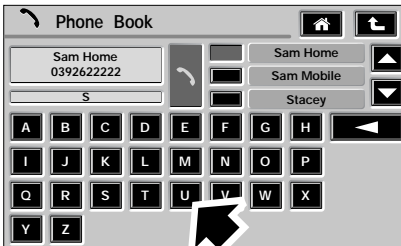
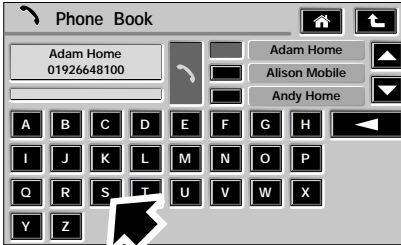
TEL0027 ENG

1. To navigate through your contact list, press either of the **Scroll** softkeys as shown.
2. Alternatively, use the **Search forwards/backwards** controls on the Steering wheel.

Phone Book

Phone book search letter

This method should be used when you wish to reduce the search to letter or name specific contacts (the more letters input, reduces the name search).

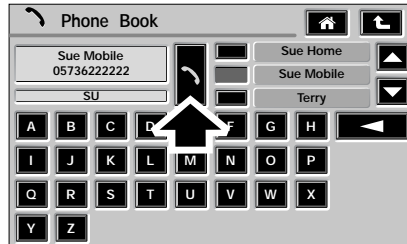
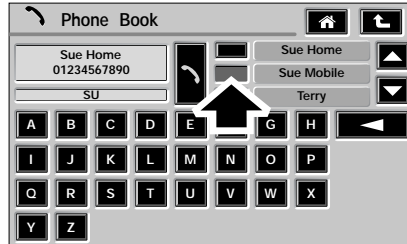


TEL0028 ENG

1. Press the **Alpha character input** softkey for the first search letter (shown in the Search text input display).
2. Further letters can be typed if desired.
3. If an error is made, press the **Delete** softkey to delete the last character. Hold to delete entire entry.

Dialling from the phone book

Where a contact is available via your Phone book, this method of dialling may be used as an alternative to dialling via the numeric keypad.



LAN1088 ENG

1. Press the **Phone book entry** softkey corresponding to the required contact name.
2. Press the **Send** softkey.
3. The display reverts to the Phone main display. The name/number dialled is shown in the Phone information display.

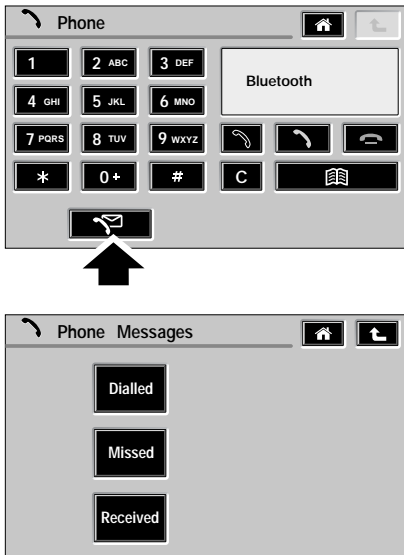
Call Register

CALL REGISTER

Note:

This function will only be available if your phone is capable of sending the car register list to the vehicle.

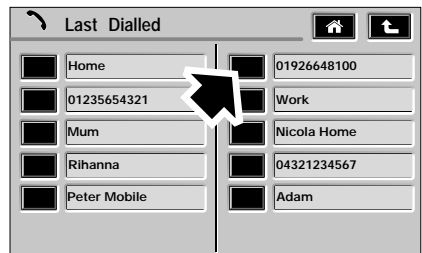
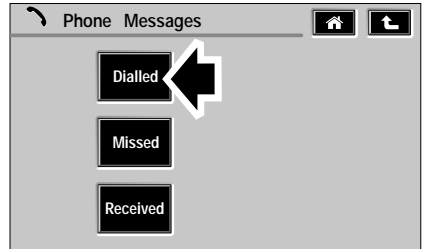
Call register menu



