



# **RANGE ROVER SPORT**

**OWNER'S HANDBOOK**

**Publication Part No. LRL 10 02 54 701**

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# Quick Start

## Quick Start

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## Filling Station Information

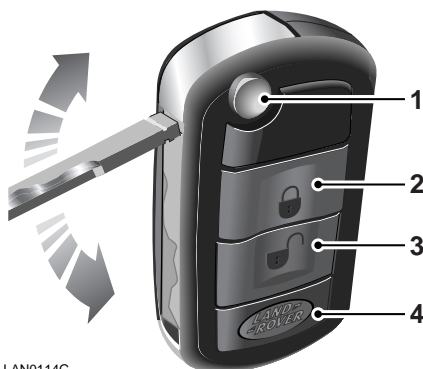
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# Quick Start

## THE REMOTE CONTROL



LAN0114G

- 1. Key release button.**  
Press to release the folded key.
- 2. Lock button.**  
Superlocks all doors and activates perimetric alarm. If interior space protection and tilt sensor options are fitted, they can be over-riden by pressing the button twice within 3 seconds. See **Superlocking, 44, Perimetric alarm, 44, Interior space protection, 46, and Tilt sensor, 46.**
- 3. Unlock button.**  
Press once to disarm all alarm features and unlock driver's door only. Press twice to open all doors.  
**Note:** *The above applies unless configured for multi-point entry. See **Single-point entry, 42.***
- 4. Land Rover button.**  
The remote control can be programmed to initiate one of 5 features; Panic alarm, Headlamp courtesy delay, Tailgate release, Tailglass release or Air suspension control. See **LAND ROVER BUTTON, 40.**

### Single point entry

This is a security feature that unlocks only the driver's door. It can be disabled on individual remote controls by simultaneously pressing and holding buttons **2** and **3** for three seconds. The vehicle will lock and then unlock in the currently selected mode to confirm the change.

You can now unlock all doors with a single press. Repeating the procedure will re-enable Single point entry.

### Automatic relock

If the vehicle is unlocked with the remote control, it will automatically relock and arm the alarm if a door or the tailgate is not opened within one minute.

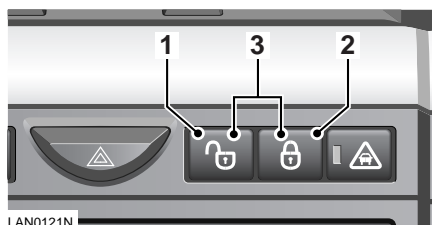
### Partial arming

If an aperture (door, bonnet or tailgate) is not fully closed when the remote control lock button is pressed, the horn will sound briefly to signal that an aperture is still open. The alarm will remain disarmed and all of the closed apertures will lock.

As soon as the open aperture is closed, the system will automatically arm, signalled by three flashes of the hazard warning lamps, with interior space protection activating 30 seconds later.

# Quick Start

## CENTRAL LOCKING



### Master lock and unlock switches

1. Press to unlock all doors and tailgate.
2. Press to lock all doors and tailgate.
3. Press both buttons simultaneously for three seconds to release the tailgate.

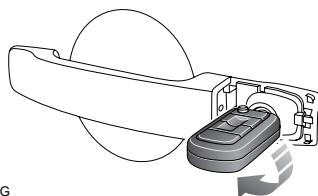
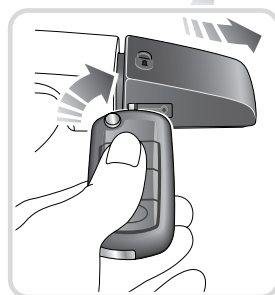
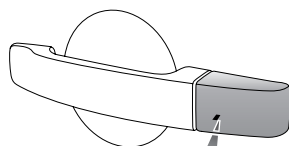
### Speed related locking

If enabled, the doors and tailgate will automatically lock when the vehicle's speed exceeds 8 km/h (5 mph).

This feature can be disabled or enabled in the **SETTINGS** menu of the trip computer.

See **SELECTING SETTINGS OPTION, 88**.

## EMERGENCY UNLOCKING



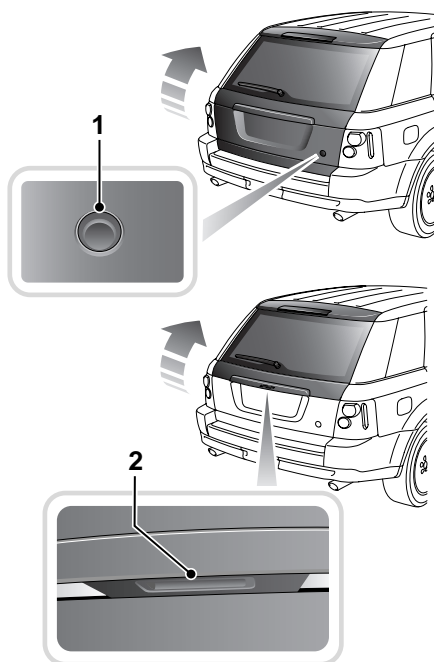
LAN0116G

If the remote control should fail, there is an emergency access feature on the left-hand front door lock. With the key inserted into the slot beneath the handle cap, the cap can be pulled outwards slightly and then moved backwards to unhook it. The key can now be used to unlock the vehicle.

See **Emergency locking/unlocking, 49**.

# Quick Start

## TAILGATE



LAN0394G

### Opening the tailgate

With all the doors unlocked, press the release button **1** on the tailgate to release.

The tailgate incorporates a 'Power closure' feature, which removes the need to 'slam' the tailgate when closing.

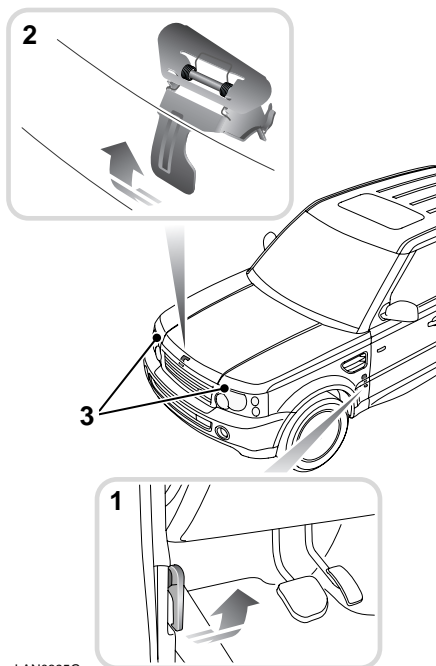
### Opening the tailglass

With all the doors unlocked, press the touch pad **2** on the exterior handle and pull to open.

### Operating note

If the vehicle is locked/unlocked 10 times within a short period, the door and tailgate latches will be disabled for approximately one minute, to protect the battery and lock mechanism.

## BONNET



LAN0395G

### Opening

Pull the bonnet release lever **1** located on the left-hand side of the vehicle.

Lift the bonnet safety catch lever **2**, located on the front edge of the bonnet beneath the centre point of the words LAND ROVER and raise the bonnet.

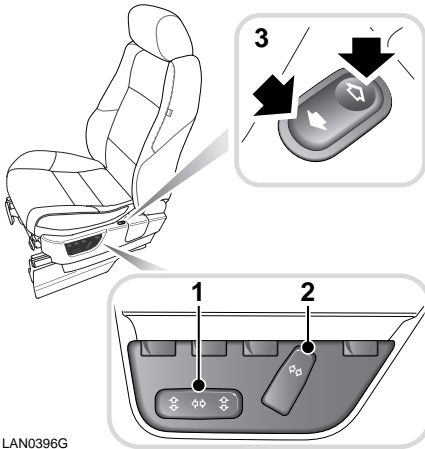
### Closing

Lower the bonnet until it is 300 mm (12 inches) from its closed position. Using the palms of both hands positioned on the front edge of the bonnet on either side of the radiator grille, push down until the catches 'click'.

Check that both catches **3** are engaged by trying to lift the front edge of the bonnet.

# Quick Start

## SEAT ADJUSTMENT - POWER SEATS



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To adjust the seats, the starter switch must be in position **I** or **II**.

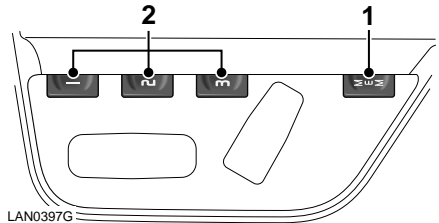
1. Seat recline.
2. Seat fore/aft, cushion height and front tilt control.
3. Lower backrest lumbar support.

Power operated memory driver's seat also has a 10 minute active period (Non-memory power operated seats up to 15 minutes) initiated when:

- The driver's door is opened/closed.
- The starter key is turned to the off position.

See **FRONT SEAT ADJUSTMENT, 54**.

## DRIVING POSITION MEMORY



LAN0397G

Once you have adjusted the driver's seat and exterior mirrors, the vehicle can memorise these settings for future use.

1. Press the memory store button **1** to activate the memory function for five seconds.
2. Press one of the preset buttons **2** within five seconds to memorise the current settings. **MEMORY STORED** will be displayed in the message centre accompanied by an audible chime to confirm the settings have been memorised.

To recall a stored driving position, press the appropriate preset button **2**.

### Operating note

A seat position will only be memorised during the five second active period.

Any existing settings will be over-written when programming a memory position.

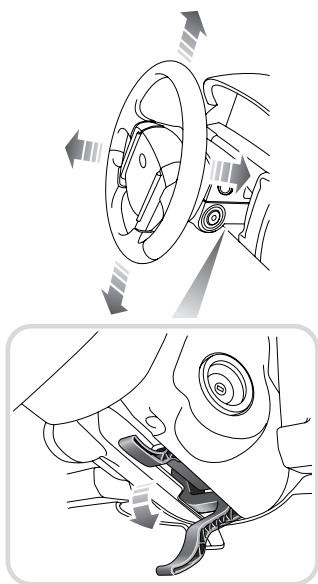
### Lazy entry

When this feature is enabled, the vehicle stores the seating and mirror positions for each remote control. Next time the vehicle is unlocked using a remote control, the position of the seat and mirrors will adjust to the last used position.

This feature can be disabled or enabled in the **Settings** option accessed via the trip computer.

# Quick Start

## STEERING COLUMN ADJUSTMENT



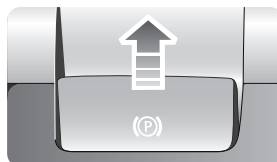
LAN0398G

1. Move the lever located under the steering wheel fully downward.
2. Adjust the height and reach of the steering wheel to the desired position.
3. Move the lever fully up to lock the position of the wheel.

See **STEERING COLUMN ADJUSTMENT, 81.**

## PARKBRAKE (EPB)

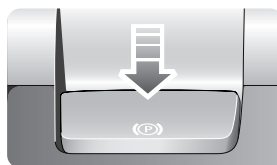
### Applying



LAN0406G

With the vehicle stationary, pull up the parkbrake lever and then release it. The lever will return to a neutral position and the red warning indicator in the instrument pack will illuminate.

### Releasing



LAN0407G

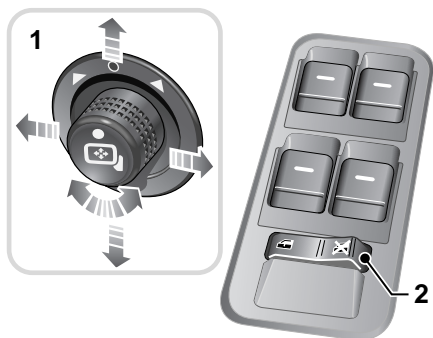
The starter switch must be in position **I** or **II**. Apply the footbrake and press down on the parkbrake lever.

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

For more detailed information on the parkbrake, see **PARKBRAKE (EPB), 177.**

# Quick Start

## WINDOWS/DOOR MIRRORS



LAN0399G

### Windows

- To open a window, press and hold the respective switch.
- To close the window, pull and hold the switch.

Window movement can be stopped at any time by releasing the switch.

The driver's window has a one touch facility that allows it to be opened or closed with a single operation of the switch. Firmly press the switch and release. Movement can be stopped by pressing the switch again.

Press the right-hand side of switch **2** to inhibit the operation of the rear window switches. See **ELECTRIC WINDOWS, 119**.

### Resonance with lowered windows

If a resonance/booming sound occurs when a rear window is open, lowering an adjacent front window about 25 mm (1 inch) will eliminate the condition.

### Door mirror adjustment

To adjust the mirrors, rotate the mirror adjustment knob **1** left or right to select the appropriate mirror. Move the knob in any direction to adjust the position of the mirror glass. See **EXTERIOR MIRRORS, 82**.

### Power fold mirrors

Allows the mirrors to be electrically folded towards the door for better clearance/protection.

With the mirror adjustment knob in the central position, push the knob downwards to fold/unfold the mirrors.

See **Folding the mirror body, 83**.

### Reverse automatic mirror dip

With the feature enabled, when reverse gear is selected the door mirrors will dip.

The dip position of the door mirrors can be personalised. See **Reverse mirror dipping, 84**.

This feature can be disabled or enabled in the **Settings** option accessed via the trip computer. See **SELECTING SETTINGS OPTION, 88**.

# Quick Start

## SEAT BELTS/CHILD RESTRAINTS



A warning indicator in the instrument pack will illuminate to alert you that the driver's and/or front passenger's seat belt is unbuckled. An intermittent chime may also be heard.

### Automatic Locking Reels (ALR)

All passenger seat belts have ALR fitted for use with child seats or securing large items.

- To engage: extend seat belt to maximum length to enable locking mechanism.
- Allow seat belt to retract onto the child seat/large item (a clicking sound will be heard as the belt retracts). Ensure there is no slack by pressing the seat/item firmly into the vehicle seat.
- To disengage: unbuckle belt and allow belt to fully retract.

With ALR enabled, as the seat belt retracts, it will automatically lock, preventing re-extension.

Ensure passengers do not fully extend the restraints and inadvertently engage this feature during normal use.

### Child Seats

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

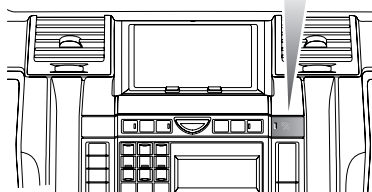
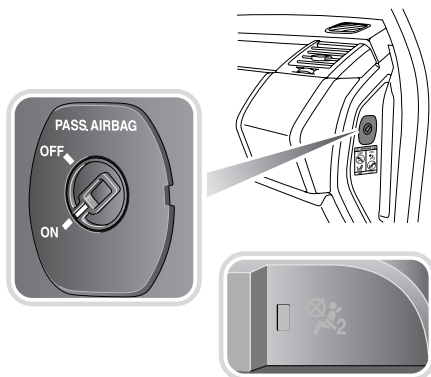
See **Child safety seating and positions, 68**.

### Recommended child seat

Land Rover's recommended Group 1 seat is the Land Rover ISOFIX child restraint with a top tether.

The ISOFIX child seat can only be fitted in the outer, rear seating positions.

## PASSENGER AIRBAG DISABLING



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

To disable 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. See **PASSENGER AIRBAG DISABLING SWITCH, 78**

With the airbag disabled, the status indicator will illuminate whenever the starter key is turned to position **II**.

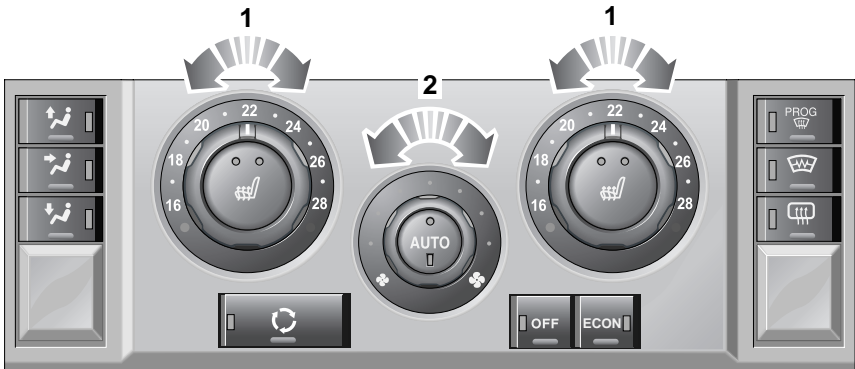
### Operating note

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



# Quick Start

## HEATING AND VENTILATION



LAN0402G

### AUTO (Automatic) MODE



Press **AUTO** to select automatic operation of the system, both LEDs in the switch will illuminate.

The system adjusts heat output, blower speed, air intake and airflow distribution to maintain your the selected temperature(s) and reduce misting without further adjustments.

Use the air distribution and blower controls to adjust the automatic settings. The appropriate LED in the **AUTO** control will extinguish.

#### Recommended mode

Select **AUTO** as the normal operating mode. This will help prevent window misting and odours from the climate control system.

### Air conditioning

Air conditioning provides cooled and dehumidified air for occupant comfort. Dry airflow is effective in preventing misting of windows and is also beneficial at low external temperatures.

Air conditioning is automatically switched on and controlled whenever the system is not operating in 'Economy' mode.

#### External water deposits

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

### Temperature selection

Rotate the controls **1** to adjust the temperature for the respective side of the passenger compartment.

#### Operating note

It is not possible to achieve a temperature differential of more than 4°C (7°F) between left and right.

# Quick Start

## MANUAL MODE

### Blower speed

Rotate the control **2** to adjust the airflow. LEDs will illuminate to indicate which of the eight possible speeds is currently selected.

### Air distribution control

Press to select a distribution setting. An LED will illuminate in the switch.



Windscreen and side window vents



Face level vents



Foot level vents

More than one setting can be selected.

### Air recirculation



Press to activate air recirculation. An LED will illuminate in the switch. Press again to return to fresh air intake.

### OFF



Press to switch the system off. An LED will illuminate in the switch.

Press again to return the system to its previous operating mode. The system will also be reactivated by using the **AUTO**, blower speed, air distribution or defrost controls.

### Economy mode



Press to select 'Economy' mode. An LED will illuminate in the switch.

Air conditioning is switched off to reduce load on the engine and improve fuel consumption.

## Seat heaters



Press the relevant button to operate the required seat heater at high level. Both LEDs in the switch will illuminate.

Press a second time to heat the seat at a lower level. One LED will extinguish.

Press a third time to switch off.

## Defrost mode



Press to remove frost or heavy misting from the windscreen. The system will automatically adjust the blower output for maximum

clearing, in addition the rear window and windscreen heaters will be activated.

Press again to switch off defrost mode. The rear window and windscreen heaters will remain on for a preset interval.

## Heated windscreen/rear window



Press to operate. An LED will illuminate in the switch.



The heaters will automatically switch off after a preset interval.

For more information, see **TEMPERATURE CONTROLS, 123**.

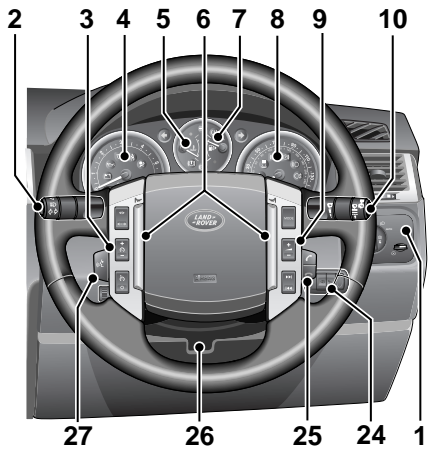
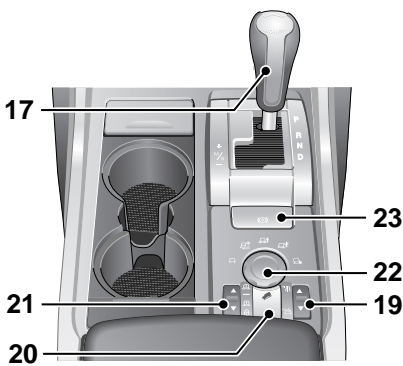
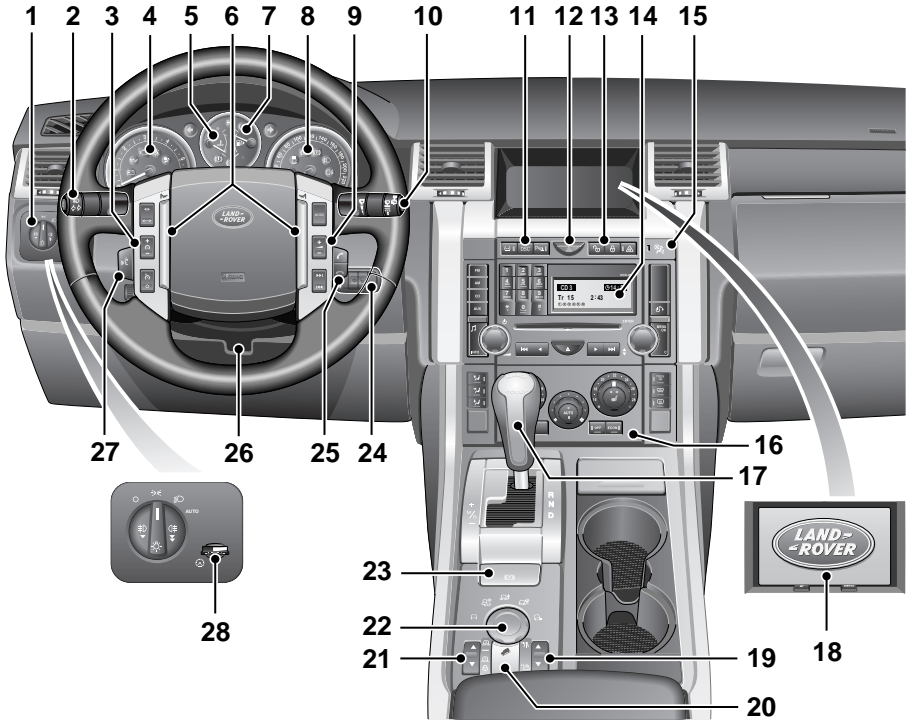
## AUXILIARY FUEL-BURNING HEATER

When the heater automatically switches on, exhaust fumes may be seen coming from under the bonnet. This is normal and no cause for concern.