LAN1092 ENG

1. From the Phone main display, press the **Phone call stack** softkey.
2. The Phone Messages menu is displayed.

Last dialled numbers menu



LAN1093 ENG

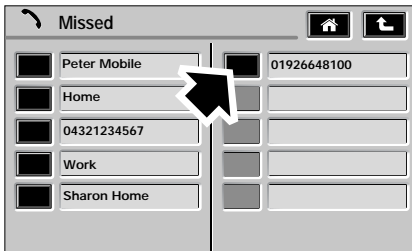
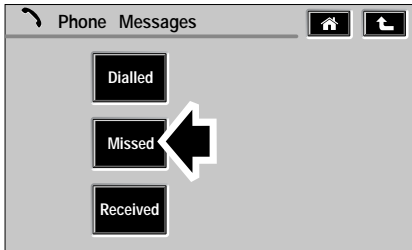
1. From the Phone Messages menu, press the **Dialled** softkey.
2. The Last Dialed menu displays details of the last ten calls dialled.
3. If desired, calls can be made to any contacts shown by pressing the softkey corresponding to the required name/number.

Call Register

4. If a call is made, the display reverts to the Phone main display. The name/number dialed is confirmed in the Phone information display.

Missed calls menu

Note: This function will only be available if your phone is capable of sending the missed call list to the vehicle.



LAN1094 ENG

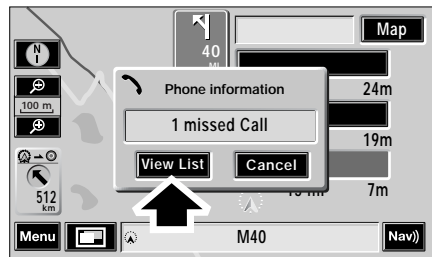
1. From the Phone messages menu, press the **Missed** softkey.
2. The Missed menu is displayed.

3. If desired, calls can be made to any contacts shown by pressing the softkey adjacent to the required name/number.
4. If a call is made, the display reverts to the Phone main display. The name/number dialed is confirmed in the Phone information display.

Missed calls

There are two other methods that you can be informed of missed calls. The first method is as follows:

1. When informed via the Phone main menu that you have a missed call, press the **Phone call stack** softkey.



LAN1095 ENG

The second method is as follows:

1. If another Infotainment mode is active and displayed (e.g. Navigation) and there is a missed call, an information pop-up will appear.

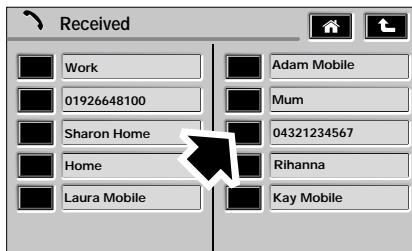
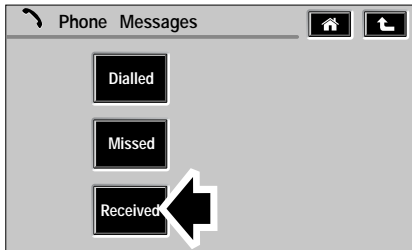
Call Register

2. Press the **View List** softkey to display the missed call(s).

Received calls menu

Note: This function will only be available if your phone is capable of sending the received call list to the vehicle.

3. If desired, calls can be made to any contacts shown by pressing the softkey adjacent to the required name/number.
4. If a call is made, the display reverts to the Phone main display. The name/number dialed is confirmed in the Phone information display.



LAN1096 ENG

1. From the Phone Messages menu, press the **Received** softkey.
2. The Received menu is displayed.

Telephone Voice Recognition

TELEPHONE VOICE RECOGNITION

IMPORTANT

Voice control enables you to activate important functions of your telephone system, without the need to operate the controls manually. This enables you to concentrate fully on driving the vehicle, you do not need to divert your eyes from the road ahead in order to check read-outs, and the voice control system feeds back information to you.

A number of voice commands are available and, with a little experience, you will find them easy and convenient to use. Whenever you issue one of the defined commands with the system active, the voice control system converts your command into a control signal for the telephone system. Your inputs take the form of dialogues or commands. You are guided through these dialogues by announcements or questions. Please familiarise yourself with the functions of your telephone system, before using voice control.

WARNING

Do not use the voice control for placing emergency calls. Your voice and tone could be affected by stressful situations as a result of which, the process of establishing the telephone connection could be unnecessarily delayed.

Making yourself clearly understood

The voice control system includes a special hands-free microphone mounted in the roof lining of your vehicle, at the front. This microphone filters out ambient noise. There are nevertheless a few points to observe in making sure you are properly understood:

- Speak continuously and at normal volume, avoiding unnatural emphasis and pauses between words.
- Do not speak while the voice control system itself is giving an output. The voice system displays **LISTENING** and gives a beep when it is waiting for a speech input.
- It is possible that noise interference from the air conditioning system or noise from outside the vehicle could affect commands. To avoid this, ensure the blower speed is not on a high setting and keep doors, windows and the sunroof closed when issuing voice commands.
- If a command is not understood or your speech was not heard, the voice system responds with "Sorry", "Command not recognised" or "No speech detected". Please try again if this happens.
- Avoid causing background noise in the vehicle while you are speaking and ask your passengers not to talk while you are issuing voice commands.
- The hands-free microphone is positioned to pick up the driver's voice. Other occupants of the vehicle could be understood with less accuracy and are, therefore, advised to use the handset when making a telephone call.

***Note:** The voice recognition directory is separate from your phone handset SIM card/ address book/phone book.*

Telephone Voice Recognition

Defined voice commands

The voice control system understands predefined commands which need to be given **exactly** word for word.

You can prompt the system to speak a selection of these commands by activating the system and giving the command **Phone help** or **Telephone help**.

*Note: For each command below, the term **Phone** or **Telephone** are equally acceptable.*

These commands are as follows:

Telephone commands

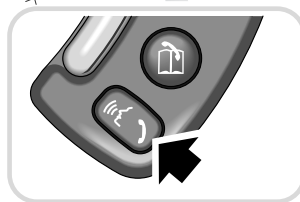
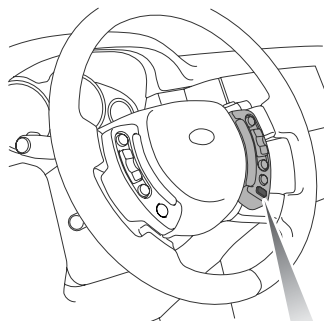
- Phone dial number/Dial phone number
- Phone redial/Redial
- Phone dial name/Dial name
- Phone store name
- Phone play directory/Read phone book
- Phone delete directory/Clear phone book
- Phone help

Telephone sub-commands

These commands are used in response to a prompt or question within a dialogue.

- Correction
- Delete
- Cancel
- Store
- Dial
- Yes
- No
- Replay
- Numbers 0-9
- Double
- Treble/Triple

Activating the system



LAN1130

To switch on voice control, press the voice control key (arrowed) in the multi-functional steering wheel:

- Hold the key pressed in (until the listening beep is heard) to activate voice control (your Audio will mute at this point, if switched on). A listening beep and the display **LISTENING** in the main message centre indicate that the system is now waiting for a spoken input.

Once the system is listening, give the desired voice command.

Before giving a new voice command - except during a dialogue - always press the steering wheel voice control key.

Telephone Voice Recognition

Interrupting voice control

A command can be interrupted by speaking the word **Cancel** or by pressing the steering wheel voice control key until the system responds by displaying **COMMAND CANCEL** in the Main message centre.