See **AUXILIARY FUEL-BURNING HEATER, 126**.

# Quick Start

## FACIA CONTROLS



LAN0110G

# Quick Start

## **FACIA CONTROLS KEY**

- 1.** Lamps master switch
- 2.** High beam/Direction indicators/Trip computer
- 3.** Cruise control switches
- 4.** Tachometer
- 5.** Temperature gauge
- 6.** Horn buttons
- 7.** Fuel gauge
- 8.** Speedometer
- 9.** Audio/Telephone remote controls
- 10.** Wiper/washer controls
- 11.** Dynamic Stability Control (DSC) switch
- 12.** Hazard warning lamp switch
- 13.** Door lock/unlock switches
- 14.** Audio display/controls
- 15.** Passenger airbag status indicator
- 16.** Heater/Air conditioning controls
- 17.** Gear selector
- 18.** Display screen
- 19.** Transfer gearbox switch
- 20.** Hill Descent Control (HDC) switch
- 21.** Air suspension switch
- 22.** Terrain Response™ control switch
- 23.** Electric parkbrake (EPB) switch
- 24.** Starter switch
- 25.** Telephone switch
- 26.** Steering column adjustment
- 27.** Voice recognition switch
- 28.** Dimmer control

# Quick Start

## WARNING INDICATORS



Battery charging - RED.



Low oil pressure - RED.



Parkbrake - RED.



Brakes - RED/AMBER.



Anti-lock braking system - AMBER.



Airbag - RED.



Engine - AMBER.



Diesel glow plugs active - AMBER.



Suspension/Dynamic response - RED/AMBER.



Low tyre pressure - AMBER.



Dynamic Stability Control (DSC) - AMBER.



Adaptive front lighting system - AMBER.



Adaptive Cruise Control (ACC) - AMBER.



Seat belts - RED.



Low gear range selected - GREEN.



Hill Descent Control (HDC) on - GREEN.



Cruise control active - AMBER.



Direction indicator - GREEN.



Trailer direction indicator - GREEN.



Side lamps/Headlamps on - GREEN.



Headlamp high beam on - BLUE.



Rear fog lamps on - AMBER.



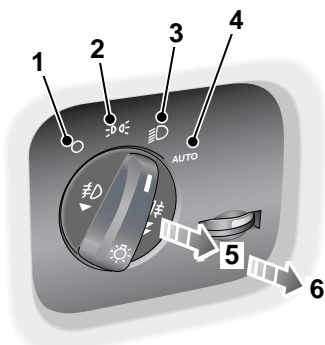
Front fog lamps on - GREEN.

If a red warning indicator illuminates while driving, a serious fault is indicated. Stop the vehicle and refer to the main section of this handbook.

For a full description of warning indicators and their functions, see **Warning Indicators, 104**.

# Quick Start

## LAMPS MASTER SWITCH



LAN0403G

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

In **AUTO** mode and the starter switch in position **II**, a sensor monitors the exterior light levels and will automatically switch the side lamps and low beam headlamps on or off as required.

5. Front fog lamps on.
6. Front and rear fog lamps on.

If front fog lamps are not fitted, the rear fog lamps will come on at position **5**.

Fog lamps cannot be operated if the lamps master switch is at position **4** Auto.

For a full description of these functions, see **EXTERIOR LAMPS, 110**.

## Headlamp courtesy delay

With the master switch in positions **2**, **3** or **4**, turn the starter switch off and remove the key. Turn the master switch to the off position. The headlamps will remain on for up to 240 seconds. For a full description of this feature and how to set the time delay, see **Headlamp courtesy delay, 112**.

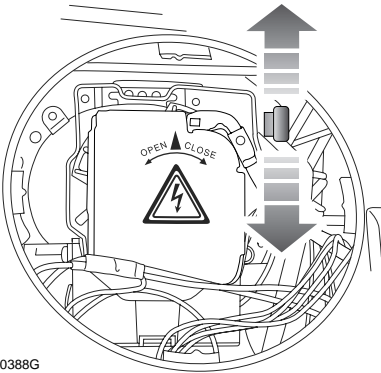
# Quick Start

## HEADLAMP TOURING ADJUSTMENT

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.

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.

### Xenon headlamps



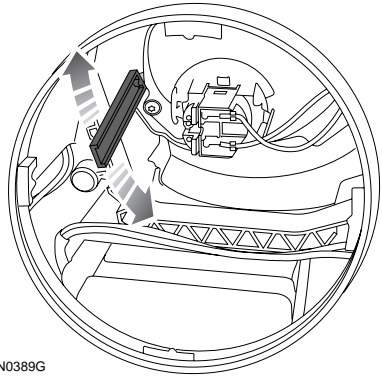
LAN0388G

Follow the process shown in **HEADLAMP UNIT, 272**, to gain access to the inside of the headlamp unit. Move the lever to adjust the beam.

### Lever default position - Xenon headlamps

Right hand headlamp	Up
Left hand headlamp	Up

### Halogen headlamps



LAN0389G

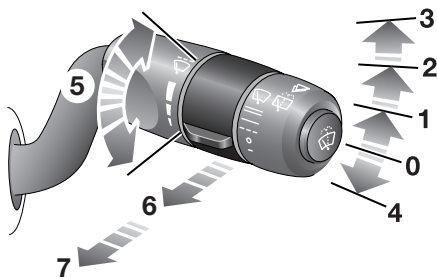
Follow the process shown in **HEADLAMP UNIT, 272**, to gain access to the inside of the headlamp unit. Move the lever to adjust the beam.

### Lever default position - Halogen headlamps

Right hand headlamp	Down
Left hand headlamp	Up

# Quick Start

## STEERING COLUMN LEVERS



LAN0519G

1. Rain sensor variable delay or Intermittent wipe.
2. Normal speed wipe.
3. Fast speed wipe.
4. Single wipe.
5. Rotate collar to adjust rain sensor/Intermittent variable delay.

### Rear wiper and washer

Pull the lever to position **6** for intermittent operation of the rear wiper. Pull and hold the lever in position **7** to operate the rear washer and wiper.

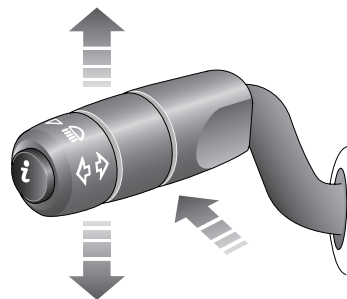
### Windscreen washer



Push the button on the end of the lever to operate the windscreen washer.

For more detailed information on the wash/wipe system, see **WINDSCREEN WIPERS, 114**.

## Direction indicators/Headlamp high beam



LAN0405G



Move the lever up or down to activate the direction indicators.



Push the lever away from you to select headlamp high beam. A blue warning indicator will illuminate on the instrument pack.

### Trip computer



Press the button on the end of the lever to cycle through the trip computer functions displayed on the message centre.

See **TRIP COMPUTER - FUNCTION SELECTION, 87**



# Quick Start

## CONFIGURABLE FEATURES

### Settings options (trip computer)

These are displayed on the main message centre. See **SELECTING SETTINGS OPTION, 88**.

SETTINGS	CHOICE
TRIP DISTANCE UNITS (odometer)	MILES/KM
FUEL USAGE UNITS	MPG l/100km Km/l
EXTERNAL TEMPERATURE	°C or °F
OVERSPEED WARNING (Set a personal speed limit - Warnings are displayed in the message centre)	Off 20 - 250 km/h or 15 to 140 mph in 5-unit steps (units set as trip distance)
HEADLAMP OFF DELAY	30/60/120/240 seconds
AUTO DOOR LOCK (speed related locking)	ON/OFF
REVERSE MIRROR DIP	ON/OFF
LAZY ENTRY	ON/OFF
RESTORE DEFAULT SETTINGS	YES/NO

### Remote control

The remote control can be configured to operate the following features:

- Panic alarm, for personal protection. See **Panic alarm, 41**.
- Headlamp courtesy delay, providing lighting for personal safety. See **Headlamp courtesy delay, 41**.
- Air suspension control, allows remote operation of the air suspension. See **Air suspension control, 42**.
- Tailgate release function, releases the tailgate as a whole. See **Tailgate release, 43**.
- Tailglass release function, releases only the tailglass. See **Tailglass release, 43**.
- Single point entry, allowing only the drivers door to be opened remotely. See **Single-point entry, 42**.

### Passenger airbag disabling

The safest place for a child seat is fitted to the rear seating. However, if it is necessary to fit a child seat to the front passenger seat the front passenger airbag must be disabled. See **PASSENGER AIRBAG DISABLING SWITCH, 78**.

### Daytime running lamps

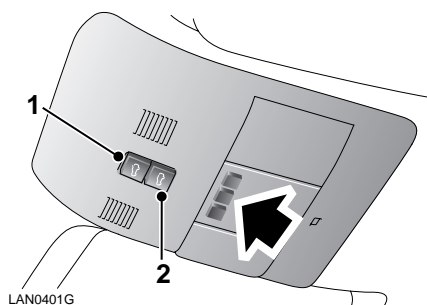
Unless prevented by legislation, it is possible to automatically switch on the exterior lamps whenever the engine is running. See **Daytime running lamps, 112**.

### Speed dependent wiper mode

The wiper speed in all modes can be automatically varied according to vehicle speed. See **Speed-dependent mode, 115**.

# Quick Start

## OVERHEAD CONSOLE



### Courtesy lamps

If automatic mode is enabled, the front and rear courtesy lamps will operate in conjunction with the vehicle being unlocked/locked or when a door is opened.

#### Automatic mode

Automatic mode for the courtesy lamps can be enabled/disabled by pressing and holding the centre lamp switch for more than three seconds.

A message will be displayed in the message centre advising you of the mode currently set.

The courtesy lamps can be manually switched on/off by pressing and releasing the centre lamp switch (arrowed in illustration).

See **Front Interior lamps, 131**.

### Interior lamps

The interior lamps can be switched on/off by pressing the switch adjacent to the lamp.

## Sunroof

Open/close sunroof:

- Press and release the switch **1** to open the sunroof fully.
- Press the switch **2** to close.

Tilt sunroof:

- Press and release the switch **2** to open the sunroof to the tilt position.
- Press and hold the switch **1** to close.

If the sunroof is moving, it can be stopped by pressing the switch again.

See **SUNROOF OPERATION, 121**.

#### Operating note

The sunroof can be operated with the starter key in position **I** or **II** and for 40 seconds after position **0** has been selected, providing that neither front door has been opened.

With the starter key in position **I** or **0**, the switch will need to be pressed and held until the roof reaches the desired position.

## REAR VIEW MIRROR

### Automatic dimming

Some rear view mirrors are fitted with a feature that will automatically darken to counteract glare from the headlamps of a following vehicle.

This feature is temporarily switched off while reverse gear is selected.

See **REAR VIEW MIRRORS, 137**.

# Quick Start

## AUTOMATIC TRANSMISSION

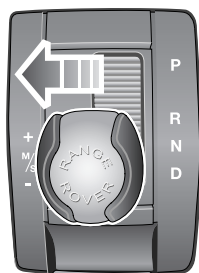
### Gearshift interlock

The starter switch must be in position **II**, the foot brake applied and the selector release button pressed before the gear selector can be moved from **P** (Park) to **R** (Reverse).

The gear selector must be in **P** before the starter key can be removed.

See **AUTOMATIC TRANSMISSION USE, 157**.

### Sport mode



LAN0408G

In Sport mode, automatic gear changing is maintained but the gearshift changes are modified to improve performance.

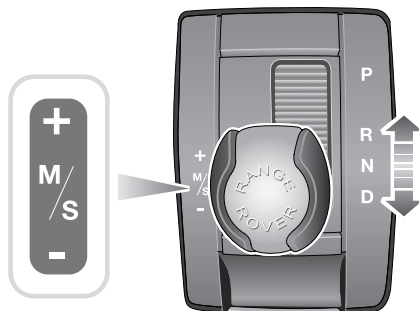
To select Sport mode, move the gear selector from **D** towards the left-hand side of the vehicle.

The word **SPORT** will appear in the instrument pack display and the LED in the gear selector surround will illuminate.

With the gear selector in Sport, the transmission will stay in lower gears for longer with downshifts occurring more readily.  
Fuel consumption will be adversely affected.  
If Terrain Response is fitted, Sport mode is only available if the **General** program is selected.

### CommandShift

CommandShift gear selection can be used as an alternative to automatic gear selection and is particularly effective when rapid acceleration or engine braking is required.



LAN0422G

1. Select Sport mode. The transmission will automatically select the gear most appropriate to the vehicle's road speed and accelerator position.
2. Moving the selector lever forward (+) or backward (-) and then releasing will manually select a higher or lower gear (when available). The message **TRANSMISSION COMMANDSHIFT SELECTED** will appear in the message centre.
3. Subsequent gear selections will shown in the instrument pack display.
4. To deselect CommandShift mode, move the selector lever back to **D**.

# Quick Start

## HILL DESCENT CONTROL (HDC)



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



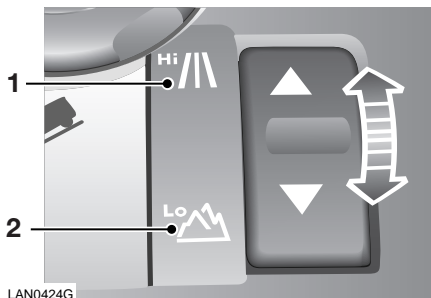
Press the switch (arrowed in illustration) to select HDC. HDC can be selected at speeds below

80 km/h (50 mph), but will not be fully active until the vehicle speed reduces below 50 km/h (30 mph), confirmed by a continuously illuminated HDC indicator in the instrument pack.

Press the switch again to deselect HDC.

See **HILL DESCENT CONTROL, 181**.

## TRANSFER GEARBOX



1. **HIGH** range should be used for all normal road driving and also for off-road driving across dry level terrain.
2. **LOW** range should be used in situations where low speed manoeuvring is necessary, or in extreme off-road conditions.

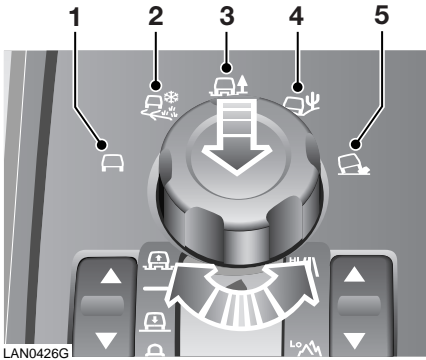
### Range changing

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. The indicators on the switch and instrument pack display will flash during range changing. When range changing is complete, a chime will sound and a message displayed in the message centre.

See **TRANSFER GEARBOX, 162**.

# Quick Start

## TERRAIN RESPONSE SYSTEM



- 1. General:** Suitable for surfaces that match typical road surfaces.
- 2. Grass-Gravel-Snow:** Suitable for surfaces which are firm, but have a slippery surface, e.g. grass, snow, loose gravel, pebbles or icy conditions.
- 3. Mud-Ruts:** Suitable for soft, muddy, uneven or deeply rutted ground. It is recommended that LOW range is selected on the Transfer gearbox.
- 4. 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.
- 5. Rock Crawl:** Only selectable when the Transfer gearbox is in 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.

See **TERRAIN RESPONSETM, 191**.

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.

To raise the rotary knob, press down lightly and release. Manual selection of a special program, by rotating the knob, will provide benefits in how the vehicle can be driven over different surfaces or terrains by automatically adjusting the vehicle's drive and suspension systems.

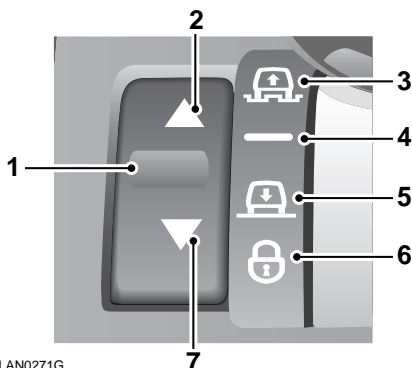
It is recommended that a special program be engaged whenever driving conditions could become difficult and cancelled once the conditions for use are no longer present. To lower the rotary knob press down until a 'click' is heard.

### Wading

When driving through water less than 490 mm (19 inches) deep, select the program suitable for the surface beneath the water.

# Quick Start

## AIR SUSPENSION



LAN0271G

Vehicle height can be manually adjusted via the raise/lower switch **1**. Height changes may only be made when the the engine is running and the driver and passenger doors are closed.

Indicators **2** or **7** will illuminate to show the direction of movement. They extinguish when the height change 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 for the vehicle.

Access height **5**, lowers the vehicle to provide easier entry, exit and loading of the vehicle. This position may be selected up to 40 seconds after the starter switch is turned off.

Crawl (locked at Access height) **6**, allows the vehicle to be driven at low speeds at access height, to give increased roof clearance.

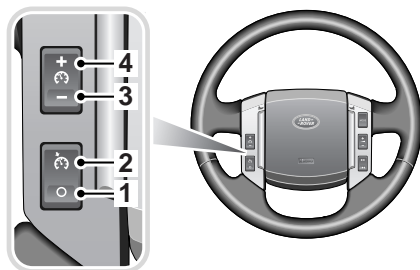
Vehicle height will be automatically adjusted according to road speed in order to maintain driveability and handling.

If Terrain Response is fitted, some of its programs will automatically adjust the suspension height.

See **AIR SUSPENSION, 184.**

## CRUISE CONTROL

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



LAN0252G

- 1. CANCEL:** cancel cruise control, but retains the set speed in memory.
- 2. RESUME:** resumes a SET speed retained in memory.
- 3. SET - :** to set a road speed or decrease the speed in 2 km/h (1 mph) steps when cruise control is operating.
- 4. SET + :** to set a road speed or increase the speed in 2 km/h (1 mph) steps when cruise control is operating.

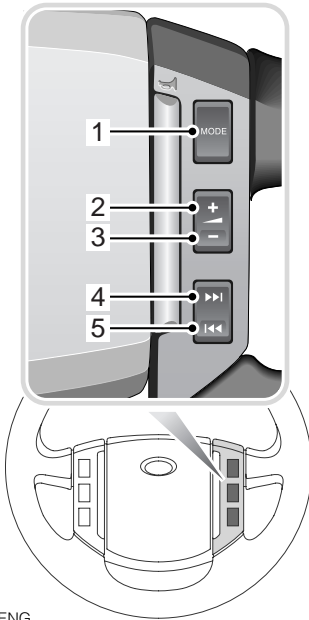
Cruise control will automatically disengage when the brake pedal is used or when the vehicle speed falls below 30 km/h (18 mph).

See **CRUISE CONTROL, 165.**

# Quick Start

## AUDIO SYSTEM

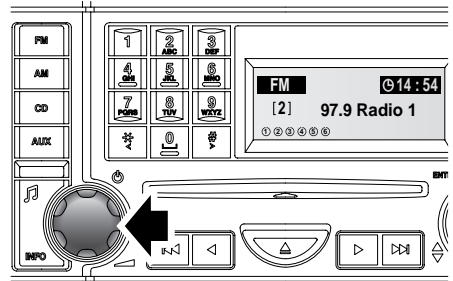
### Steering wheel controls



ICE1579 ENG

1. Mode select
2. Volume up
3. Volume down
4. Channel up
5. Channel down

### Switching on the audio unit

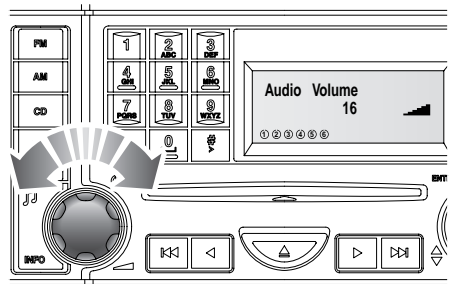


ICE1614 ENG

To turn on the audio unit, press the rotary control.

To make any of the changes to settings, as shown in the following pages, the unit must be switched on.

### Volume control



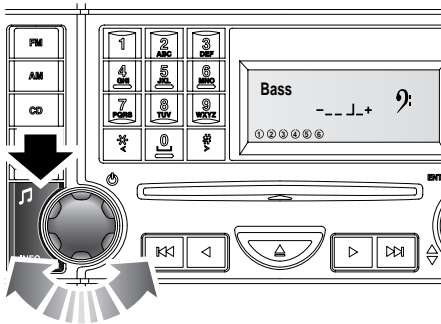
ICE1615 ENG

To increase or decrease the volume level, rotate the control.

With the engine running, the volume level can be adjusted between 0 and 35. If the audio unit is turned off, it will re-start at the previously selected volume level, provided that this is not too loud or too quiet.

# Quick Start

## Tone and balance settings



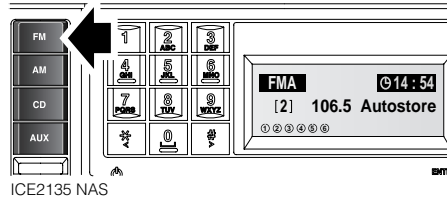
ICE1618 ENG

To change the Bass, Treble, Balance, Fader, Subwoofer and Logic 7 settings, press the Tone button repeatedly until the required setting is displayed, then use the rotary control to adjust the setting as required.

For further information, see **TONE AND BALANCE ADJUSTMENT, 311**.

## RADIO OPERATION

### Autostore



To autostore FM or AM stations, press and hold the **FM** or **AM** buttons. **Autostore** will be shown in the information display and the stations will be stored under the pre-set numbers, in the order that they are found.