It is only possible to interrupt dialogues, in which it is possible to speak a text of your choice (e.g. name), by pressing the steering wheel key.

If you receive a telephone call (or Navigation route guidance instruction/T.A. announcement) while conducting a dialogue by voice control, the telephone mode automatically cuts in.

GENERAL COMMANDS

Note: The voice control commands you should give are shown in bold and the responses by the voice recognition system are shown inside chevrons <...>.

Activating the user help function

The command

Phone help

calls up a list of telephone commands in spoken form.

Command not recognised

If a command is not recognised by the speech recognition system, it responds with **<Sorry>**.

Please say your command again.

Activating the user help function

You say	Voice output	Display output
Phone help	<i>(Reads out the telephone commands)</i>	<i>(Followed by telephone commands)</i>

Telephone Voice Recognition

DIALLING A PHONE NUMBER

Starting a dialogue

Hold the voice control key in the multi-functional steering wheel pressed in until the beep is heard. Any audio sources in the vehicle are muted.

The commands

Dial telephone number

or

Phone dial number

start the dialogue for entering a telephone number. You are guided through this process by a predefined dialogue.

Saying numbers

The system understands single digits from zero to nine. You can choose to say either

Zero

or

Oh.

Numbers such as ten, eleven, twelve etc. are not recognised.

To speed up input it is a good idea to group together between three and five digits into a continuous string. However, you can also say each digit individually, or all digits continuously.

***Note:** Telephone numbers of up to 20 digits are acknowledged. If a longer number is given, the following error message will be issued:*

<Number too long>.

Establishing a connection

The command

Dial

terminates input of the digits and a connection is established with the telephone number displayed.

***Note:** To make a foreign phone call say **Plus** followed by the country code.*

Dialling a phone number

You say	Voice output	Display output
Phone dial number	<Phone dial number, Number please>	DIAL NUMBER NUMBER PLEASE
Zero, one, six, one	<Zero, one, six, one, continue?>	0161
Four, nine, six	<Four, nine, six, continue?>	0161496
Zero, nine, nine, eight	<Zero, nine, nine, eight, continue?>	01614960998
Dial	<Dialling>	DIALLING

Telephone Voice Recognition

Correcting/Deleting and Cancelling inputs

When you are entering digits into the system, it will repeat back the numbers given, then asks you to continue. You may continue entering digits to complete your number or if you have made a mistake or if the voice control has misunderstood, you may say:

Correction, **Delete** or **Cancel**.

Correcting inputs

Use the command

Correction

to delete the last block of digits.

After the command **Correction**, the system repeats the digits that were entered correctly up to that point.

Deleting inputs

The command

Delete

deletes all digits entered.

It is then necessary to enter the digits again from the very beginning

Cancelling voice session

The command

Cancel

terminates voice session.

Correcting/Deleting inputs

You say	Voice output	Display output
Phone dial number	<Phone dial number, Number please>	DIAL NUMBER NUMBER PLEASE
Zero, one, six, one	<Zero, one, six, one, continue?>	0161
Four, nine, six	<Four, nine, six, continue?>	0161496
Correction	<Zero, one, six, one, continue?>	0161
Four, nine, five	<Four, nine, five, continue?>	0161495
Delete	<Number please>	NUMBER PLEASE

Redialling

The command

Phone redial or **Redial**

dials the telephone number last used.

Redialling the last number used

You say	Voice output	Display output
Phone redial	<Phone redial, Confirm Yes or No>	PHONE REDIAL SAY YES OR NO
Yes	<Dialling>	DIALLING

Telephone Voice Recognition

STORING A TELEPHONE NAME/NUMBER

Telephone numbers which you dial frequently can be stored in the Voice Recognition phone directory in conjunction with the contact name.

There are two methods of achieving this. One is by initially entering the contact phone number via the touchscreen (detailed below). The

second is initiated via a voice command. See

Storing via voice command, 386.

Storing via touchscreen

From the touchscreen, press the **Settings** menu soft or hardkey, followed by **voice settings**, then select **voice add name**. Enter telephone number using the touchscreen keypad. Press **Add** to initiate the voice recognition Phone Store Name function. Follow the process in the table below.

***Note:** For further information on voice settings, please refer to the Audio section of the Owner's Handbook.*

Storing via touchscreen

Action	Voice output	Display output
(After pressing Add softkey in Voice add name screen)	<Name please>	NAME PLEASE
(Follow voice prompts)		

Telephone Voice Recognition

Storing via voice command

The command

Phone store name

calls up the dialogue for storing a name. The name is entered first, then the number. The same rules for saying numbers apply as for the **Phone dial number** command.

If possible, keep names acoustically distinct from one another, for example, "**Andrew Royd**" and "**David Royle**" instead of "**Mr Royd**" and "**Mr Royle**". This will improve recognition when you make a call.

Depending on the spoken length of the names and numbers you have entered, it is possible to store approximately 50 entries.

Storing via voice command

You say	Voice output	Display output
Phone store name	<Phone store name, Name please>	PHONE STORE NAME NAME PLEASE
Andrew Royd	<Number please>	NUMBER PLEASE
Zero, one, six, one	<Zero, one, six, one, continue?>	0161
Four, nine, six	<Four, nine, six, continue?>	0161496
Zero, nine, nine, eight	<Zero, nine, nine, eight, continue?>	01614960998
Store	<Stored>	STORED

Telephone Voice Recognition

USING THE VOICE RECOGNITION PHONE DIRECTORY

Dialling a telephone number in phone directory

The command

Phone dial name

activates the phone number in the directory
corresponding to the name tag.

When prompted by the voice control system,
speak the name under which you have stored
the telephone number you want.

The voice control system will understand best
the person who made the entries.

Dialling a telephone number in phone directory

You say	Voice output	Display output
Phone dial name	<Phone Dial Name>	DIAL NAME NAME PLEASE
Andrew Royd	<Andrew Royd, Confirm Yes or No>	SAY YES OR NO
Yes	<Dialling>	DIALLING

Telephone Voice Recognition

Dialling/Editing and Deleting from the phone directory

The command

Phone play directory

or

Read phone book

enables you to have all entries in your voice recognition phone directory read out in order.

You may say one of the following after each name has been read out. Give the command

Dial, Replay, Delete, Edit, Cancel or remain silent to advance to the next name.

Dialling from the phone book

You say	Voice output	Display output
Phone play directory You can say Dial, Replay, Delete, Edit or Cancel after each name. <i>(Reads out the entries)</i>	<Phone play directory>	PHONE DIRECTORY <i>(Display numbers)</i>
Dial	<nametag> Confirm Yes or No	DIAL NAME SAY YES OR NO
Yes	<Dialling>	DIALLING

Dialling

This function enables you to dial a telephone number stored in the phone directory. This is useful if you have forgotten a contact's voice/name tag or if the tag is not recognised.

Replaying

This function repeats the name again from the phone directory.

Deleting

This function enables deletion of a telephone number and name stored in the phone directory.

Editing

This function enables voice editing of a telephone number of an existing name stored in the phone directory.

Cancelling

Terminates the voice session.

Telephone Voice Recognition

Deleting/Clearing the entire phone directory

The command

Phone delete directory

or

Clear phone book

deletes all entries in the Voice Recognition phone directory.

The names and telephone numbers entered in your Voice Recognition phone directory are independent of the telephone or SIM card memory of your phone. In other words, it is not possible to recall or delete the numbers stored in the telephone itself or on the SIM card by voice input, nor is it possible to store numbers there by voice input.