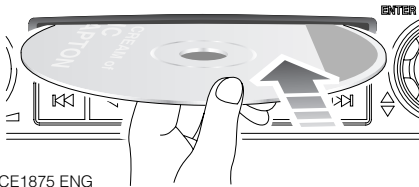
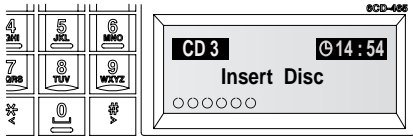
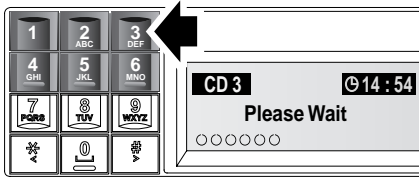
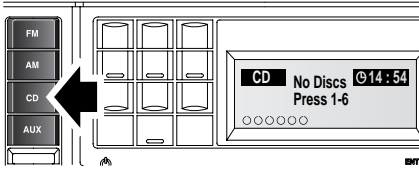
To access the stations once stored, press the required pre-set number briefly.



# Quick Start

## CD OPERATION

### Inserting a CD



ICE1875 ENG

*Premium audio unit illustrated*

Before inserting a CD into the audio unit, select CD mode by pressing the **CD** button.

**Note:** On Premium audio units it is necessary to then select an empty CD slot, by pressing the appropriate disc selection button (e.g. **3**). The six circles at the bottom left-hand side of the screen represent the six available CD slots. As soon as one has a CD in it, its number will appear in the circle. Empty slots are, therefore, those without numbers.

When inserting a disc into either player, ensure that the label side of the disc is facing upwards and present the disc to the slot. Do not push it into the slot, the player mechanism will draw the disc in automatically.

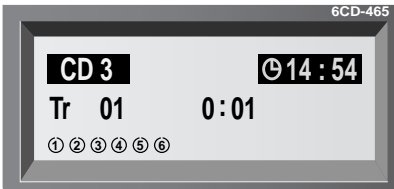
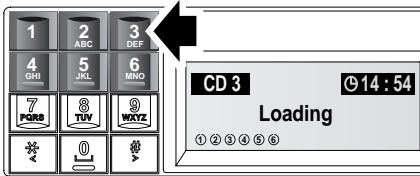
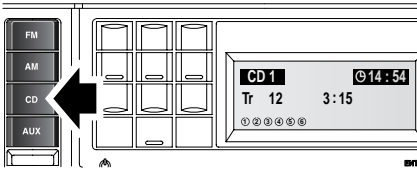
There will be a short pause whilst the player reads the information from the disc, which will then be displayed on the screen. Play will commence at the first track on the newly inserted disc.

### Dual and 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 will block up the player. Such damage to a CD player will not be covered under warranty.

# Quick Start

## CD playback



ICE1887 ENG

*Premium audio unit illustrated*

**Premium audio:** To start CD playback, briefly press the **CD** mode button, followed by the disc number required. If no disc number is selected, playback will begin at one of two places:

- If the discs contained in the player have not been removed since their last use, playback will begin from the point at which it was stopped previously.
- If the discs contained in the player have not been used since they were inserted, playback will begin at the start of disc one.

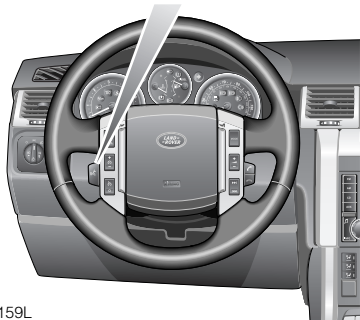
**Standard audio:** CD playback will commence automatically when a CD is inserted.

If a CD is already inserted but the audio system is currently in radio mode, press the **CD** mode button to commence playback.

# Quick Start

## VOICE RECOGNITION

### Activating the system



H6159L

To activate voice control:

- Briefly pull the control paddle (your Audio system will mute at this point). A brief acoustic signal 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 paddle 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 feedback of voice commands is available. To activate the feedback, pull the voice control paddle briefly and give one of the following commands:

#### General commands

- **Voice help** - To list all commands.
- **Notepad Help** - To list Notepad commands.  
See **Voice Recognition, 142.**

#### Audio commands

- **Radio help** - To list Radio commands.
- **CD help** - To list CD commands.  
See **Audio Voice Recognition, 337.**

#### Navigation and Telephone commands

- **Phone help** - To list telephone commands.
- **Navigation help** - To list Navigation commands.

Please refer to the **Navigation, TV and Telephone Systems Handbook.**

# Filling Station Information

## FUEL FILLER FLAP

**Note:** The fuel filler flap has a spring loaded release, do not force it open.

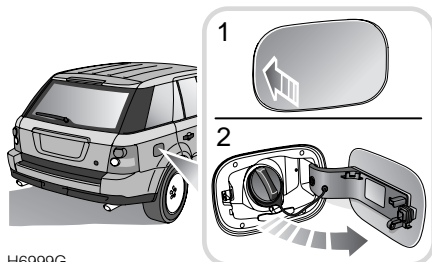
The fuel filler is located in the rear right-hand wing. With the vehicle fully unlocked, press and release the centre of the left edge of the fuel filler flap to open. See arrow position (1).

The fuel filler flap springs out, revealing the filler cap (2).

Unscrew the filler cap and place it on the projection on top of the hinge of the fuel filler flap.

Insert the pump nozzle into the filler neck, pushing aside the spring-loaded cover.

When delivery is complete, withdraw the nozzle and replace the cap. Tighten the cap clockwise until you hear it click three times. Return the fuel filler flap to its closed position.



H6999G

**Note:** For more detailed information, see **FUEL FILLER, 151**.

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

Engine oil top-up	
V8 petrol vehicles	Use a 5W/30 oil to specification ACEA A3 Land Rover WSS-M2C913-B preferred.
Diesel vehicles	Use a 5W/30 oil to specification ACEA B1 or B3
Cooling system top-up	
All vehicles to -40°C (-40°F)	50% mix of water and an approved antifreeze

**Note:** For more detailed information, see **LUBRICANTS AND FLUIDS, 286**.

# Filling Station Information

## TYRE PRESSURES

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 by between 30 and 40 kPa (0.3 to 0.4 bar) (4 to 6 lbf/in<sup>2</sup>). In this circumstance, NEVER let air out of the tyres in order to match the recommended pressures.

Loading condition		kPa	bar	lbf/in <sup>2</sup>
Temporary spare wheel (All operating conditions)		420	4.2	60

**Note:** For more detailed information, see *Tyre pressure and loading label, 239*.

# 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.

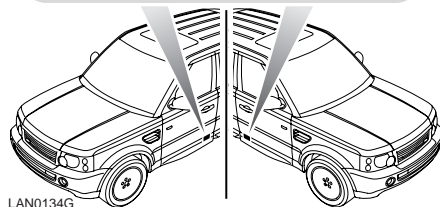
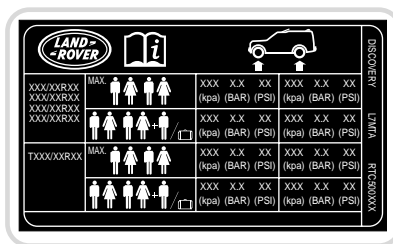


Labels showing this symbol indicate that the ignition system utilises very high voltages. DO NOT touch any ignition components while the starter switch is turned on.



### Warning labels

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.



LAN0134G

*Examples of left/right-hand drive.*

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

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## 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.**

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## 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, accelerator, 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

Event data recorders are capable of collecting and storing data during a crash or near-crash event. The recorded information may assist in the investigation of such an event. The modules may record information about both the vehicle and the occupants, potentially including information such as:

- How various systems in your vehicle were operating.
- Whether or not the driver and passenger seat belts were buckled.
- How far, if at all, the driver was depressing the accelerator and/or the brake pedal.
- How fast the vehicle was travelling.
- Where the driver was positioning the steering wheel.

To access this information special equipment must be connected directly to the recording modules. Land Rover do not access event data recorder information without obtaining consent, unless pursuant to court order or where required by law enforcement, other government authorities or third parties acting with lawful authority. Other parties may seek to access the information independently of Land Rover.

# Parts and Accessories

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## 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.**

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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.

### 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.**

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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.



# Parts and Accessories

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## Airbag

### **WARNING**

**The components that make up the airbag 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 any airbag malfunction, ALWAYS consult a Land Rover 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 of the vehicle.**
  - **Any modification to the front of the vehicle.**
  - **Any modification involving the removal or repair of any wiring or component in the vicinity of any of the airbag components, including the steering wheel, steering column, instrument or facia panels.**
  - **Any modification to the facia panels or steering wheel.**
- 

## 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.

# Keys and Remote Controls

## KEYS AND REMOTE CONTROLS

**Caution:** Keep the spare remote control in a safe place - NOT IN THE VEHICLE.



LAN0112G

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

The operation of all remote control 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. See **Emergency locking/unlocking, 49.***

The remote controls supplied with your vehicle are programmed to your security system - the engine cannot be started without a remote control programmed to your vehicle.

**Note:** *Should a remote control be lost or damaged, a replacement can only be obtained from your Land Rover Dealer, where it will be programmed to your vehicle. 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, and have the remaining remote control reprogrammed. This will prevent access to the vehicle using the lost/stolen remote control.*

### 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.

# Keys and Remote Controls

---

## SECURITY SYSTEM

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

### Security Information

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

- Apply the parkbrake.
- Remove all keys and remote controls from the vehicle prior to locking the doors.
- Close all doors, windows, luggage compartment (including blind), sunroof, and glovebox.
- 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.

## LAND ROVER BUTTON

Customer programmable button

### WARNING

**Be aware that the previously programmed feature will be activated when the button is initially pressed to start the programming sequence.**

---



LAN0128G

The fourth button on the remote control - marked with the Land Rover logo - can be programmed to give remote operation of one of the following functions:

- panic alarm.
- headlamp courtesy delay.
- air suspension control.
- tailgate release.
- tailglass release.

**Note:** Programming and subsequent use of the Land Rover button will not occur if the key is in the starter switch.

# Keys and Remote Controls

## REMOTE CONTROL PROGRAMMING

### Panic alarm



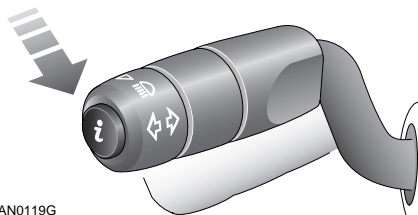
Programme by keeping the Land Rover button pressed and also pressing the hazard warning lamps button on the instrument panel. A chime from the instrument panel will confirm successful programming.

A short press of the button will now cause the vehicle's alarm to be sounded and the hazard warning lamps to flash.

The alarm is turned off by inserting the key in the starter, or pressing the lock or unlock buttons on the remote control.

**Note:** In some countries it is an offence to activate the panic alarm for any purpose other than an emergency.

### Headlamp courtesy delay



Programme by keeping the Land Rover button pressed and also flashing the headlamps. A chime from the instrument panel will confirm successful programming.

A short press of the Land Rover button will now cause the vehicle's headlamps to illuminate for the length of time specified in Settings. See **SELECTING SETTINGS OPTION, 88**.

A second press of the button after three seconds will deactivate the lamps.

# Keys and Remote Controls

## Air suspension control

Programme by keeping the Land Rover button pressed and also pressing the suspension control switch. A chime from the instrument panel will confirm successful programming.



Programming of this function must be done within one minute of switching off the engine.

After programming, to change the suspension height via the remote control, remove the starter key, turn on the hazard warning lamps and close all the doors. Remote operation is not possible unless this is done.

To raise the vehicle, press and hold the Land Rover button and Lock button.

To lower the vehicle, press and hold the Land Rover button and Unlock button.

If any button is released during the raising or lowering of the suspension, all movement of the suspension will stop. It will restart once the buttons are pressed again.

The height will initially change slowly but, after three seconds, the speed will increase. While the height is changing, a symbol on the raise/lower switch will be lit according to the direction of movement. See **Adjusting suspension heights, 185**.

If the starting height is above or below On-road height, movement will stop when On-road height is reached. Further movement can be achieved by releasing the buttons and pressing them again.

See **AIR SUSPENSION, 184**.

## Single-point entry

This is a personal security feature, which enables only the driver's door to be unlocked, leaving the other doors in a locked state.

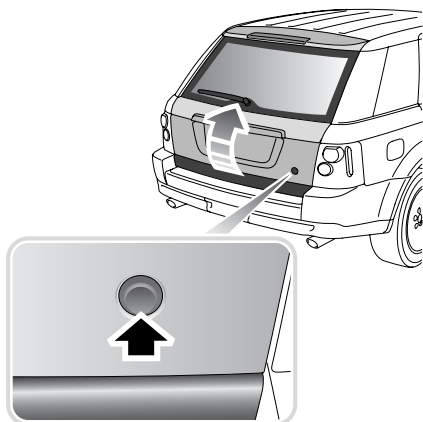
Single-point entry can be disabled on individual remote control keys by pressing and holding the lock and unlock buttons together for three seconds.

Repeating the procedure will re-enable the feature.

Each time single-point entry is turned on or off, the vehicle will lock then unlock into the selected mode (all doors unlocked or just the driver's door unlocked).

# Keys and Remote Controls

## Tailgate release

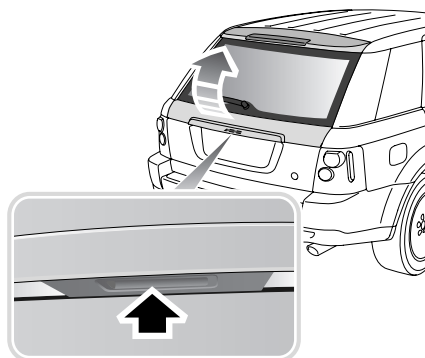


LAN0125G

Programme by keeping the Land Rover button pressed and also pressing the main tailgate release button on the rear tailgate. A chime from the instrument panel will confirm successful programming.

A short press of the button will now cause the vehicle's tailgate to release.

## Tailglass release



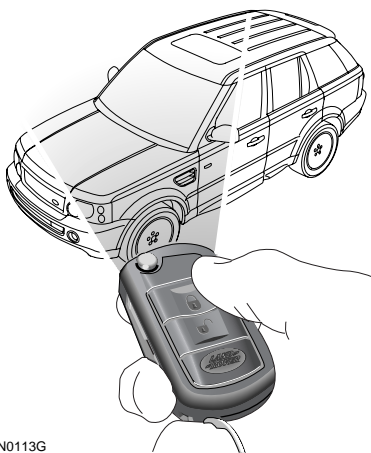
LAN0124G

Programme by keeping the Land Rover button pressed and also pressing the main tailglass release button situated under the rear number plate plinth. A chime from the instrument panel will confirm successful programming.

A short press of the button will now cause the vehicle's tailglass to release.

# Locks and Alarms

## ALARM SYSTEM



LAN0113G

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 twice within three seconds. This disables the superlocking, tilt sensing and interior space protection.

## Superlocking

### WARNING

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

Superlocking is activated by one press of the lock button on the remote control.

When the vehicle is superlocked, the doors can only be opened (from inside or outside of the vehicle) with the correct key or remote control.

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.

### Perimetric alarm

This feature is activated automatically, whenever the vehicle is locked using the remote control and protects the doors, bonnet and tailgate.

If any of these apertures are opened, or if a key that has not been programmed to the vehicle is inserted into the starter switch while the feature is activated, the alarm will be triggered.

When the perimetric alarm is activated, the direction indicators will flash three times and the security system status indicator will flash.

### Mislock

If an aperture is open when an attempt is made to lock the vehicle an audible warning will sound once to indicate that the vehicle is not secure.

# Locks and Alarms

## Anti-theft alarm indicator



LAN0115G

The indicator provides information about the status of the alarm and immobiliser systems, as follows:

### **When the alarm is armed with interior space protection:**

The indicator will triple flash for 10 seconds then continue to single flash until the vehicle is disarmed and immobilised.

### **When the alarm is armed without interior space protection:**

The indicator will double flash for 10 seconds, then continue to single flash until the vehicle is disarmed and immobilised.

### **When the alarm is disarmed but the vehicle is immobilised (key out of starter switch):**

The indicator will single flash until the alarm is armed or the vehicle is mobilised.

### **When the alarm is disarmed and the vehicle is mobilised (key in starter switch):**

The indicator gives a one-second flash on remobilisation.

## **If the alarm sounds**

If the alarm is triggered, the alarm will sound and the hazard warning lamps will flash for 30 seconds, before resetting to the same protection status that existed prior to the alarm being triggered.

To silence the alarm, press the lock or unlock button on the remote control or insert the key into the starter switch. Pressing the lock button will keep the alarm armed.

When the vehicle is disarmed, the hazard warning lamps will quickly flash eight times if the alarm has sounded since the vehicle was last armed.



# Locks and Alarms

## Interior space protection

Interior space protection is activated whenever the vehicle is superlocked.

**Note:** *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).



LAN0117G

Four roof-mounted sensors monitor 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 on the remote control twice within three seconds.

## 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.

## Disabling tilt sensor protection:

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 twice within three seconds.

## Battery-backed sounder

This device will sound the full alarm if the alarm is activated, or if the vehicle's battery or the sounder is disconnected whilst the security system is armed.

# Locks and Alarms

---

## 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. The system prevents the engine from being started unless the GENUINE remote control key is inserted into the starter switch.

Engine immobilisation is automatic five seconds after 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. When this happens, the anti-theft alarm indicator will illuminate for one second and then extinguish.*

## LOCKING/UNLOCKING

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.

**Note:** *If the remote control fails to work even when close to the vehicle, it could be that it is not synchronised with the system, see **Emergency locking/unlocking, 49**. Putting the key in the starter switch and running the engine for six minutes will restore full operation.*

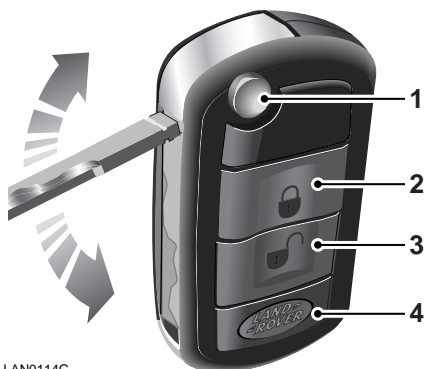
The operating range may vary, depending upon remote control battery condition and may sometimes be limited by physical and geographical factors beyond your control.

**Note:** *If a key is in the starter switch, the vehicle will not respond to remote control commands.*

# Locks and Alarms

## Locking with the remote control

Remove the key from the starter switch and shut all doors, the bonnet and the tailgate.



LAN0114G

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

1. Key release button.
2. Lock button: Press to superlock all doors and to activate the perimeter alarm and interior space protection and activate the tilt sensor. See **Superlocking, 44, Tilt sensor, 46**.

Press twice within three seconds to lock all doors and activate the perimeter alarm, but NOT activate interior space protection or the tilt sensor.

The direction indicators will flash three times.

3. Unlock button: Press once to disarm the alarm and unlock the driver's door and to activate the Lazy entry feature. See **Lazy entry, 57**. Press again to unlock the remaining doors. See **Single-point entry, 42**.

In either case, the interior lamps illuminate and the direction indicators flash once.

The hazard warning lamps will quickly flash eight times when the vehicle is disarmed if the alarm has sounded since the vehicle was last armed.

4. Customer configuration - Land Rover button: This button can be configured to operate panic alarm, headlamp courtesy delay, tailgate release, tailglass release or suspension control. See **LAND ROVER BUTTON, 40**.

# Locks and Alarms

## Partial arming

If an aperture (door, bonnet or tailgate) is not fully closed when the remote control lock button is pressed, the horn will sound briefly to signal that an aperture is still open. The alarm will remain disarmed and all of the closed apertures will lock.

As soon as the open aperture is closed, the system will automatically arm, signalled by three flashes of the hazard warning lamps, with interior space protection activating 30 seconds later.

**Note:** *The vehicle will not superlock if an aperture (other than the bonnet) is open.*

## Emergency locking/unlocking

Under a removable cap on the left front door outer handle, there is an emergency-use door lock.

## Removing the cap



LAN0116G

1. Insert the key fully into the slot under the handle cap.
2. The cap can now be removed at the forward edge and unhooked from the rear edge.
3. Remove the key from the slot and use it in the emergency lock. Turn the key anti-clockwise to unlock.

**Note:** *If the alarm was previously armed, the alarm will sound when the door is unlocked. To disable it, insert the key into the starter switch.*

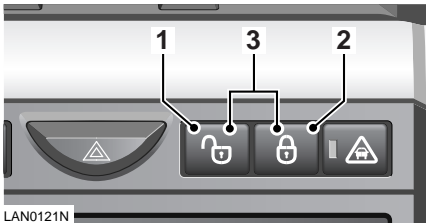
4. To lock the door, turn the key clockwise. The alarm system will not be armed.

# Locks and Alarms

## Refitting the cap

1. Insert the key fully into the slot in the handle cap.
2. Hook the cap onto the lock barrel at the rear edge.
3. Push the front edge of the cap onto the panel.
4. Remove the key from the slot.

## Master lock and unlock switches



1. Pressing the master unlock switch will unlock all of the doors.
2. Pressing the master lock switch will lock all of the doors.
3. Simultaneously pressing both the master lock and unlock switches for three seconds will cause the whole tailgate to release.

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

## Speed related locking

This security feature locks all the doors automatically when the vehicle speed exceeds 8 km/h (5 mph).

**Note:** The speed at which speed-related locking occurs is not selectable by the driver. Any presses of the master lock or unlock switches will over-ride the speed locking function, and will remain in that state for the whole journey.