Deleting/Clearing the entire phone directory

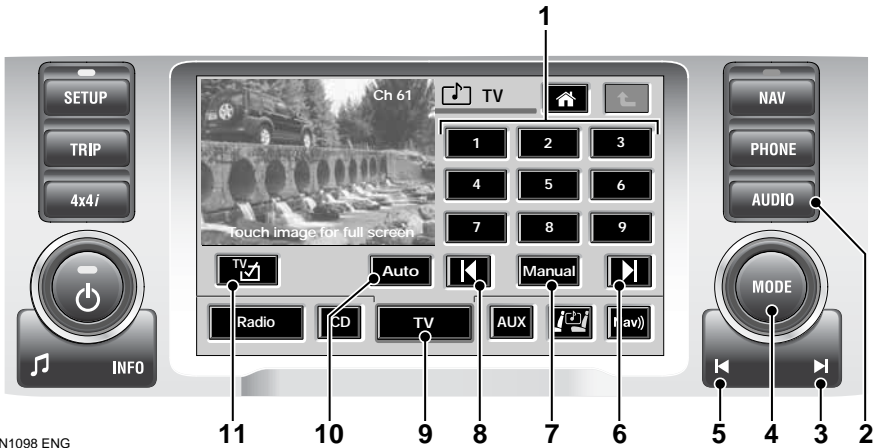
You say	Voice output	Display output
Phone delete directory	<Phone delete directory, Confirm Yes or No>	DELETE DIRECTORY SAY YES OR NO
Yes	<Are you sure you want to delete the whole directory?>	SAY YES OR NO
Yes	<Directory deleted>	DELETED

Television

ANALOGUE/DIGITAL TELEVISION

Note: To cope with changes in technology, the TV tuner is able to receive both analogue and digital TV signals. In certain areas both analogue and digital signal strengths will vary. When in an area of weak reception, you may experience a break-up in picture and sound quality or a blank screen and audio muting. It may be of benefit to retune the viewed station and possibly switch between analogue and digital TV stations.

TELEVISION CONTROLS



LAN1098 ENG

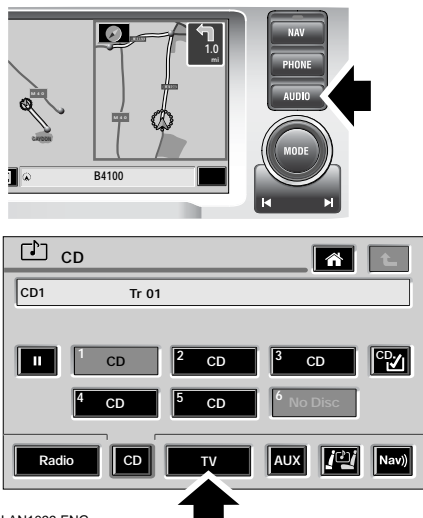
1. Numeric softkeys
2. Audio Video hardkey
3. Forwards/Next hardkey
4. Right rotary control (MODE)
5. Backwards/Previous hardkey
6. Forwards/Next softkey
7. Manual tuning softkey
8. Backwards/Previous softkey
9. TV or TV-DVD softkey
10. Automatic tuning softkey
11. TV country/format softkey

Note: For occupant safety, when the vehicle is in motion or the handbrake is released the TV picture is not displayed (but the audio signal can be heard).

Television

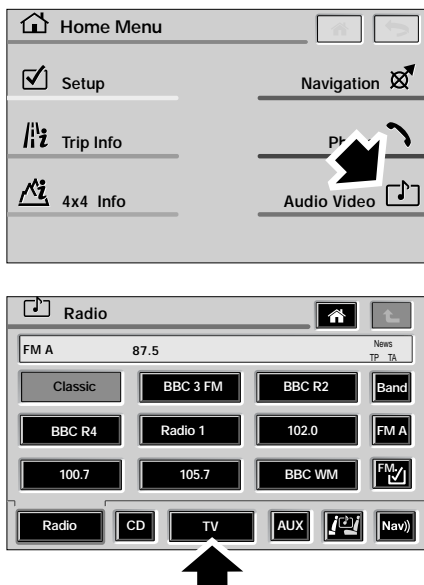
Selecting TV

There are three methods of selecting TV mode.
The first is via the **Audio Video** hardkey (arrowed in upper illustration).