Speed-related locking can be selected or deselected by a Land Rover Dealer/Authorised Repairer or by the driver.

See **SELECTING SETTINGS OPTION, 88**.

## Automatic relock

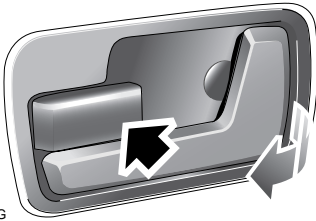
If the vehicle is unlocked using the remote control and one minute elapses before a door or the tailgate is opened, the vehicle will relock and the alarm will re-arm.

## Automatic unlocking

If the vehicle is involved in a collision forceful enough to cause a restraints device to deploy, all door locks will automatically be unlocked and the hazard warning lamps will start to flash. The interior lamps will also illuminate.

# Locks and Alarms

## Interior door handles and locking levers



LAN0122G

From inside the vehicle, each door can be individually locked by pushing the appropriate lever (arrowed).

To unlock and open a front door, simply pull the door handle.

To open a rear door, first return the locking lever to its unlocked position, then pull the door handle.

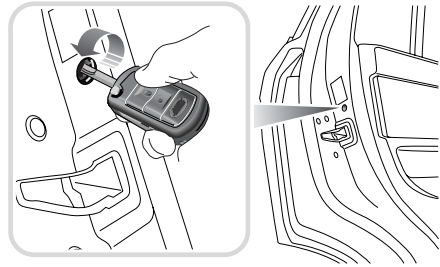
When the master lock or unlock switch is used, or speed related locking is activated, all door locking levers will activate automatically.

These locking levers will only operate if the doors have not been secured using the remote control or door key.

## CHILD SAFETY LOCKS

### WARNING

**NEVER** leave children unsupervised in the vehicle.



LAN0123G

Child safety locks are fitted to the rear doors.

Open a rear door and insert the starter key into the child safety keyhole. Turn the key one quarter of a turn so that the top of the key moves away from the vehicle. Repeat for the other door.

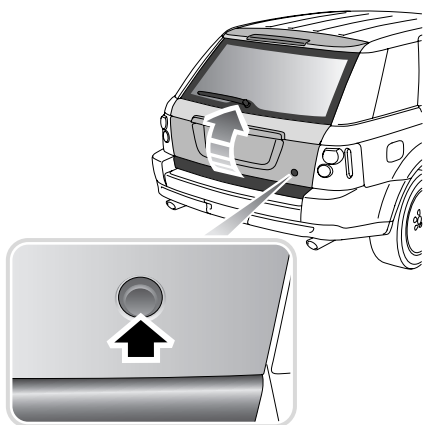
With the child safety locks engaged, the rear doors cannot be opened from inside the vehicle. This prevents a door from being opened accidentally.

Inserting the key and turning it in the opposite direction disengages the lock.

# Locks and Alarms

## TAILGATE

### Opening the tailgate



LAN0125G

With all doors unlocked, press the tailgate release button on the right-hand side of the tailgate.

If the tailgate fails to open, an emergency procedure is available.

**Note:** *If the tailgate is open, the system prohibits the tailglass release, and vice versa. It will only accept another release when the open panel has been closed.*

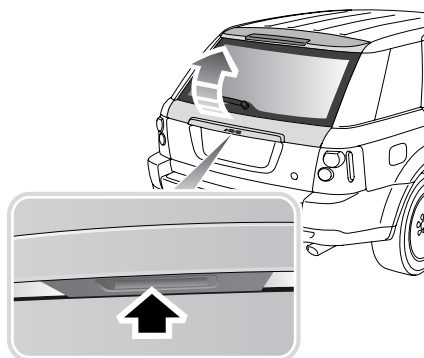
### Tailgate emergency unlock

Simultaneously pressing both the master lock and unlock switches for three seconds will cause the whole tailgate to release. This is an emergency release function in case the tailgate exterior release switch becomes inoperative.

### Power closure

The tailgate incorporates a 'Power closure' feature, which removes the need to 'slam' the tailgate when closing.

### Opening the tailglass



LAN0124G

With all doors unlocked, press the touch pad on the underside of the exterior handle and pull to open.

## FRONT SEATS

### WARNING

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

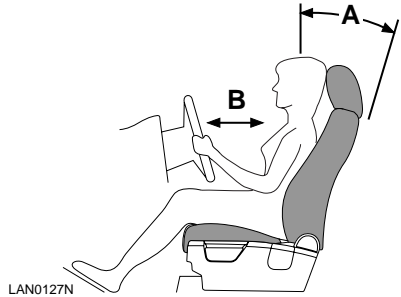
### Sitting correctly

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

- Sit in the most upright position with the base of your spine as far back as possible and the backrest reclined not more than 30 degrees (**A**).
- Do not move the driver's seat too close to the steering wheel. Ideally, a minimum distance (**B**) of at least 254 mm (10 in) between the centre of the breastbone and the cover of the steering wheel airbag is recommended. The driver should hold the steering wheel with slightly bent arms. The legs should also be slightly bent so that the pedals can be pressed to the floor.
- The seat belt should rest in the centre of the shoulder. The lap part should fit tightly across the hips and not on the stomach.

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

**Note:** For information on adjusting the steering column, see **STEERING COLUMN ADJUSTMENT, 81**.





# Seats

## FRONT SEAT ADJUSTMENT

### WARNING

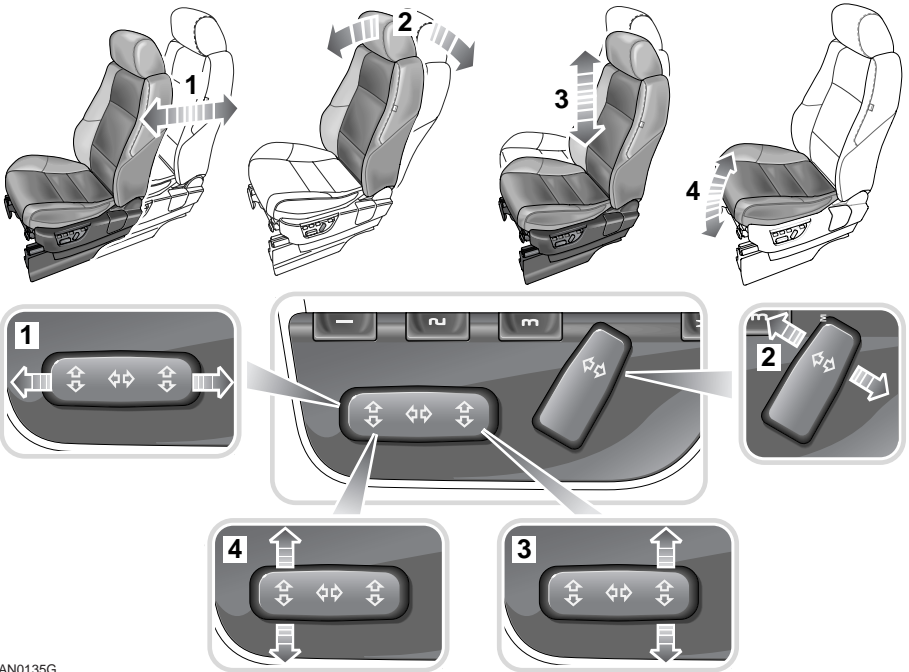
**DO NOT** adjust any part of a seat while the vehicle is in motion.

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

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

**Note:** The position of any part of the power operated seats can be changed with the starter key in positions I or II. Power operated memory driver's seat also has a 10 minute active period (Non-memory power operated seats up to 15 minutes) initiated when:

- The driver's door is opened/closed.
- The starter key is turned to the off position.



LAN0135G

# Seats

## 1. Forward/backward adjustment

Push and hold the switch to move the seat to the desired position. Release the switch to stop adjustment.

## 2. Seat back adjustment

### 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.**

Twist the switch until the desired seat back angle is achieved. Release the switch to stop adjustment.

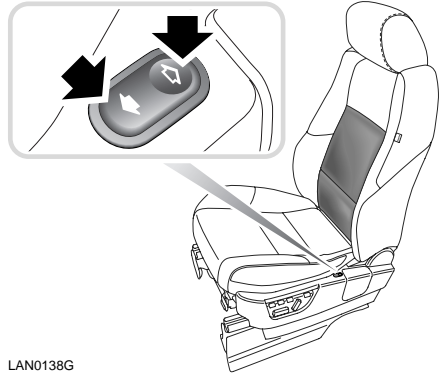
## 3. Seat cushion height adjustment

Push the switch up or down to raise or lower the cushion. Release the switch to stop adjustment.

## 4. Seat cushion edge adjustment (Driver's seat only)

Push the switch up or down to raise or lower the front edge of the cushion. Release the switch to stop adjustment.

## Lumbar support adjustment



LAN0138G

A separate switch located in the side of the seat provides for adjustment of lumbar support.

Press the front end of the switch to stiffen the support or the rear end of the switch to relax the support. Release the switch to stop adjustment.

## Folding armrest



LAN0130G

Some vehicles are fitted with adjustable front seat armrests. These are used in the horizontal position or can be stowed vertically alongside the seat backrest.

# Seats

The horizontal position can be adjusted for height by turning the knob set into the end of the armrest. Turning the knob clockwise raises the armrest; anti-clockwise lowers it.

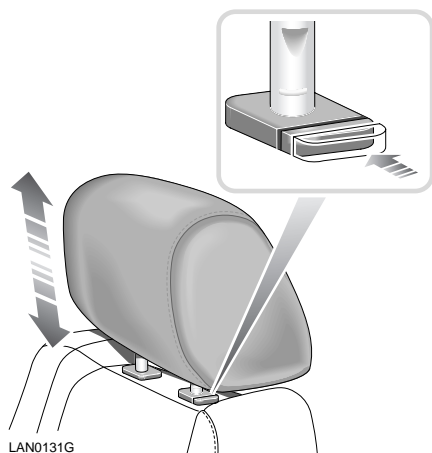
## Head restraint adjustment and removal

### WARNING

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

**DO NOT** drive or carry passengers with the head restraints removed from occupied seats, or adjust the head restraints while the vehicle is in motion.

Failure to have the head restraint installed and properly positioned will increase the potential for serious injuries.



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.

See **Sitting correctly**, 53.

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.

## Rear seat entertainment

### WARNING

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

In the event that a video display screen is damaged, avoid all contact with it, and contact your dealer as soon as possible.

**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 video 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.

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

If rear seat entertainment is fitted, the front head restraints can be adjusted for height, but cannot be removed from the seat.

## HEATED SEATS

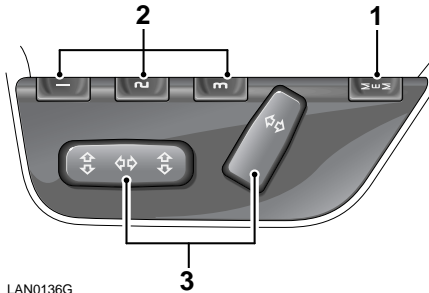
For information on operating the front and rear seat heaters, refer to **SEAT HEATERS**, 126.

# Seats

## DRIVER'S SEAT MEMORY FACILITY

### 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, 54**.

Your vehicle can memorise up to three different driver seating positions for each of three possible starter keys. This enables three separate drivers to achieve optimum comfort at the touch of a button.

### Setting the memory pre-sets

1. Insert the starter key and turn it to position I or II.
2. Adjust the seat and exterior mirrors to the desired position.  
*Note: For information on adjusting the mirrors, see **EXTERIOR MIRRORS, 82**.*
3. Press the memory store button **1** to activate the memory function.
4. Within five seconds, press the desired pre-set button **2**.
5. **Memory Stored** will be displayed on the message centre to confirm the storing action. A single chime will sound from the instrument panel to confirm storing.

### Recalling a stored seat position

Providing the power operated memory seat is active, press the pre-set button associated with the desired driving position. The seat and mirrors will move to the position stored on that pre-set.

A confirmation message will display in the message centre and a double chime will sound when adjustments are complete.

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

### Lazy entry

When the lazy entry option is selected and the vehicle is unlocked using the remote control, the vehicle adjusts the driver's seat and the exterior mirrors to the position associated with that particular remote control.

Lazy entry and associated options can be selected or deselected by a Land Rover Dealer/Authorised Repairer or by selecting Settings. See **SELECTING SETTINGS OPTION, 88**.

# Seats

## REAR SEATS

### WARNING

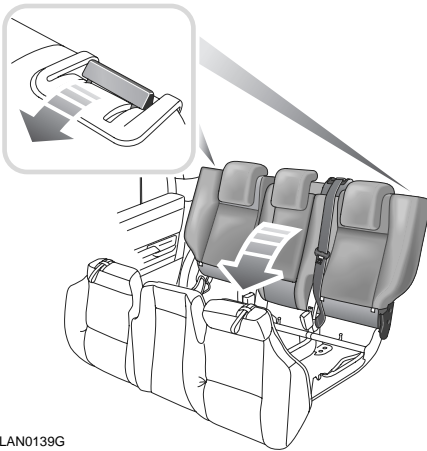
**DO NOT** adjust any part of a seat while the vehicle is in motion.

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

### WARNING

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

## Folding down the seats



LAN0139G

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

Before attempting to fold down the seats, remove the outboard seat belts from the seat belt guides and remove any items from the rear seats and footwell.

If the front seats are in their rearmost position, move them forward. They can be returned to their original position after the rear seat backs have been folded down.

Ensure that the head restraints are fully lowered. Press in the collar at the base of the head restraint support, and push the head restraint down.

Using the strap at the rear of each cushion, pull the required cushions forwards as far as they will travel.

To fold a backrest forwards, pull the seat backrest release lever(s). While pulling the lever(s) located on the top edges of the backrests, tip the seat backrest(s) forwards as far as possible.

**Note:** Only Land Rover approved seat covers and accessories should be used on these seats.

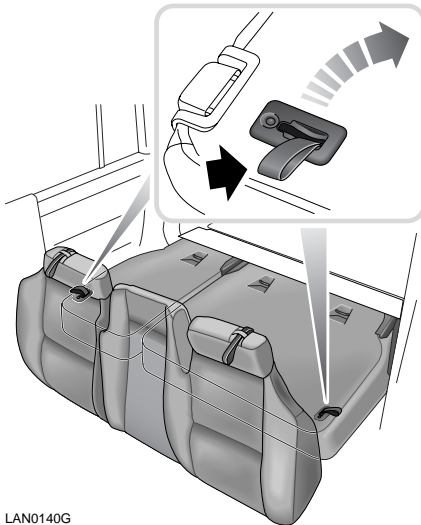
# Seats

## Returning the seats to the upright position

### WARNING

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

Also, 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).



LAN0140G

If the front seats are in their rearmost position, move them forward. They can be returned to their original position after the rear seats have been returned to the upright position.

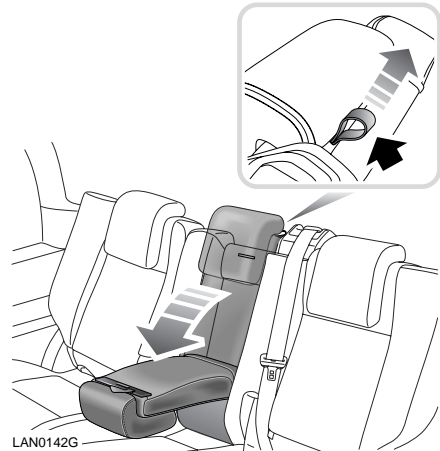
Pull the strap vertically on the back of the seat to unlock the seat. Continue to pull to raise the backrest(s) until they click into position. Push the seat cushion(s) firmly back into position.

Visually check that the lever is fully in place. If it has not returned to its locked position, red flags will be visible around the lever sides.

To raise the head restraint, pull it upwards to the required height.

Replace the outboard seat belts back into the seat belt guides.

## Rear seat armrest



LAN0142G

To release the armrest, first pull the loop at the top of the centre seat/armrest (see inset.), then push the armrest downwards to the required position.

To replace, raise the armrest and push until a click is heard when latched.

# Seats

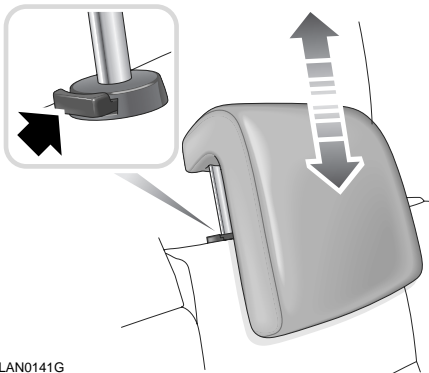
## Head restraint adjustment and removal

### WARNING

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

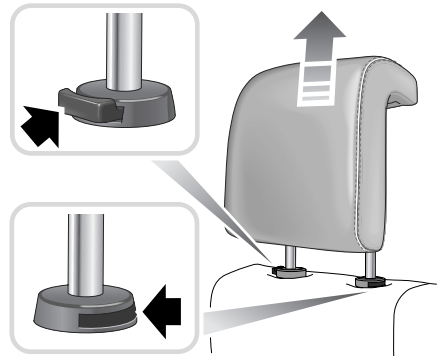
**DO NOT** drive or carry passengers with the head restraints removed from occupied seats, or adjust the head restraints while the vehicle is in motion.

**Failure to have the head restraint installed and properly positioned will increase the potential for serious injuries.**



LAN0141G

Adjust the head restraint correctly (up or down) for each passenger by pressing the collar button as indicated. The top of the head restraint should be level with the top of the head.



LAN0143G

Remove the head restraint by pressing the collar button and indented 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.

# 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 allows 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 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 AIRBAGS WORK, 75**.

### Seat belt warning indicator



Driver Beltminder commences when the starter switch is turned to position **II** and the driver belt is unbuckled.

In certain markets the seat belt reminder feature also applies to the passenger seat and will be activated if the seat is occupied and the occupant is unbuckled.

The visual and audible warnings applicable to either driver or passenger 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, 109**.

**Note:** *Objects placed on the passenger seat may activate the seat belt warning system.*



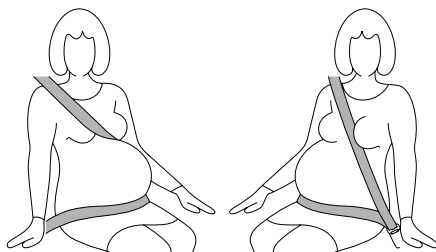
*Although not advisable, it is possible to disable the Beltminder function. Please see a Land Rover Dealer/Authorised Repairer to disable or reinstate the function.*

## SEAT BELT USE DURING PREGNANCY

### WARNING

**Pregnant women must wear a correctly positioned seat belt; it is safer for mother and unborn child.**

**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.**



LAN0144G

During pregnancy, women should wear the lap belt across the hips below the baby, with the diagonal belt passing across the shoulder, between the breasts and to one side of the baby - if in doubt, consult a doctor.



# Seat Belts

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## SEAT BELT PRE-TENSIONERS

### 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.

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The seat belt pre-tensioners activate in conjunction with the airbag and provide additional protection in the event of a severe frontal impact on the vehicle. See **HOW THE AIRBAGS WORK, 75**. 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 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.*

## AUTOMATIC LOCKING MECHANISM

### WARNING

Where possible, use the seat belt automatic locking mechanism to secure large items that are to be carried on the seats. In the event of an accident, loose items become projectiles capable of causing serious injury. Care must be taken to prevent any sharp edges damaging the belt.

Use the seat belt automatic locking mechanism to restrain pets in harnesses or pet carriers when not utilising the loadspace.

---

The passenger seat belts have a special locking mechanism which retains large items securely.

To use:

1. Place the item on the seat.
2. Put the seat belt around the item, using both the lap and shoulder parts of the belt.
3. Fasten the seat belt.
4. Pull on the shoulder part of the belt, to unreel all of the remaining belt. This will engage the automatic locking feature, which only allows the belt to retract.
5. Allow the seat belt to retract onto the item (a clicking sound will confirm that the ratchet has engaged).
6. Ensure that there is no slack in the seat belt by pulling upwards on the shoulder belt immediately above the item. The item will now be held firmly in position by the belt.

When the seat belt is released and is allowed to retract, the seat belt locking mechanism reverts to normal operation.

# Seat Belts

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## SEAT BELT SAFETY

### WARNING

Seat belts are life saving equipment. In a collision, occupants not wearing a seat belt can be thrown around inside, or possibly thrown out of the vehicle. This is likely to result in more serious injuries than would have been the case had a seat belt been properly worn. It may even result in loss of life.

Make sure ALL occupants are securely strapped in at all times - even for the shortest journeys.

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

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

DO NOT wear seat belts over hard, sharp or fragile items in clothing, such as pens, keys, spectacles, etc.

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

DO NOT allow front seat occupants to travel with the seat backs reclined steeply rearwards. Optimum benefit is obtained from the seat belt with the seatback angle set to no more than 30 degrees from the upright.

---

### WARNING

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

Belts should not be worn with the straps twisted.

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.

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.

No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

Should the seat belt not retract and remain at its static length, consult your Land Rover Dealer/Authorised Repairer immediately.

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.

Where possible, use the seat belt automatic locking mechanism to secure large items that are to be carried on the seats. In the event of an accident, loose items become projectiles capable of causing serious injury. Care must be taken to prevent any sharp edges damaging the belt.

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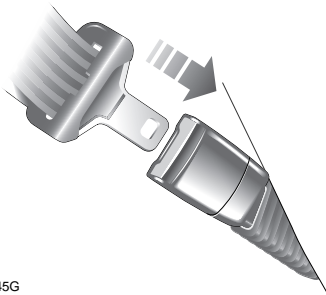
# Seat Belts

## FRONT SEAT BELTS

### Fastening the seat belts

#### 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.



LAN0145G

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

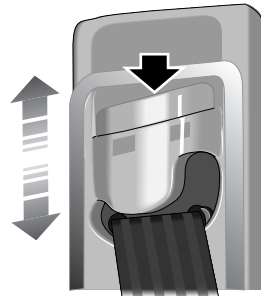
### Releasing the belt

Press the RED button on the seat belt buckle.