1. Press the **Audio Video** hardkey.
2. From the next screen, select TV by pressing the **TV** or **TV-DVD** softkey.

The second method is via the **Home Menu**.

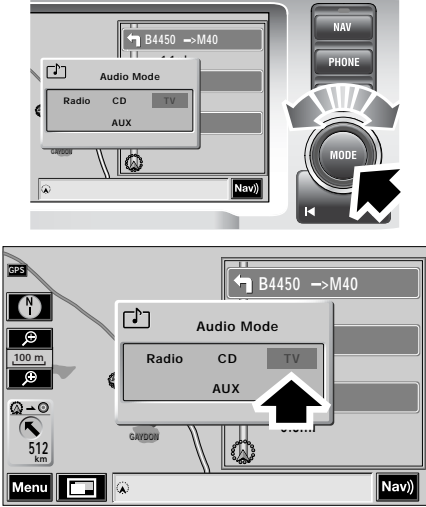


1. Press the **Audio Video** softkey.
2. From the next screen, select TV by pressing the **TV** or **TV-DVD** softkey.

Television

The third method can be used while in another mode e.g. Navigation.

Whichever method is used, the TV menu will be displayed.



1. Press the right rotary control (MODE).
2. Press the TV softkey or, turn the right rotary control to select TV and then press it to confirm.



Touch the small TV image for full screen display.

Note: If no small TV image is visible, this may be due to the vehicle having moved since the stations were stored or that no stations are stored or that the vehicle is in a poor reception area. Whichever the case, tuning/retuning the stations will be necessary.

See **Automatic station search and store, 395.**

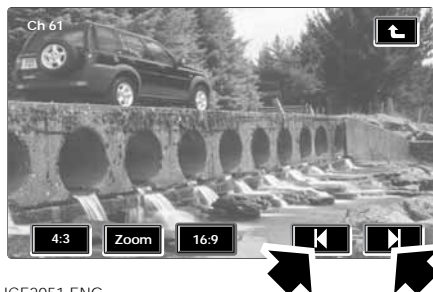


The softkeys will disappear from the display. They can be made to reappear by touching the screen again.

Television

Channel selection

Once channels are stored, there are two methods of channel selection.



Touch the full size TV image to access the softkeys and press the appropriate **Forwards/Next** or **Backwards/Previous** softkey to select the channel.



Alternatively, press the appropriate **Forwards/Next** or **Backwards/Previous** hardkey to select the channel.

Adjusting picture format



To adjust the viewable picture format, press the appropriate softkey, **4:3**, **16:9** or **Zoom** for a proportional enlargement.

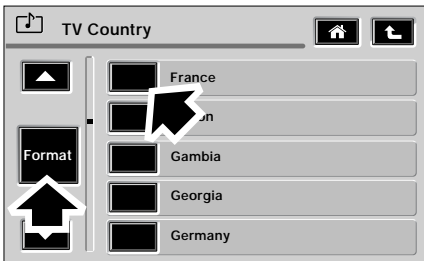
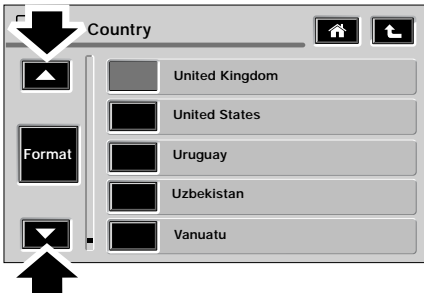
Television

Selecting TV Country/Format



LAN1186 ENG

Press the **TV Country/Format** softkey to enter the format menu.

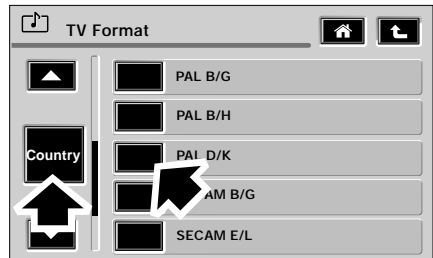
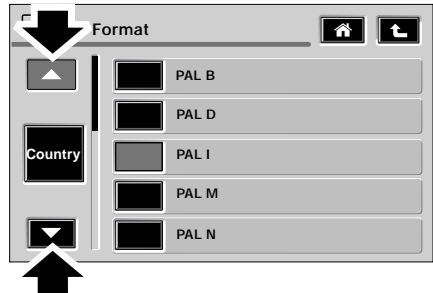


ICE2039 ENG

1. To select the country in which you are driving, scroll up or down using either arrow softkey and press the relevant country softkey.
2. To switch to the TV format menu, press the **Format** softkey.

Not all countries use the same TV format. However, you can adapt your unit to accept the format of the country in which you are driving (PAL, SECAM, NTSC).

Note: During normal operation, the user should not need to adjust the format. Selection of the correct country of operation is sufficient.



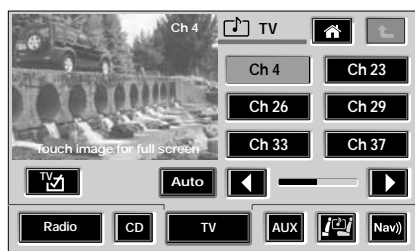
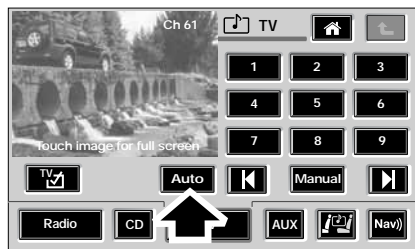
ICE2038 ENG

1. Scroll up or down using either arrow softkey and press the relevant TV format softkey for your reception area.
2. To switch to the TV country menu, press the **Country** softkey.

Television

Automatic station search and store

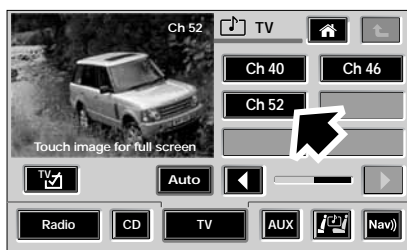
Up to 99 analogue or digital TV stations can be registered automatically in the Auto list.



LAN1187 ENG

1. Press the **Auto** softkey to initiate the automatic station search and store mode.
2. Received stations are stored in ascending numeric order and assigned to direct channel access softkeys (e.g. Ch4).

Selecting an automatically stored station



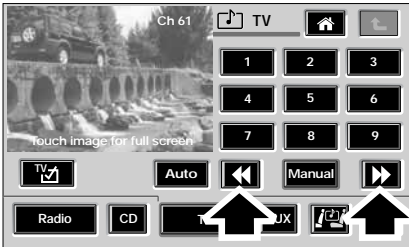
LAN1188 ENG

1. If there are more than six stored stations, the continuation of the channel list can be accessed by pressing the right arrow softkey (left arrow softkey for the previous list).
2. Once the desired channel number is visible, press the appropriate direct channel access softkey.
3. To access the manual station menu, press the **Auto** softkey.

Television

Manual station search and store

Up to 9 TV stations can be stored manually as presets.



LAN1189 ENG

1. Press the **Manual** softkey to initiate the manual station search and store mode.
2. To manually search for a station, press the right or left arrow softkey.
3. To assign and store the received station, press and hold one of the numeric softkeys, until a confirmation tone is heard. The station is now stored.

Selecting a manually stored station



LAN1190 ENG

1. To subsequently select a stored station, press the required numeric softkey.

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