### Upper anchorage adjustment

#### WARNING

Maladjustment of the seat belt could reduce its effectiveness in a crash. Always ensure that the anchorage is correctly located and properly locked in one of the height positions before driving and DO NOT adjust the height once the vehicle is in motion.



LAN0146G

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.

# Seat Belts

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## CARING FOR SEAT BELTS

### WARNING

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

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

DO NOT bleach or dye the webbing and avoid contaminating the webbing with polish, oil or chemicals. See **Seat belts, 248**.

### Testing inertia reel belts

- With the seat belt fastened, give the webbing near the buckle a quick upward pull. The buckle must remain securely locked.
- With the seat belt unfastened, unreel the webbing to the limit of its travel. Check that unreeling is free from snatches and snags and then allow the belt to FULLY retract.
- Partially unreel the webbing, then hold the tongue plate and give it a quick forward pull. The mechanism must lock automatically and prevent any further unreeling.

If a seat belt should fail any of these tests, contact your Land Rover Dealer/Authorised Repairer immediately.

**Note:** *If the vehicle is parked on ground that is not level, the seat belt mechanism may lock. This is not a fault; gently ease the belt from its upper anchorage to release.*

## Service information

### WARNING

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

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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

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## CHILD SEATS

### 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.**

**There is a risk of death or serious injury when the airbag deploys.**

**The safest place for children is properly restrained in the rear seats.**

---

### WARNING

**DO NOT allow a baby or infant to be carried on the lap. The force of a crash can increase effective body weight by as much as 30 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. This reduces the risk of injury in a crash. Children could be endangered in a crash if their 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 a child.**

---

The seat belts fitted to your vehicle are designed for adults and larger children. For their safety, it is very important that all infants and children under 12 are restrained in a suitable child safety seat appropriate to their age and size (see table). Child safety seats approved for use in your vehicle are available from your Land Rover Dealer/Authorised Repairer.

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

**Note:** *Crash statistics show that children are safer when properly restrained in the rear seating positions, than they are in the front.*

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 should travel in the front passenger seat, Land Rover recommends that when installing child restraints, the vehicle front passenger seat be positioned fully rearward, the lumbar adjusted to its minimum support position and the cushion adjusted to its highest position. Additionally, if your vehicle is also fitted with front cushion rake adjustment, this should be adjusted to its lowest position. The seat belt upper adjustable anchorage should be set to its lowest position. Disable the airbag using the switch on the end of the instrument panel. See **PASSENGER AIRBAG DISABLING SWITCH, 78.**

Always use an approved child seat, suitable for a child's age and size.

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 child held in a person's arms can be crushed between the vehicle's interior and a restrained person.

# Child Restraints

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LAN0164G

This symbol affixed to the passenger side **B** post of your vehicle, warns against the use of a REAR-FACING child seat in the front passenger seat, when a passenger airbag is fitted and operational.

# Child Restraints

## Child safety seating and positions

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 m (5 feet) tall and the installation of suitable child restraint systems.

<b>Mass group</b> (with approximate age) <i>As indicated on child restraint</i>	<b>0</b> = Up to 10 kg (22 lb) (0-10 months)	<b>0+</b> = Up to 13 kg (29 lb) (0-18 months)	<b>I</b> = 9 to 18 kg (20 to 40 lb) (9 months - 5 years)	<b>II and III</b> = 15 to 36 kg (33 to 80 lb) (4-12 years)
<b>Seating positions</b>				
Front passenger <sup>†</sup>	U <sup>†</sup>	U <sup>†</sup>	U <sup>†</sup>	U <sup>†</sup>
Rear seats, rear outboard	U	U	U	U
Rear seats, rear centre	U	U	U	U
U = Suitable for universal category restraints approved for this mass group. <sup>†</sup> Never place a child seat in the front passenger seating position unless the airbag has been disabled. See <b>PASSENGER AIRBAG DISABLING SWITCH, 78.</b>				

### WARNING

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

**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.**

In many countries, legislation governs how and where children should be carried when travelling in a vehicle.

It is the responsibility of the driver to comply with all regulations in force in the country where the vehicle is being used.

### Seat belt locking mechanism

The passenger seat belts have a special locking mechanism which aids the retention of child seats. See **AUTOMATIC LOCKING MECHANISM, 70.**

### Child restraints for larger children

In a situation where a child is too large to fit into a child safety seat, but is still too small to safely fit the 3 point seat belt properly, a booster seat is recommended for maximum safety. Follow the manufacturer's fitting instructions exactly, then adjust the seat belt to suit.

# Child Restraints

## ISOFIX table of installation

### Note:

ISOFIX anchorages are provided for both outer rear seating positions. ISOFIX child restraints should be securely attached following the manufacturers instructions at these locations only.

Mass group as shown on child restraint	Size Classes	Fixtures	Vehicle ISOFIX positions
Carrycot	F/ G	ISO L1/ L2	X
0 = Up to 10 kg (22lb)	E	ISO R1	IL
0+ = Up to 13 kg (29lb)	C/ D/ E	ISO R1/ R2/ R3	IL
I = 9 to 18 kg (20 to 40 lb)	C/ D A/ B1/ B	ISO R2/ R3 ISO F2/ F2X/ F3	IL IUF
II = 15 to 25 kg (33 to 55 lb)	-	N/A	N/A
III = 22 to 36 kg (48 to 79 lb)	-	N/A	N/A

- IUF = suitable for ISOFIX forward child restraint systems of universal category approved for use in the mass group.
- IL = suitable for particular ISOFIX child restraint systems (CRS) given in the attached list. These ISOFIX CRS are those of the “specific vehicle”, “restricted” or “semi-universal” categories.
- X = ISOFIX position not suitable for ISOFIX child restraint systems in this mass group and/or this size class.



# Child Restraints

## AUTOMATIC LOCKING MECHANISM

### WARNING

Where possible, use the seat belt automatic locking mechanism to secure large items that are to be carried on the seats. In the event of an accident, loose items become projectiles capable of causing serious injury. Care must be taken to prevent any sharp edges damaging the belt.

**Use the seat belt automatic locking mechanism to restrain pets in harnesses or pet carriers when not utilising the loadspace.**

The passenger seat belts have a special locking mechanism which aids the retention of child seats and large items. The procedure to install a child seat is as follows;

1. Place a child seat in the vehicle, attach the seat belt and secure the buckle in accordance with the manufacturers fitting instructions.
2. Pull on the shoulder section of the belt to reel out all of the remaining webbing to the limit of its travel. This will engage the automatic locking feature, which then acts as a ratchet, allowing the webbing ONLY to retract.
3. Allow the seat belt to retract onto the child seat (a clicking sound will confirm that the ratchet has engaged), while firmly pushing the child seat into the vehicle seat.
4. Ensure that there is no slack in the seat belt by pulling upwards on the shoulder belt immediately above the child restraint. The seat belt should now be locked and the child seat held firmly in position.

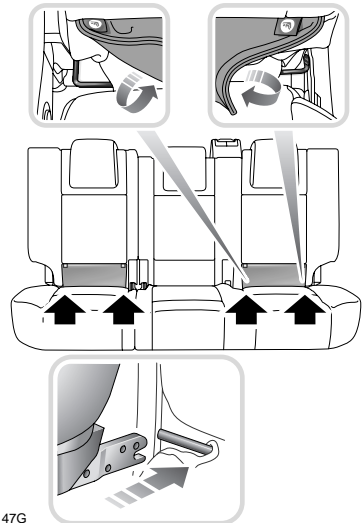
When the child seat belt is retracting all of the seat belt is allowed to retract, the seat belt locking mechanism reverts to normal operation.

## ISOFIX CHILD RESTRAINTS

### 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.**

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 from conventional child seats, requiring anchor bars built into the vehicle seat in order to accept the ISOFIX locking mechanism.



LAN0147G

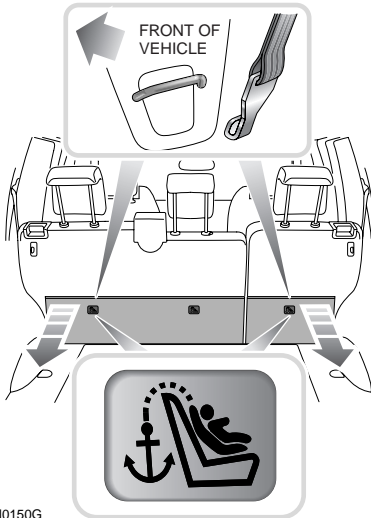
Both outer rear seating positions in your vehicle are equipped to accept ISOFIX restraints.

# Child Restraints

To install your child seat with an ISOFIX restraint system:

- Raise or remove the head restraint.
- Lift the velcro strap, exposing the ISOFIX locking mechanism.
- Slide the child seat into the locking mechanism.

The tether anchorages are provided at each seating position equipped to accept Isofix child restraints (shown in the illustrations).



LAN0150G

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

## Fitting ISOFIX child restraints

### 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 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.**

ISOFIX child restraints should only be fitted in the two **outer** rear seating positions. Anchor bars built into the rear seat frame, enable the ISOFIX restraints to be securely attached to the vehicle seat only in these positions.

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

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

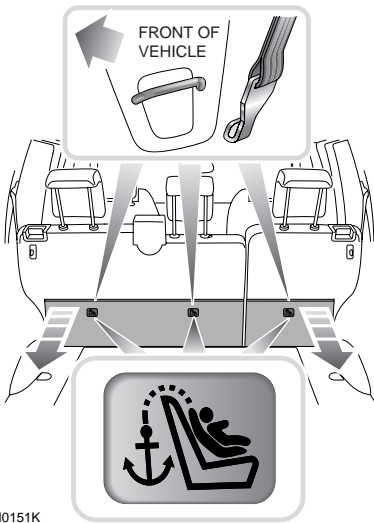
Once the ISOFIX restraint is installed, you are recommended to test the security of the installation before seating the child. Attempt to twist the restraint from side to side and to pull the restraint away from the vehicle seat; then check that the anchors are still securely in place.

# Child Restraints

## TETHER STRAP ANCHORAGES (Australia only)

### WARNING

Child restraint anchorages are designed to withstand only 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.



LAN0151K

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. Three anchorage points are located in the floor panel of the luggage area behind the rear seats.

# Child Restraints

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## CHILD RESTRAINT CHECK LISTS

### Non-ISOFIX child restraints

Follow the check list every time a child travels in the vehicle:

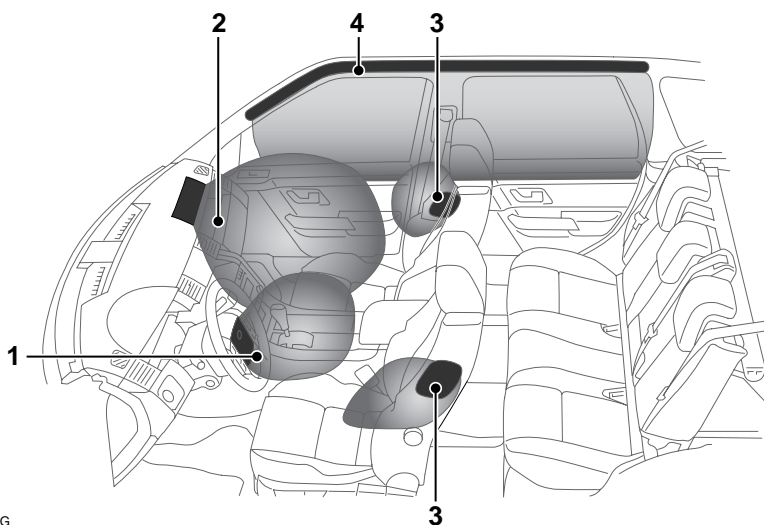
- Carefully follow the instructions provided by the manufacturer of the restraint system.
- Always use the appropriate child restraints and adjust harnesses for every child, every trip.
- Avoid dressing a child in bulky clothing and do not place any objects between the child and the restraint system.
- Regularly check the fit of a child seat and replace seats or harnesses that show signs of wear.
- Ensure that you have removed all slack from the adult seat belt.
- 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 SAFETY LOCKS, 51**.
- Ensure that a child does not exit the vehicle from the side where there is traffic.
- Set children a good example - always wear your seat belt.

### ISOFIX child restraints

Follow the check list every time a child travels in the vehicle:

- **Always attach the top tether when installing the ISOFIX seat.**
- Carefully follow the instructions supplied with the child seat.
- Always give the ISOFIX seat a final pull to ensure that the lower anchors are secure.
- Always use the appropriate child restraints and adjust the harnesses for every child, every trip.
- Make sure that a child falls into the correct weight range for the seat.
- Avoid dressing a child in bulky clothing and do not place any objects between the child and the restraint system.
- Regularly check the fit of a child seat and replace seats and harnesses that show signs of wear.
- No child seat is completely child-proof. Encourage children 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 SAFETY LOCKS, 51**.
- Ensure that a child does not exit the vehicle from the side where there is traffic.
- Set children a good example - always wear your seat belt.

# Airbags



LAN0152G

## 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.

Ensure that a gap is maintained between the side of the vehicle and the head and torso, to enable unobstructed inflation of the curtain and seat mounted side airbags. **DO NOT** lean out of the window.

## INTRODUCTION

The airbag supplementary restraint system (SRS) incorporates front airbags **1** and **2**, seat mounted side airbags **3** and curtain airbags **4** for the driver and front passenger and curtain airbags **4** for the rear seat outboard passengers (see illustration for airbag locations). These are indicated by the word **AIRBAG** on the trim.

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

In the event of a side collision or a roll-over, curtain airbags will afford additional protection to the side of the head facing the impact for the front seat and outer rear seat occupants.

# Airbags

## 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.

## Airbag warning indicator



A warning indicator mounted in the instrument pack will alert you to any malfunction of the airbag,

see **Warning Indicators, 104**. The airbag should always be checked by a Land Rover Dealer/Authorised Repairer if any of the following symptoms occurs:

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

## HOW THE AIRBAGS WORK

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

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

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

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

- *Rear collisions.*
- *Minor front impacts.*
- *Minor side impacts.*
- *Heavy braking.*
- *Driving over bumps and potholes.*

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

## Dual stage deployment

The front airbags deploy in two stages, depending on the severity of the frontal collision. The unit monitors the rate of deceleration during the impact.

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.

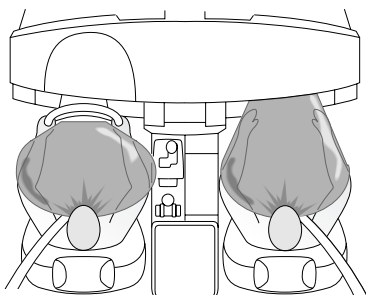
Airbag inflation is virtually instantaneous and occurs with considerable force, accompanied by a loud noise. The inflated bag, together with the seat belt restraint system, limit the movement of an occupant, thereby reducing the risk of injury to the head and upper torso.

In the case of a severe frontal collision, both front airbags will be deployed. In the case of a severe side collision, only the seat mounted side airbags and curtain airbags on the impacted side of the vehicle will inflate.

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

# Airbags

## 1 and 2. Front mounted airbags

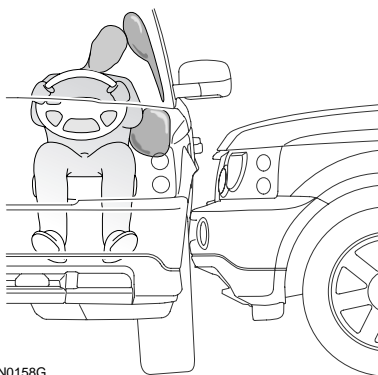


LAN0155G

## 3 and 4. Side and Curtain airbags

### WARNING

For the curtain 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.



LAN0158G

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

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

### Deployment effects

#### WARNING

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

Activation of an airbag creates dust, causing possible 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 and doors.

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

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

# Airbags

## WARNING

Even with airbag equipment fitted, seat belts must **ALWAYS** be worn because:

- An airbag will only provide additional protection in certain types of frontal 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.

## Obstruction of airbags

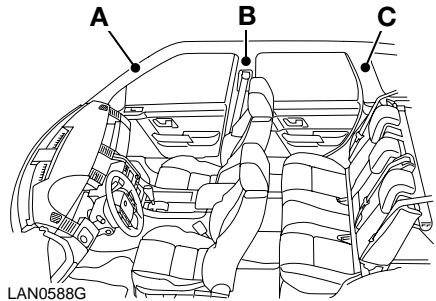
### WARNING

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 on, or close to the roof lining, A, B and C post finishers, front seat backs or to an airbag cover, which could interfere with the inflation of the airbag or, if the airbag inflates, be propelled inside the vehicle causing injury to the occupants.

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

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:



LAN0588G

- Accessories attached to or obscuring an airbag cover, including; the roof lining, A, B and C post finishers and the seat backs of the front seats.
- 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 side airbag. If in doubt, consult your Land Rover Dealer/Authorised Repairer.

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



# Airbags

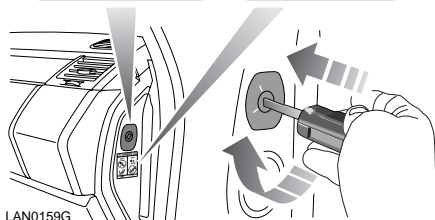
## PASSENGER AIRBAG DISABLING SWITCH

### WARNING

Do not use a child restraint on a seat protected by an operational airbag in front of it.

There is a risk of death or serious injury when the airbag deploys.

The safest place for children is properly restrained in the rear seats.



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

To use a child restraint in the front, make sure that the key switch is turned to the OFF position.

## Operational status indicator

### WARNING

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



The passenger airbag operational status indicator is an oblong lamp which illuminates amber when the passenger airbag disabling switch has been turned to the OFF position to de-activate the passenger's airbag.

After the airbag has been de-activated, the indicator does not illuminate until the starter key has been turned to position II.

# Airbags

## Airbag switched off

### WARNING

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**.

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



LAN0162G

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 vehicle has been switched on (position II), the operational status lamp on the instrument panel is illuminated indicating that the passenger airbag is NOT operational.

If the airbag warning indicator in the instrument cluster illuminates continuously, it means that there is a malfunction of the system, see **Warning Indicators, 104**.

Remove the child restraint from the front seat and consult your Land Rover Dealer/Authorised Repairer.

## Airbag switched on



LAN0163G

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 vehicle is switched on (position II), the operational status lamp on the instrument panel is NOT illuminated, indicating that the passenger airbag is operational.

The safest place in your vehicle for a child, is in the rear seat.

# Airbags

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## SERVICE INFORMATION

### WARNING

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

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### 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 airbag components, including the steering wheel, steering column, door trim, roof lining, instrument pack and instrument panel.**
  - **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.**
- 

**Caution: The components that make up the airbag 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.**

In addition, 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.
- any trim containing airbags - front seat back, headlining or pillar trims - becomes damaged.

# Steering Column

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## STEERING COLUMN ADJUSTMENT

### WARNING

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

**Ensure that the lever is fully up. Inadvertent movement of the wheel might occur if the lever is not fully tightened.**

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The steering wheel position can be adjusted in two directions.

Move the lever located under the steering wheel fully downwards (see inset).

Adjust the steering wheel up or down, in or out.

Move the lever fully up to lock.



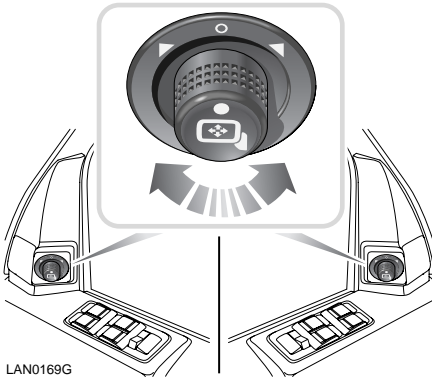
LAN0168G

# Door Mirrors

## EXTERIOR MIRRORS

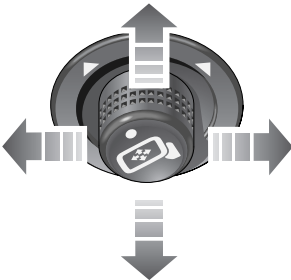
**Caution:** Objects viewed in exterior mirrors may appear further away than they actually are.

### Mirror adjustment



*Left and right hand drive.*

With the starter switch turned to position I or II, rotate the knob to select either the left or right-hand mirror. Push the knob in the appropriate direction to tilt the mirror glass up/down/left or right.



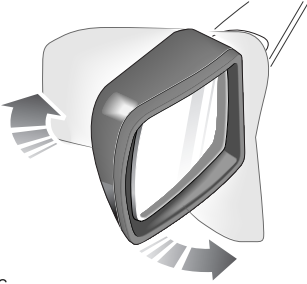
The door mirrors have integral heating elements which disperse ice or mist from the glass. These will operate automatically with the starter switch in position II and are controlled according to the external temperature and wiper status.

**Note:** On vehicles fitted with the driver's seat memory facility, up to three exterior mirror positions for each of three possible starter keys can be stored. See **DRIVER'S SEAT MEMORY FACILITY, 57.**

# Door Mirrors

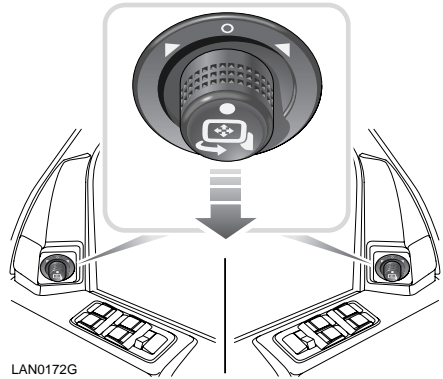
## Folding the mirror body

The door mirrors are designed to fold forwards or rearwards on impact. They can also be folded in towards the side windows into a park position.



LAN0171G

**Manual operation:** On some vehicles this operation can be carried out manually, by physically pushing the mirror bodies towards the side windows.



LAN0172G

*Left and right hand drive.*

**Electric operation:** With the rotary knob in the central position, push the knob downwards to fold the mirrors. Push the knob downwards again to unfold the mirrors.

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

# Door Mirrors

## Reverse mirror dipping

Vehicles with driver's seat memory have a pre-stored function, which causes the door mirrors to dip whenever reverse gear is selected, giving the driver a view of the kerbside.

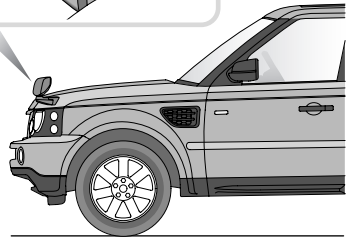
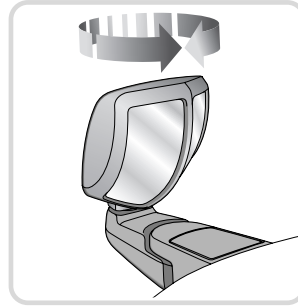
When this feature is first turned on, the mirrors will dip to a pre-set amount. See **SELECTING SETTINGS OPTION, 88**. The degree of dipping can be programmed using the following sequence:

1. Insert the starter key and turn it to position I or II. Do not start the engine.
2. Adjust the seat and the exterior mirrors to the correct position and perform a memory-store routine. See **Setting the memory pre-sets, 57**.
3. Select reverse gear - the mirrors will dip to a pre-set level.
4. Adjust the mirrors to the required dipped position.
5. Perform a memory-store sequence.
6. Within 5 seconds, press the pre-set button you previously stored the seat and mirror positions on.
7. **DOOR MIRROR DIP STORED** will be displayed on the message centre.
8. A single chime will sound from the instrument pack.



*This feature can be enabled or disabled by a Land Rover Dealer/Authorised Repairer or by the driver. See **SELECTING SETTINGS OPTION, 88**.*

## Proximity mirror (Japan only)



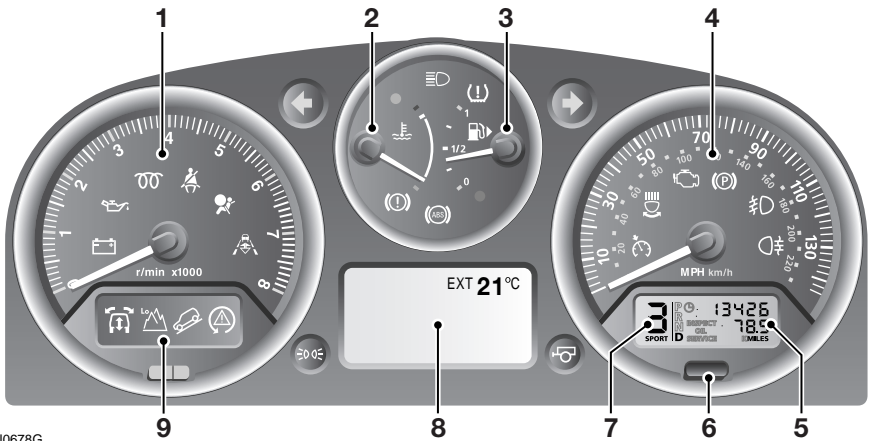
LAN0251J

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.

# Instruments

## INSTRUMENT PACK



LAN0678G

### 1. 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.

### 2. Temperature gauge

At normal operating temperature, the pointer will be positioned midway between the RED and BLUE segments of the gauge (the precise position will vary according to climatic conditions).

If the pointer moves above the mid point, the engine coolant is becoming too hot. Should the pointer move INTO the RED segment and the RED warning indicator within the gauge illuminates, severe engine damage could occur.



LAN0175G

Idle the engine and allow to cool down until the temperature gauge recovers. If the problem persists, seek qualified assistance before continuing.

**Note:** If the engine is in danger of overheating, the air conditioning may switch off and engine performance may reduce, in order to minimise engine load.



# Instruments

## 3. Fuel gauge

**Caution: NEVER allow vehicles to run out of fuel as the resultant misfire may destroy the catalytic converter.**

When the starter switch is turned to position II, the pointer quickly rises to show the level of fuel in the tank.



LAN0176G

When the remaining fuel reaches a minimum of 12 litres (3 gallons) on petrol vehicles, the AMBER low fuel warning indicator in the fuel gauge illuminates (arrowed).

The remaining fuel should give a range of 80 km (50 miles).

The small arrow visible alongside 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.

## 4. Speedometer

Indicates road speed.

## 5. Total distance (odometer) and trip recorder

Indicates the total distance travelled, and also shows the most recent individual journey distance. See **ODOMETER DISPLAY, 103**.

## 6. Trip recorder reset switch

With the starter switch in position II, pressing this button resets the trip recorder to zero.

## 7. Gear selector position display

Displays the current gear selector position. See **GEAR SELECTOR DISPLAY, 102**.

## 8. Main message centre

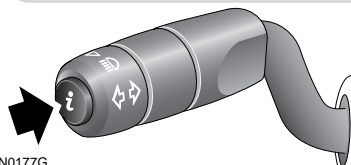
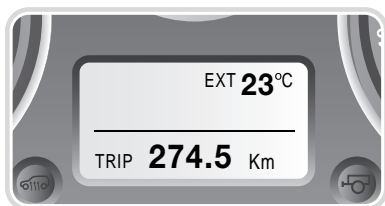
Displays all warning and information messages. See **MAIN MESSAGE CENTRE, 90**.

## 9. Tachometer indicators panel

Displays four system status indicators.

# Trip Computer

## TRIP COMPUTER - FUNCTION SELECTION



LAN0177G

The trip computer functions can be set by the user to give a wide range of information, with the units used by the displays being chosen by the driver. See **SELECTING SETTINGS OPTION, 88**.

The system is also used to display any warning messages generated by the vehicle's self-checking facility.

At engine start-up, the screen shows **SYSTEM CHECK IN PROGRESS**. When this check is completed, the screen will show the outside temperature. If the vehicle is in motion, the screen will also show the current trip distance.

Trip computer statistics can be viewed by pressing the **i** button on the end of the direction indicator stalk.

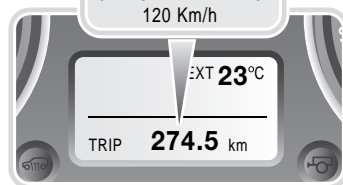
A long press of the button (over two seconds) will zero the trip distance recorder which will then start to record distance from that point.

RANGE **387** km

AV. FUEL **4.3** l/100km

AV. SPEED **57** km/h

OVERSPEED WARNING  
120 Km/h



LAN0180G

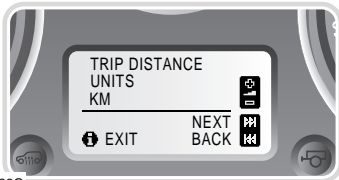
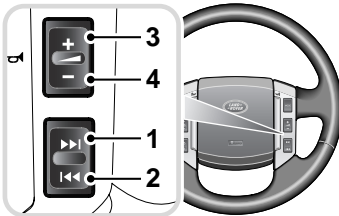
A series of short presses of the button (less than two seconds) will scroll through the following:

- Available range (with current fuel tank contents)
- Average fuel consumption
- Average speed
- The option to activate/de-activate the overspeed warning function (A long press of the button turns the function on or off)
- A review of active warning messages
- A blank trip computer window (screen shows outside temperature)
- Settings option menu
- A display of trip distance
- Time display

# Settings Option

## SELECTING SETTINGS OPTION

Various vehicle functions can be selected to suit personal requirements. These can be set by the driver.



LAN0183G

With the starter key in any position, but with the vehicle stationary and a blank screen displayed, a short press (less than two seconds) on the **i** (information) button on the end of the direction indicator stalk brings up the **SETTINGS** display.

Once this screen is displayed, pressing button **1** gives access to the menu of options that can be personalised.

Move through the Settings menu by pressing buttons **1** or **2**, and make choices by pressing buttons **3** or **4**.

When you have finished making adjustments, a short press (less than two seconds) on the **i** button will return you to the trip computer display.

# Settings Option

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SETTINGS	CHOICE
TRIP DISTANCE UNITS (odometer)	MILES/KM
FUEL USAGE UNITS	MPG l/100km Km/l
EXTERNAL TEMPERATURE	°C or °F
OVERSPEED WARNING	Off 20 - 250 km/h or 15 to 140 mph in 5-unit steps (units set as trip distance)
HEADLAMP OFF DELAY	30/60/120/240 seconds
AUTO DOOR LOCK (speed related locking)	ON/OFF
REVERSE MIRROR DIP	ON/OFF
LAZY ENTRY	ON/OFF
RESTORE DEFAULT SETTINGS	YES/NO

## Confirming choices

After making any changes to the Settings options, press the information button again to save settings and exit.

**Note:** *If the vehicle is moved while any changes are being made to the Settings options, the system will prevent any further input until the vehicle is stationary again.*

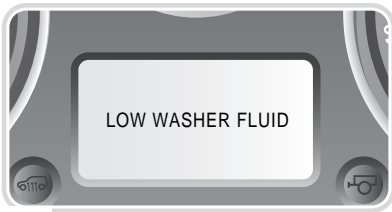
## Key memory

All of the choices made during Settings are stored within the vehicles memory. The choices are referenced to the remote control that was used during the process.

These choices are recalled when the vehicle is next unlocked using that remote control.

# Message Centre

## MAIN MESSAGE CENTRE



LAN0186G

Driver warning and information messages are displayed in the main message centre.

They are displayed when a fault is detected and also when the starter switch is turned off. It is possible, by pressing the **i** button on the direction indicator stalk, to view messages for up to 3 minutes after the key has been removed from the starter switch.

Messages have different priority levels and are grouped into the following categories.

### Critical warning messages

Critical warning messages are accompanied by an audible warning and may have the handbook symbol next to it.

DO NOT ignore these messages - TAKE CORRECTIVE ACTION IMMEDIATELY!

### Warning messages

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

DO NOT ignore these messages - TAKE CORRECTIVE ACTION AS SOON AS POSSIBLE.

All Warning messages are displayed for approximately 4 seconds, after which the **i▶** symbol is displayed in the main message centre for as long as the message exists. There are current warning messages waiting to be reviewed. Review the messages by pressing the **i** button on the direction indicator stalk until the list of messages appears. The message centre will then automatically cycle through the messages, until the **i** button is pressed again.

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.

Messages are displayed in order of importance with critical warnings taking priority.

### Information messages

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.

Messages are displayed in order of importance with critical warnings taking priority.

### Languages

The language displayed in the main message centre is a dealer configurable feature.

The languages supported are:

- English
- English US
- French
- German
- Italian
- Spanish

# Message Centre

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If your vehicle has the navigation option, the language you select for navigation display will also be displayed in the main message centre, if it is one of the supported languages in the above list. If the main message centre does not support the selected navigation language, English will be displayed.


# Message Centre

## MESSAGE CENTRE MESSAGES

The following table is a comprehensive list of all messages that could appear in the message centre. Market criteria mean that some messages will not apply to your vehicle and will therefore not appear.

Message	Meaning	What to do?
The <b>i▶</b> icon appears in the display	There are current warning messages waiting to be reviewed.	Press the <b>i</b> button on the end of the direction indicator stalk to view the list of messages.
AIRBAG FAULT	Fault in supplementary restraint system.	Seek qualified assistance immediately.
CANNOT EDIT ON THE MOVE	Driver has attempted to access the Customer Settings menu when the vehicle is moving.	Stop the vehicle before entering Customer Settings menu.
CAUTION PARKBRAKE APPLIED	Parkbrake has been applied while the vehicle is moving.	Only use this function 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).	Raise suspension manually to off-road height if possible and appropriate.
CHECK ALL TYRE PRESSURES	Advisory message, pressure in a running tyre decreased to first warning threshold.	Check tyre pressures.
CHECK BRAKE FLUID	Brake fluid in reservoir below recommended level.	Seek qualified assistance immediately.
CHECK BRAKE PADS	Brake pads worn beyond the service limit.	Seek qualified assistance immediately.
CHECK SPARE TYRE PRESSURE	Pressure in spare tyre decreased to warning threshold.	Check pressure of spare tyre.
COOLING SYSTEM FAULT MONITOR GAUGE	Low coolant level	Stop the vehicle and check level. Top up with engine coolant. If the problem persists, consult your Dealer.
CRUISE CANCELLED	Driver has switched off cruise control.	Nothing.

# Message Centre

Message	Meaning	What to do?
DRIVER OVERRIDE	Driver is pressing the accelerator pedal during cruise control.	Nothing, message will clear when the driver releases the accelerator, then cruise control will resume.
CRUISE NOT AVAILABLE	System not available due to system fault.	Consult your Land Rover Dealer/Authorised Repairer.
CRUISE CONTROL NOT PERMITTED	System fault or vehicle operating parameters outside threshold for operation of cruise control.	Consult cruise control section of this handbook for guidance.
SET SPEED XXX MPH KM/H	Speed set for Adaptive Cruise Control.	Nothing.
CRUISE GAP 	Adaptive Cruise Control set distance (time gap).	Adjust to required distance. (4 settings).
ACC SENSOR BLOCKED	Adaptive Cruise Control field of view may be obstructed.	Check to make sure nothing is covering the ACC sensor.
FWD ALERT ON (or OFF)	Forward alert feature has been turned on or off.	Nothing.
FWD ALERT <---->	Forward alert sensitivity adjustment.	Adjust to required sensitivity. (4 settings).
DOOR MIRROR DIP STORED	Memory system - confirmation that memory has stored driver information.	Nothing.
DRIVER INTERVENE	Alert that action by the driver to apply the brakes is required.	If required, the driver should apply the brakes.
DRIVER'S DOOR OPEN	Driver's door open or not fully closed.	Close driver's door.
DSC SWITCHED OFF	System not available - switched off by driver.	To reselect, press DSC switch.
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.
ENGINE SYSTEM SERVICE REQUIRED	The relevant service interval has elapsed and your vehicle requires servicing.	Arrange as soon as possible.
FASTEN SEAT BELTS	Seat occupied and safety belt not fastened.	Fasten safety belt.



# Message Centre

Message	Meaning	What to do?
GRASS GRAVEL SNOW	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
GRASS GRAVEL SNOW PROGRAM SELECTED	The rotary knob has been left in one position for longer than two seconds and Grass Gravel Snow special program has been activated.	Nothing.
HDC FAULT SYSTEM NOT AVAILABLE	System fault.	Drive with care and do not attempt to descend steep slopes. Seek assistance immediately.
HDC NOT AVAILABLE IN THIS GEAR	HDC not operative because of incorrect gear selection. HDC is fully functional in <b>1</b> , <b>R</b> and <b>D</b> 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, max speed for HDC selection is 80 km/h.	Reduce vehicle speed.
HDC SWITCHED OFF	HDC switched off by driver, Terrain Response system or speed threshold exceeded.	Nothing.
HDC TEMPORARILY NOT AVAILABLE SYSTEM COOLING	HDC switched off while brake system is cooling.	Wait until message disappears before attempting to descend steep slopes.
HIGH ENGINE SPEED FOR COOLING	Engine idle speed increasing to improve cooling and/or air conditioning performance.	Nothing.
HIGH/LOW RANGE SELECTED	Advises driver that transfer box has engaged HIGH/LOW range.	Nothing.
INTERIOR LIGHTS OFF	Courtesy lamps can only be operated manually, and will not illuminate when a door is opened.	Nothing
INTERIOR LIGHTS AUTOMATIC	All courtesy lamps have been enabled.	Nothing

# Message Centre

Message	Meaning	What to do?
KEY BATTERY LOW PLACE KEY IN IGNITION TO CHARGE	Remote control battery charge low.	Insert key in starter switch and start the engine to recharge the remote control battery.
LOW COOLANT LEVEL	Coolant level in header tank below recommended level.	Stop the vehicle and check level in the header tank. Top up with correct mixture of antifreeze and water at the earliest opportunity. If the problem persists, consult your Land Rover Dealer/Authorised Repairer.
LOW WASHER FLUID	Washer fluid quantity below 1 litre.	Top up washer fluid.
MEMORY 1/2/3 STORED/SELECTED	Memory system - confirmation that memory has been stored/selected.	Nothing.
MUD RUTS	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
MUD RUTS SELECTED	The rotary knob has been left in one position for longer than two seconds and Mud Ruts special program has been activated.	Nothing.
PARKBRAKE BEDDING CYCLE ACTIVE	A garage technician has requested a bedding cycle.	If not required, an ignition reset will cancel the function.
PARKBRAKE FAULT	Supports the amber warning indicator - electric parkbrake functions may not be available.	Seek qualified assistance.
PARKBRAKE FAULT AUTO RELEASE NOT FUNCTIONAL	Drive-away release function is not available.	Use manual release.
PARKBRAKE FAULT SYSTEM NOT FUNCTIONAL	Supports the red warning indicator - electric parkbrake functions are not available.	Seek qualified assistance immediately.
PARKBRAKE FAULT TO HOLD VEHICLE REMOVE KEY THEN APPLY PARKBRAKE	Electric parkbrake has lost vehicle speed information.	Follow the instructions to park the vehicle.

# Message Centre

Message	Meaning	What to do?
PARKBRAKE OFF LIFT SWITCH TO APPLY	An emergency release operation is detected.	Once original faults have been corrected, apply the switch to reinstate electric parkbrake.
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 FOOT BRAKE AND PARKBRAKE SWITCH TO RELEASE	A switch release has been detected without brake pedal contact.	Follow the instructions to achieve a manual release.
PRESS FOOT BRAKE OR CLUTCH AND PARKBRAKE SWITCH TO RELEASE	A switch release has been detected without brake pedal contact.	Follow the instructions to achieve a manual release.
PROGRAM CHANGE IN PROGRESS	Conditions prevail which make it temporarily impossible to select a new Terrain Response program. This can be due to ABS or DSC activity or the overheating of the electronic differentials.	Be patient. If conditions change within 60 seconds, the chosen program will be activated. If the message is prompted by electronic differential overheat, then it will take longer but there will be separate advice about this. Once the differentials have cooled and this advice is no longer present, try to reselect the required special program.
RECOMMEND LOW RANGE IS SELECTED FOR MUD-RUTS PROGRAM	LOW range is usually better for Mud-Ruts special program.	Select LOW range if required.
RECOMMEND RAISING SUSPENSION TO OFF ROAD HEIGHT IN DEEP MUD-RUTS	In deep ruts it is beneficial to raise the vehicle to off-road height. This is done automatically in LOW range but has to be done manually if mud/ruts program is used in HIGH range.	Raise suspension manually to off-road height.

# Message Centre

Message	Meaning	What to do?
RECOMMEND STARTING IN 2ND/3RD GEAR FOR SLIPPERY CONDITIONS	For slippery conditions it can be beneficial to start off in a higher gear than usual.	Select second/third gear.
REDUCED ENGINE PERFORMANCE	Engine management system registers a serious fault - reduced engine performance may be experienced.	Avoid high speeds and consult your Land Rover Dealer/Authorised Repairer.
RESET SUSPENSION HEIGHT IF CLEAR OF OBSTACLE	Suspension still in extended mode.	Check if vehicle is clear of obstacle. If clear, select required suspension.
ROCK CRAWL	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
ROCK CRAWL SELECTED	The rotary knob has been left in one position for longer than two seconds and Rock Crawl special program has been activated.	Nothing.
SAND	If you leave the rotary knob in this position then you will activate the highlighted Terrain Response special program.	Nothing.
SAND SELECTED	The rotary knob has been left in one position for longer than two seconds and Sand special program has been activated.	Nothing.
SELECT LOW RANGE TO ACTIVATE ROCK CRAWL	Vehicle is not in LOW range, so Rock Crawl cannot be activated.	Select LOW range if Rock Crawl is required.
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 LOWER/RAISE	Vehicle will automatically lower/raise 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.

# Message Centre

Message	Meaning	What to do?
SPEED TOO HIGH FOR RANGE CHANGE	Driver has requested range change when vehicle speed is too high.	Reduce speed to 40 km/h.
SUSPENSION ACCESS HEIGHT SELECTED	Access height selected.	Nothing.
SUSPENSION CLOSE DOOR TO CHANGE HEIGHT	Air suspension height change is prevented because a door is open.	Close all doors.
SUSPENSION FAULT	A fault has been detected in the air suspension system. System may still operate normally.	Seek qualified assistance immediately.
SUSPENSION FAULT MAX SPEED 50 KM/H (MAX SPEED 30 MPH)	A major fault has been detected in the air suspension system. Height cannot be controlled.	Drive slowly until fault can be rectified.
SUSPENSION FAULT NORMAL HEIGHT ONLY	A fault has been detected in the air suspension system. Only normal height is available.	
SUSPENSION FAULT STOP SAFELY STOP ENGINE	Major component failure.	Stop vehicle immediately and seek qualified assistance.
SUSPENSION FAULT VEHICLE LEAN WHEN CORNERING	A fault has been detected in the Dynamic Response system.	Drive slowly and take additional care until fault can be fixed.
SUSPENSION IN EXTENDED MODE	Vehicle body has become trapped on an obstacle and will raise automatically.	Nothing.
SUSPENSION LOCKED AT ACCESS HEIGHT	Crawl mode selected and suspension locked.	Nothing.
SUSPENSION NORMAL HEIGHT SELECTED	Normal height selected.	Nothing.
SUSPENSION SPEED TOO HIGH TO CHANGE HEIGHT	A height change has been requested but is prevented because speed is too high.	Reduce vehicle speed.
SUSPENSION START ENGINE TO RAISE VEHICLE	Vehicle height can only be raised with the engine running.	Start the engine.

# Message Centre

Message	Meaning	What to do?
SUSPENSION VEHICLE RAISING SLOWLY	Vehicle is raising slowly because reservoir is empty (only displayed if lift time exceeds 24 seconds. This is NOT a system fault).	Nothing.
SUSPENSION WILL RAISE WHEN SYSTEM COOLED	Air suspension compressor is cooling. Lifting will resume when compressor has cooled.	Wait for suspension to carry out lifting sequence.
SYSTEM CHECK IN PROGRESS	Instrument cluster internal diagnostic routine.	Nothing.
SYSTEM FAULT SOME PROGRAMS NOT AVAILABLE	Some Terrain Response special programs are not available because of a system fault.	Be careful going off-road as Terrain Response may not function in the program required. Get the vehicle checked and rectified.
SYSTEM FAULT SPECIAL PROGRAMS NOT AVAILABLE	There is a fault on the vehicle which makes the Terrain Response special programs unavailable.	Be careful going off-road as Terrain Response cannot function in any of its special programs. Get the vehicle checked and rectified.
TERRAIN RESPONSE SPECIAL PROGRAMS OFF	If you leave the Terrain Response rotary knob in this position, you will activate the general program and any active Terrain Response special program will be deselected.	Nothing.
TRAILER CONNECTED OFF ROAD HEIGHT NOT SELECTED AUTOMATICALLY	Advisory message that vehicle has not selected off-road height as trailer socket is being used.	If a trailer is connected, do nothing, as it may not be safe to raise the vehicle to off-road height. If no trailer is connected electrically but something else is, such as a bike rack, then the vehicle can be raised to off-road height manually. If nothing is connected, then the socket needs checking for faults.
TRANSMISSION FAULT	Advises driver that automatic transmission has a fault.	Seek qualified assistance immediately.

# Message Centre

Message	Meaning	What to do?
TRANSMISSION FAULT AND OVERHEAT	Advises driver that an automatic transmission fault has occurred and the temperature is too high.	Seek qualified assistance immediately.
TRANSMISSION FAULT LIMITED GEARS AVAILABLE	Advises driver that automatic transmission has a fault and performance may be affected.	Seek qualified assistance immediately.
TRANSMISSION FAULT STOP SAFELY	Advises driver that a fault has occurred with the electronic rear differential.	Stop the vehicle as soon as it is safe to do so.
TRANSMISSION FAULT TRACTION REDUCED	Advises driver that a fault has occurred with the transfer box control system.	Reduce speed and seek qualified assistance immediately. <i>Note: Off-road performance will be reduced.</i>
TRANSMISSION OVERHEAT SLOW DOWN	Rear differential temperature has reached or is approaching the overheat threshold.	Reduce speed and seek qualified assistance immediately.
TRANSMISSION RANGE CHANGE NOT AVAILABLE	Advises driver that a fault has occurred which prevents the transfer box from changing range.	Reduce speed and seek qualified assistance immediately.
TRANSMISSION TRACTION REDUCED	Transfer box control module fault.	Reduce speed and seek qualified assistance immediately.
TYRE PRESSURE NOT MONITORED	Possible loss of RF transmission or defective sensor battery.	Seek assistance immediately.
TYRE PRESSURE TOO HIGH	Pressure in a running tyre too high, threshold reached.	Adjust to correct pressure as soon as possible.
TYRE PRESSURE VERY LOW	Pressure in a running tyre decreased to warning threshold.	Adjust to correct pressure as soon as possible.
TYRE PRESSURE MONITORING SYSTEM FAULT	TPM system fault has occurred.	Seek qualified assistance immediately.
TYRE PRESSURES TOO HIGH		Adjust to correct pressure as soon as possible.
TYRE PRESSURES VERY LOW		Adjust to correct pressure as soon as possible.

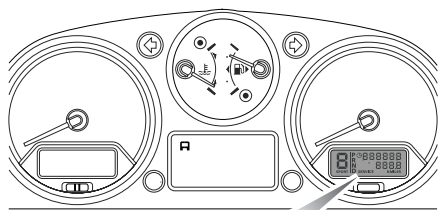
# Message Centre

<b>Message</b>	<b>Meaning</b>	<b>What to do?</b>
TYRE PRESSURE MONITORING SET FOR HEAVY LOAD	Indicates the system is set to monitor the tyre pressures for heavily laden conditions.	Ensure setting is correct for the current tyre pressures and loading conditions.
TYRE PRESSURE MONITORING SET FOR LIGHT LOAD	Indicates the system is set to monitor the tyre pressures for normally laden conditions.	Ensure setting is correct for the current tyre pressures and loading conditions.



# Message Centre

## SERVICE INTERVAL INDICATOR



LAN0187G

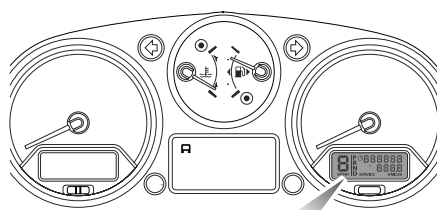
The service interval indicator is a market configurable feature and may not be enabled. If the feature is enabled, the display will become active when a pre-determined distance or time before service is reached. These pre-determined values are market dependent.

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

After approximately five seconds, the display reverts to show the total distance travelled.

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

## GEAR SELECTOR DISPLAY



LAN0188G

This shows the current gear lever position and indicates when SPORT has been selected.

# Message Centre

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## ODOMETER DISPLAY



LAN0189G

With the starter switch turned to position **II**, the display indicates the total distance travelled by the vehicle, and also shows the most recent individual journey distance. See **SELECTING SETTINGS OPTION, 88**. Pressing the trip recorder reset button (see inset), resets the trip recorder to zero.



# Warning Indicators

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

## TACHOMETER

### Battery charging - RED



Illuminates as a bulb check when the starter switch is turned to position **II** and extinguishes once the engine is running. If it remains on, or illuminates whilst driving, a fault with the battery charging system is indicated. Seek qualified assistance urgently.

### Low oil pressure - RED



Illuminates as a bulb check when the starter switch is turned to position **II** and extinguishes when the engine is started. If the 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.

### Glow plug - AMBER (diesel only)



Illuminates when the starter switch is turned to position **II**. When the engine is cold, wait for the lamp to extinguish before starting. If the engine is warm, the lamp will not illuminate.

### Seat belt - RED



Illuminates when the starter switch is turned to position **II** and extinguishes after approximately 6 seconds, even if the driver's seat belt remains unfastened. In some markets illumination of the indicator will be accompanied by a warning chime. See **AUDIBLE WARNINGS, 109**.

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

### Airbag - RED



The indicator illuminates when the starter switch is turned to position **II** and extinguishes after about 4 seconds. If the indicator illuminates at any other time, there is a fault with the system - seek qualified assistance urgently.

### Adaptive Cruise Control (ACC) active



Illuminates when Adaptive Cruise Control detects a vehicle in front and will react to it.

# Warning Indicators

## Suspension- AMBER/RED



This lamp is shared between the Air suspension system and Dynamic Response.

The lamp illuminates both RED and AMBER briefly as a bulb check when the starter switch is turned to position II.

If illumination occurs whilst driving, a fault with one of the systems is indicated, as follows:

- If the lamp shows RED (a flashing red lamp which changes to constant illumination after two minutes, and is accompanied by a warning chime): This indicates a system fault that may result in serious damage to vehicle components and reduced Dynamic Response performance. Stop the vehicle as soon as safety permits and switch off the engine. DO NOT CONTINUE DRIVING! Seek qualified assistance immediately.

The following message will be displayed in the message centre window to accompany a red warning lamp for a dynamic response system failure:

**SUSPENSION FAULT, STOP SAFELY, STOP ENGINE.**

If the following message is displayed in the message centre:

**SUSPENSION FAULT, MAX SPEED 50KPH (MAX SPEED 30MPH).**

This indicates an air suspension fault, with the system not being able to control ride height. In which case the maximum speed indicated should not be exceeded until the fault has been rectified.

- If the lamp shows AMBER (constant illumination): This indicates a system fault that will result in reduced Dynamic Response performance but will not leave the vehicle in a dangerous condition. You may continue driving, but reduce speed, take additional care, and consult a Land Rover Dealer/Authorised Repairer at the earliest opportunity. The ride quality of the vehicle may be reduced in this condition.

The following message will be displayed in the message centre window to accompany an amber warning lamp:

**SUSPENSION FAULT, VEHICLE LEAN, WHEN CORNERING.**

If the following message is displayed in the message centre:

**SUSPENSION FAULT, NORMAL HEIGHT ONLY.**

This indicates an air suspension fault, but the vehicle can still be driven normally.

## LOW gear- GREEN



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

# Warning Indicators

## Hill Descent Control (HDC) information - GREEN



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

If HDC is selected and all operating conditions are met, the indicator will illuminate continuously.

If HDC is selected and all operating conditions are not met (vehicle in neutral gear, vehicle speed above HDC operating range) the indicator will flash.

If a fault with the HDC system occurs, HDC will fade-out and then deselect, or deselect immediately (depending on the type of fault and whether or not HDC is in operation). The green indicator will extinguish and the message **SYSTEM NOT AVAILABLE** will be displayed in the message centre.

## Dynamic Stability Control (DSC) and Electronic Traction Control (ETC) - AMBER



Illuminates briefly as a bulb check when the starter switch is turned to position **II**. The indicator also illuminates when DSC is switched off.

De-activating DSC has no effect on traction control.

The indicator will flash while DSC and/or ETC is activated and will remain flashing until the system is no longer active.

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

## FUEL/TEMPERATURE GAUGE

### Headlamp high beam - BLUE



Illuminates when the headlamps are switched to high beam or headlamps are flashed.

### TPM system operation



The tyre pressure warning comprises a yellow warning indicator (telltale) within the instrument pack and an associated message within the message centre.

### Brake systems - AMBER/RED



This indicator shares its position and symbol with four brake system warnings and illuminates briefly as a bulb check when the starter switch is turned to position **II** (the indicator will illuminate red and amber during bulb check).

### Emergency Brake Assist (EBA) - AMBER

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

### Brake pad wear - AMBER

It illuminates when brake pad wear has reached a predetermined limit.

### Electronic Brake force Distribution (EBD) - RED

A fault with the EBD system is indicated by illumination of the red brake warning indicator. If this illuminates while the vehicle is being driven, stop the vehicle gently, as soon as safety permits, check and top up brake fluid if necessary. If the lamp remains illuminated, seek qualified assistance before continuing.

# Warning Indicators

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## Brake fluid level - RED

Low brake fluid level is indicated by illumination of the red brake warning indicator. If this illuminates while the vehicle is being driven, stop the vehicle gently, as soon as safety permits. Check and top up brake fluid if necessary. If the lamp remains illuminated, seek qualified assistance before continuing. Have the problem checked by your Land Rover Dealer/Authorised Repairer.

## Anti-lock Braking System (ABS) - AMBER



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

## SPEEDOMETER

### Cruise control active - AMBER



Illuminates when Cruise Control is operating.

## Adaptive Front lighting System (AFS) - AMBER



Flashes when a fault occurs with the Adaptive Front Lighting System.

## Check engine - AMBER



Illuminates as a bulb and system check when the starter switch is turned on and extinguishes as soon as the engine is started. Illumination at any other time indicates an engine fault. If the indicator illuminates continuously while driving, the emission performance of the engine management system is impaired - seek qualified assistance.

If the indicator flashes while driving, immediately reduce engine power to avoid catalytic converter damage.

## Parkbrake system - RED



Illuminates for about 3 seconds as a bulb check when the starter switch is turned to position II.

If the indicator flashes red, a fault with the parkbrake 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 parkbrake.

## 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.

# Audible Warnings

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## AUDIBLE WARNINGS

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

### Electronic air suspension warnings

A warning chime will sound:

- Whenever the air suspension raise/lower switch is operated to raise the vehicle to off-road height, or to return it to standard ride height.
- If changes to or from off-road height are requested but not permitted.
- Whenever the speed threshold for the current ride height is reached.
- Whenever the air suspension is lowered to crawl mode.

### Dynamic Response warning

A warning chime will sound:

- If a fault with the Dynamic Response system is detected. The chime will coincide with the suspension warning lamp flashing RED then turning solid after 2 minutes, with the following message in the message centre **SUSPENSION FAULT, STOP SAFELY, STOP ENGINE**. This indicates a system fault that may result in serious damage to vehicle components and reduced Dynamic Response performance. Stop the vehicle as soon as safety permits and switch off the engine. **DO NOT CONTINUE DRIVING!** seek qualified assistance immediately.

### Dynamic Stability Control (DSC) warning

A warning chime will sound once:

- If a fault with the DSC system is detected, and the appropriate warning indicator(s) illuminates (DSC, ABS, Amber Brake Warning or HDC fault text message). The vehicle may still be driven with care, but seek qualified assistance at the earliest opportunity.

### Adaptive Cruise Control (ACC) warning

A warning chime will sound:

- When the driver must intervene and take control.

### Electric parkbrake

A warning chime will sound:

- If the driver selects electric parkbrake whilst the vehicle is moving.

### Starter key reminder

A warning will chime continuously:

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

### 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).

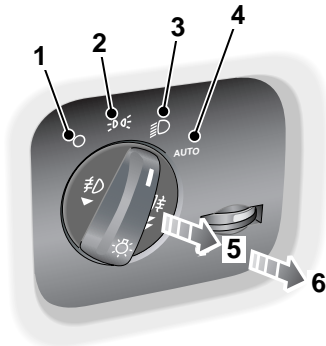
If the seat belt remains unfastened, the chime will sound at intervals of 15 seconds.



# Lamps and Indicators

## EXTERIOR LAMPS

### Lamps master switch



LAN0403G

1. Side lamps and headlamps off.
2. Side lamps on.
3. Low beam headlamps on.
4. Automatic control lamps on.
5. Front fog lamps on.
6. Front and rear fog lamps on.

If front fog lamps are not fitted, the rear fog lamps will come on at position 5.

**Note:** Fog lamps cannot be operated if the lamps master switch is at position 4 Auto.

### Side lamps

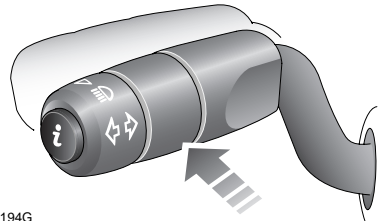
The front and rear side lamps, along with licence plate lamps, illuminate when the lamps master switch is turned to positions 2 or 3, regardless of the position of the starter switch.

### Automatic control lamps

With the lamps master switch in position 4 and starter switch in position II, the side lamps, low beam headlamps and licence 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.

### High beam



LAN0194G

With the lamps master switch in position 3 and starter switch in position II, push the left-hand steering column lever away from the steering wheel as far as it will go to select high beam, and release it.

To cancel high beam, pull the lever towards the steering wheel again and release it.

While high beam is selected, a blue indicator will be illuminated in the instrument pack.

### Headlamp high beam flash

To flash the headlamps on high beam, pull the lever towards the steering wheel and release it.

The blue indicator in the instrument pack illuminates when the headlamps are flashed.

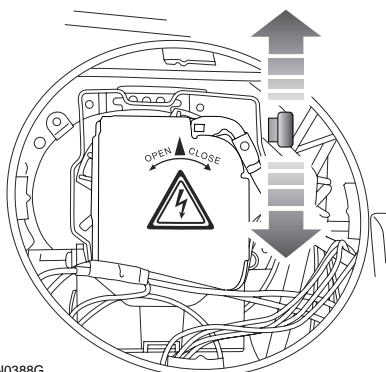
# Lamps and Indicators

## Headlamp touring adjustment

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.

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.

## Xenon headlamps



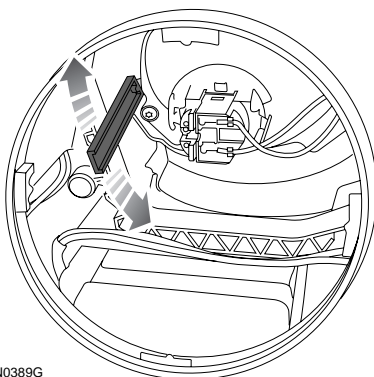
LAN0388G

Follow the process shown in **HEADLAMP UNIT, 272** to gain access to the inside of the headlamp unit. Move the lever to adjust the beam.

### Lever default position - Xenon headlamps

Right hand headlamp	Up
Left hand headlamp	Up

## Halogen headlamps



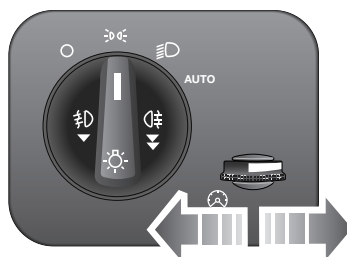
LAN0389G

Follow the process shown in **HEADLAMP UNIT, 272** to gain access to the inside of the headlamp unit. Move the lever to adjust the beam.

### Lever default position - Halogen headlamps

Right hand headlamp	Down
Left hand headlamp	Up

## Dimmer control



LAN0195G

Rotate the dimmer control to vary the level of instrument pack illumination.

# Lamps and Indicators

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## Headlamp courtesy delay

As a driver convenience feature the headlamps can be kept on for a short time after the vehicle is parked. Turn the starter switch off with the headlamps still switched on. The lamps master switch can be in positions **2**, or **3**. With the switch in position **4** the Headlamp delay works in automatic mode.

Remove the key from the starter switch and turn lamps master switch fully anticlockwise to the Off position. The headlamps will remain illuminated for up to 240 seconds. This automatic time delay is configurable. See **SELECTING SETTINGS OPTION, 88**.

The courtesy delay may be cancelled at any time by turning the starter switch to position **I** or **II** or the lamps master switch from position **1** to **2**.

***Note:** If Automatic Control Lamps are switched on, the headlamp courtesy delay will operate automatically.*



*Headlamp courtesy delay can be enabled or disabled by a Land Rover Dealer/Authorised Repairer or by the driver. See **SELECTING SETTINGS***

**OPTION, 88.**

## Cornering lamps

The cornering lamps produce an angled beam on the relevant side of the vehicle at speeds below 40 km/h (25 mph) when the headlamps are on and the turn indicator stalk is moved to indicate a turn.

## Daytime running lamps

In certain markets, with the engine running and the main lighting switch turned off, the front and rear side lamps, the licence plate lamps and the headlamp low beams will illuminate. The instrument pack illumination remains off.



*Unless they are required or prohibited by law, daytime running lamps can be disabled/enabled by a Land Rover Dealer/Authorised Repairer.*

***Note:** The following lamps operate only with the starter switch in position **II**.*

## Stop lamps

The stop lamps will illuminate when the brake pedal is pressed and will remain on while the brake pedal is pressed.

The stop lamps also illuminate when Hill Descent Control is braking the vehicle or during Electronic Parkbrake dynamic deceleration.

## Reversing lamps

Selection of reverse gear will operate the reversing lamps.

## Front fog lamps

### WARNING

**Fog lamps should ONLY be used when visibility is severely restricted - as soon as conditions clear, switch off fog lamps to prevent dazzling of other road users.**

---

With the lamps master switch in positions **2** or **3**, pull out the switch to position **5** to operate the front fog lamps.

An indicator will illuminate in the instrument pack.

# Lamps and Indicators

## Rear fog lamps (with front fog lamps fitted)

With the lamps master switch in positions **2** or **3**, pull out the switch to position **6**. An indicator will illuminate in the instrument pack.

## Rear fog lamps (no front fog lamps fitted)

With the lamps master switch in position **3**, pull out the switch to position **6**. An indicator will illuminate in the instrument pack.

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

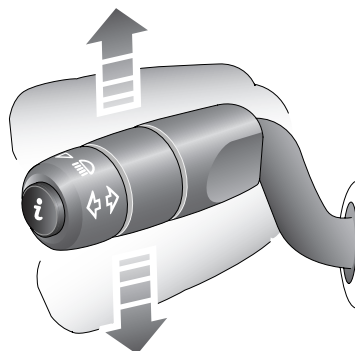
## HAZARD WARNING LAMPS



Press the switch to operate the hazard warning lamps. All of the direction indicator lamps (including the instrument pack warning indicators and those fitted to a trailer) will flash together.

Use **ONLY** in an emergency to warn other road users when your stationary vehicle is causing an obstruction, or is in a hazardous situation. Remember to switch off before moving away.

## DIRECTION INDICATORS



LAN0197G

With the starter switch in position **II**, the left-hand steering column lever will operate the direction indicators (a GREEN warning indicator on the instrument pack will flash in time with the direction indicators).

**Note:** Bulb failure of any front or rear direction indicator lamp (not side repeaters) will cause the instrument pack warning indicator to flash rapidly and the audible indicator signal to double in speed.

### Lane change flash

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

If the lever is held against spring pressure, the direction indicators will continue to operate until the lever is released.



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

# Wipers and Washers

## OPERATING

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

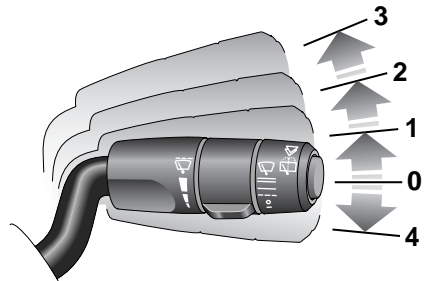
### Note:

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

**Note:** If the wiper blades have stuck to the glass, an electronic cut-out may temporarily prevent the wiper motor from operating. If this is the case, switch the wipers off and turn the starter switch off. Clear the obstruction and try again.

Semi-automatic operation of the wiper blades is possible by setting the wiper lever to the rain sensor variable delay mode. In this mode, the wipers operate only when the rain sensor detects moisture on the windscreen and remain inactive whilst the screen is dry.

## WINDSCREEN WIPERS



LAN0198G

### Rain sensor/Intermittent variable delay

Push the lever up to position 1.

### Normal speed wipe

Push the lever up to position 2.

### Fast speed wipe

Push the lever up to position 3.

### Single wipe

Pull the lever down to position 4 and release immediately.

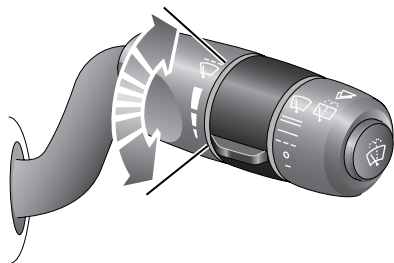
**Note:** With the lever held down, the wipers will operate at fast speed until the lever is released.

### Auto park

If the starter switch is turned to the Off position while the wipers are operating, they will continue to the Park position and stop.

# Wipers and Washers

## Intermittent variable delay



LAN0199G

With the lever in position **1**, rotate the delay switch clockwise to increase (a wipe will occur immediately), and anticlockwise to decrease, the frequency of the intermittent wipe.

### Speed-dependent mode

When speed dependent mode is configured, the operation of all wiper modes will be affected by vehicle speed.

If the vehicle's speed drops below 8 km/h (5 mph) with the wipers operating, the wiper frequency automatically reduces. The wipers will switch to the next lowest operating speed. When the vehicle's speed increases to over 8 km/h (5 mph), the original wiper speed setting is restored automatically.



*This setting can be configured by a Land Rover Dealer/Authorised Repairer.*

### Speed-dependent-intermittent mode

The frequency of intermittent variable delay is also adjusted automatically according to road speed on those vehicles not equipped with a rain sensor.

The intermittent period can be adjusted for each of the speed-dependent modes by rotating the delay switch either clockwise or anticlockwise.

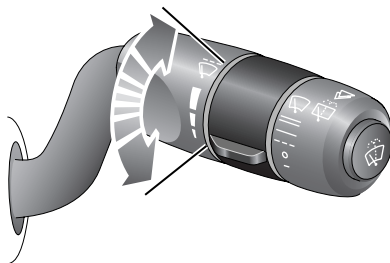


*This setting can be configured by a Land Rover Dealer/Authorised Repairer.*

## Rain sensor variable delay

### WARNING

**BEFORE** entering an automatic car wash, ensure that the wipers are switched off—otherwise, they could operate during the car wash programme and be damaged.



LAN0199G

The rain sensor is fitted to the inside of the windscreen, immediately ahead 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 position **1**, the variable delay automatically adjusts the frequency of the wiper operation according to the information supplied by the rain sensor.

You can increase (a wipe will occur immediately) or decrease the sensitivity of the rain sensor, and therefore the frequency of wiper operation, by rotating the delay switch—either clockwise or anticlockwise.

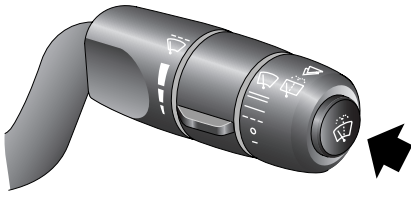
If the sensor detects constant rain, the wipers will operate continuously.

# Wipers and Washers

## FRONT WINDSCREEN WASHER

### WARNING

If you operate your vehicle in temperatures below 5°C (40°F), use washer fluid with anti-freeze protection. In cold weather, failure to use washer fluid with anti-freeze protection, could result in impaired windscreen vision and increase the risk of a vehicle crash.



LAN0200G

Push the wiper stalk button to operate the front screen washer. If the button is pressed for more than 0.5 seconds, the washer will continue to operate while the button is pressed. When the button is released, the wipers will complete the current stroke and then complete two further strokes before parking automatically.

If the button is pressed for less than 0.5 seconds, only the washer will operate.

**Note:** National or local regulations may restrict the use of volatile organic compounds (VOCs), which are commonly used as anti-freeze agents in washer fluid. A washer fluid with limited VOC content should be used only if it provides adequate freeze resistance for all regions and climates in which the vehicle will be operated.

## 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 that the headlamps are still switched on and 10 minutes have elapsed since the last headlamp wash.

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

The headlamp wash will operate every third operation of the screen washer in all Special Programs. See **Terrain Response, 191**.

**Note:** In the screen washer reservoir, if the fluid level sensor detects a low level, the headlamp power wash is inhibited.

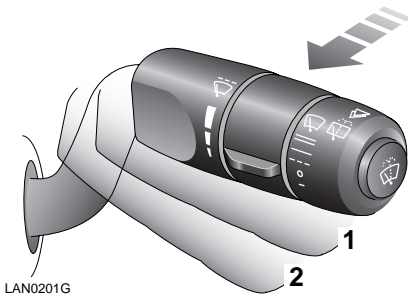
### Heated washer jets

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 position II.

An approved screenwash is necessary to prevent freezing in very cold weather. See **LUBRICANTS AND FLUIDS, 286**.

# Wipers and Washers

## REAR WINDOW WIPER AND WASHER



### Wiper - intermittent operation

Pull the lever position **1**. The intermittent delay period will vary according to the delay switch setting and with the vehicle's speed, if speed-dependent-intermittent mode has been enabled. See **Speed-dependent-intermittent mode, 115**.

### Wiper - continuous operation

If preferred the rear wiper operation can be configured by a Land Rover Dealer/Authorised Repairer to operate continuously.

### Washer

Pull the lever to position **2** and hold it there. The wiper and washer will both operate. When the lever is released, the washer will stop and the wiper will complete a further two wipe cycles and then return to intermittent operation, provided that the continuous function has not been set.

### Reverse gear input

If reverse gear is selected while the front wipers are operating, the rear wiper will operate accordingly.

If reverse gear is selected while the rain sensor is operational and the front windscreen wipers are in use, the rear wiper will operate accordingly.

### Tailgate open disable

If the rear wiper is switched on or already running and the tailgate is opened, the wiper will:

- Stop immediately.
- Not start to move if it is already stationary.

If the tailgate is subsequently closed, the wiper will resume its normal operation after a delay of three seconds.

If the tailgate is open and the vehicle's speed is above 3 km/h (2 mph), the wiper will operate as if the tailgate were closed.

### Auto park

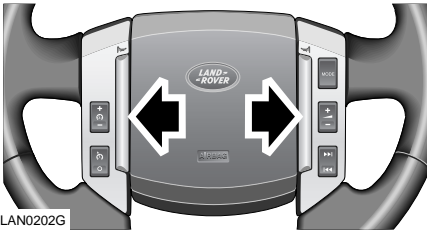
If the starter switch is turned to the **Off** position while the wiper is operating, it will continue to the Park position and stop.



# Horn

---

## HORN



To operate, press either of the horn switches.

# Electric Windows

## ELECTRIC WINDOWS

### 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.

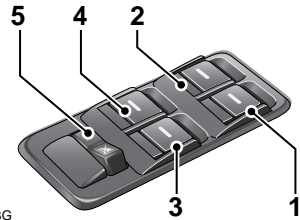
**ENSURE** that children are kept clear whilst raising or lowering windows.

**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.**

### Switch operation



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.

### Operating the windows

The electric windows can be operated when the starter switch is at position **I** or **II** and for up to 40 seconds after the starter switch is turned to position **0** (provided a front door is not opened).

If a front door is opened, the windows become inoperable.

To lower a window, press and hold the front of the switch until the desired position is reached.

To raise a window, lift and hold the front of the switch until the desired position is reached.

# Electric Windows

## One touch operation (front door's only)

Press/lift the switch briefly to open or close the window in one movement. Window movement can be stopped at any time by pressing the switch again.

## Resetting one touch operation

Disconnecting the power when the window is moving will cause memory loss. To reset the memory, drive the window to the top and keep the switch pressed for one second.

## Rear window isolation switch



LAN0205G

Press the right-hand side of the switch to isolate the window switches in the rear doors; press the left-hand side to restore independent control.

## Anti-trap mechanism (front door's only)

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 the following procedure should be used:

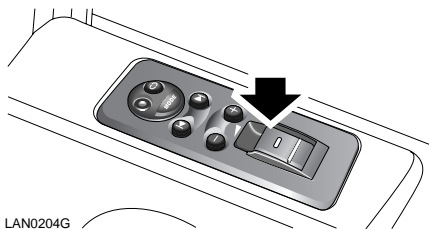
After the initial attempt to close the window, attempt it twice more with less than 10 seconds between switch presses.

On the next (fourth attempt) the window will move up a short distance with increased force to override the blockage.

If this fails to move the blockage the anti-trap feature will be lost and must be reset. See

**Resetting one touch operation, 120.**

## Rear window operation



LAN0204G

The rear windows can also be operated from the switches on the rear passenger doors. The rear door window switches will not operate if the isolating switch in the driver's door has been activated. See **Rear window isolation switch, 120.**

# Sunroof

## SUNROOF OPERATION

### WARNING

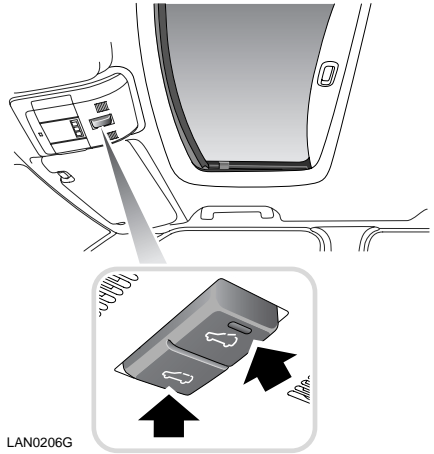
Accidental closure of a sunroof on fingers, hands or any vulnerable part of the body, can result in serious personal injury. Always observe the following precautions:

**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.

**Caution: ALWAYS close the sunroof when the vehicle is unattended.**



LAN0206G

The electric sunroof can be operated when the starter switch is at positions **I** or **II** and for 40 seconds after position **0** has been selected, provided that neither front door has been opened.

- **To tilt the sunroof:** With the sunroof closed, press the front of the switch. The roof will move towards its fully tilted position. To close the sunroof from the tilt position, press and hold the rear of the switch.
- **To open the sunroof:** With the sunroof in the closed position, press the rear of the switch momentarily. If the starter key is not in position **II**, the switch will have to be held pressed.
- **To close the sunroof:** With the sunroof open, press the front of the switch. If the starter key is not in position **II**, the switch will have to be held pressed.

**Note:** At any time while the sunroof is moving, a further press of the switch will stop the movement.

# Sunroof

## Anti-trap mechanism

### WARNING

It is possible to override the anti-trap mechanism by pressing and holding the front of the switch whilst the sunroof is closing.

Extreme care must be taken to ensure that none of the vehicles occupants have any part of their body in a position where it can be trapped by the roof.

The override allows the sunroof to be closed when movement is restricted by ice or dirt.

If the sunroof encounters resistance while travelling anywhere between the fully open and the closed position, the closing operation is interrupted and the sunroof opens slightly. This is a safety feature designed to prevent inadvertent closing of the sunroof on vulnerable parts of the body or other obstructions. Remove any obstruction and then close the sunroof.

This anti-trap feature does not apply while the sunroof is closing from the tilted position.

### Operation after power supply interruption

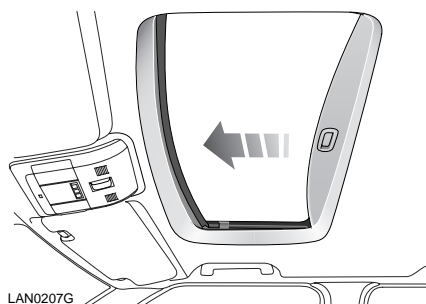
Under certain unusual circumstances, the sunroof may lose its calibration which will render it inoperable. If this happens, it needs to be recalibrated as follows:

- With the power supply reconnected, turn the starter switch to position II.
- Depress the front of the switch for 20 seconds. The sunroof will start to move. Continue to hold the switch until the sunroof completes one full open and closing cycle. When the sunroof stops moving, release the switch.

The sunroof can then be operated as normal.

**Note:** Calibration will not function if the vehicle battery voltage is low.

## Sunroof blind

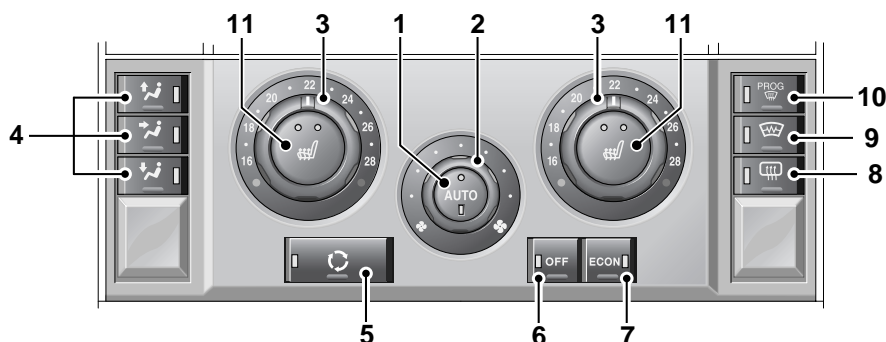


Pull the sunroof blind, across the sunroof aperture to open and close.

**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.

# Heating and Ventilation

## TEMPERATURE CONTROLS



LAN2010G

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

The configuration of controls may vary depending on the specification of your system. The variants are shown as insets to the main illustration.

The system may be fitted with the options of seat heating and front screen heating.

**Note:** *The indicators in the switches illuminate when that feature is operational.*

## OPERATION OF CONTROLS

### 1. Auto mode

Allowing the system to function automatically is by far the simplest method of operation for the owner and is preferable in most operating conditions.

- Press AUTO (1) for fully automatic operation.
- Rotate the temperature controls (3) to select the required temperature.

- Let the automatic temperature control system do the rest.

In Auto mode, air conditioning, air distribution, blower speeds and air recirculation are adjusted automatically to achieve, and then maintain, a thermal environment consistent with prevailing conditions.

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.*

### 2. Blower control

Rotate the blower control (2) to adjust airflow through the vents.

# Heating and Ventilation

## 3. Temperature controls

Rotate the controls (3) to set the required temperature for the corresponding side of the passenger compartment.

Temperatures within the range 16°C (60°F) to 28°C (83°F) can be set. The blue dot gives maximum cooling and the red dot maximum heating (depending on prevailing conditions).

**Note:** *Because of the mixing of air within the vehicle, the system will not achieve a temperature differential from left to right of more than 4°C (7°F).*

To obtain maximum air conditioning, rotate the temperature controls fully anticlockwise.

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.

**Note:** *Rotating the temperature controls fully clockwise provides maximum heating to the foot/screen vents.*

When in stationary traffic, select **P** or **N** to maximise air conditioning efficiency.

## 4. Air distribution control

Press to select the desired distribution setting:



Windscreen and side window vents



Face level vents



Foot level vents

More than one setting can be selected to achieve the desired distribution.

## 5. Air recirculation

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

Air recirculation also significantly influences the dehumidifying and cooling performance of the air-conditioning system.

**Note:** *Prolonged recirculation at low ambient temperatures may cause the windows to mist.*



Press the button (5) once to activate air recirculation (switch indicator illuminates). Press the button a second time to deselect recirculation and return to fresh air intake (switch indicator extinguishes).

With recirculation deselected, the ventilation system may automatically re-activate recirculation, if necessary, to enable optimum air conditioning performance. When this occurs, the switch indicator will not illuminate.

## 6. Off



Press to switch the system off; the indicator in the switch will illuminate to show this condition. Pressing the button again returns the system to its previous mode.

## 7. Economy mode



With the engine running, press the button (7) to put the air conditioning system into Economy mode. This turns off the air conditioning compressor which reduces the power consumed by the system and system performance. Prolonged use may cause the windows to mist.

# Heating and Ventilation

## 8. Heated rear screen

### WARNING

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



Press to operate.

**Note:** Heated front and rear screen functions are only available while engine is running.

## 9. Heated front screen



Press to operate. If the vehicle is not fitted with a heated front screen, this button will be blank.

## 10. Defrost mode



If the windscreen is misting or covered in ice, press button (10) to activate the automatic defrost programme; the system will immediately direct its output to achieve maximum screen clearing by:

- setting the blower speed to an appropriate level.
- distributing air flow to the screen only.
- deactivating air recirculation (in certain circumstances).

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. Heated screens will remain on until their time-out period has expired.

## 11. Front seat heaters



Press the left or right button once to operate the relevant seat heater at a high level, press twice to heat the seat at a lower level. For further information concerning the operation of both front and rear seat heaters, please refer to **SEAT HEATERS, 126**.

**Note:** If the vehicle is not fitted with front seat heaters, these buttons will be blank.

### General notes

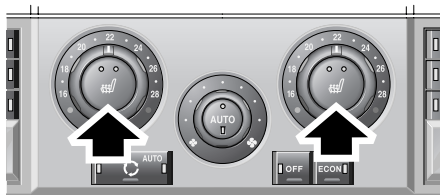
- For optimum operating efficiency, ensure all the air vents (including those in the rear of the vehicle) are open.
- For the automatic temperature control system to function efficiently, all windows (and the sunroof) should be closed, and the air intake vents free from ice, snow, leaves or other debris.
- 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.



# Heating and Ventilation

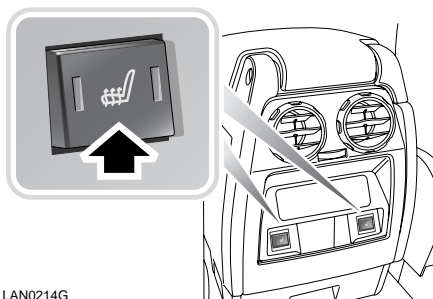
## SEAT HEATERS

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



LAN0212G

*Front seat heaters*



LAN0214G

*Rear seat heaters*

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

- Press once to operate at a high level (both indicators illuminate).

After a period based on cabin temperature, the high level will end and one lamp will extinguish.

- 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 to maintain a factory-set temperature. The indicators in the switches will remain illuminated until the heaters are manually turned off, the high level has timed out, or the engine is turned off.

## AUXILIARY FUEL-BURNING HEATER

### WARNING

**Turn the starter switch off, to ensure that the fuel-burning heater is switched off when refuelling the vehicle.**

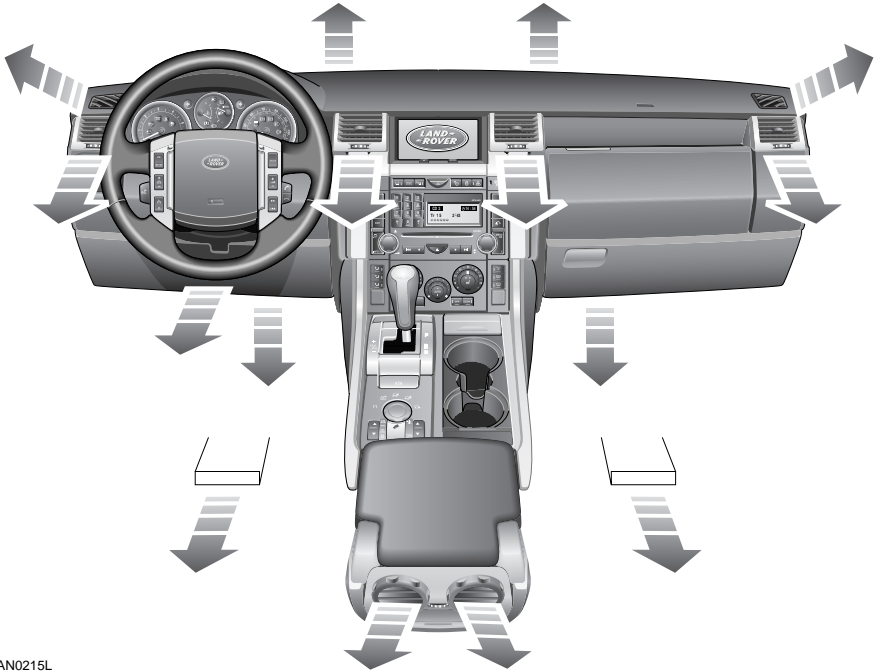
**If the fuel-burning heater has been used recently, take care not to touch the unit's exhaust when performing any checks/servicing under the bonnet.**

When the engine is started in very cold weather, the auxiliary fuel-burning heater is automatically switched on to provide extra heat to help warm up the engine.

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

# Heating and Ventilation

## VENTILATION



LAN0215L

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

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

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

### Particulate air filter

The ventilation system is fitted with a particulate air filter to remove most potentially harmful particles such as pollen, industrial fall-out and road dust from the air entering the vehicle's interior.

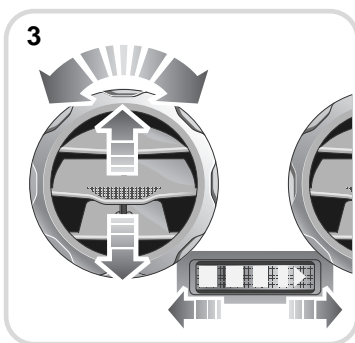
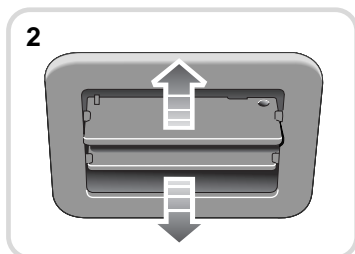
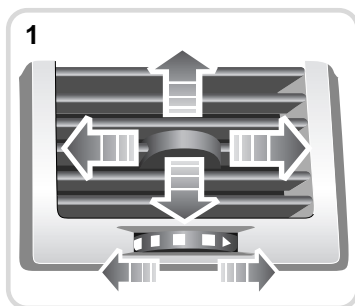
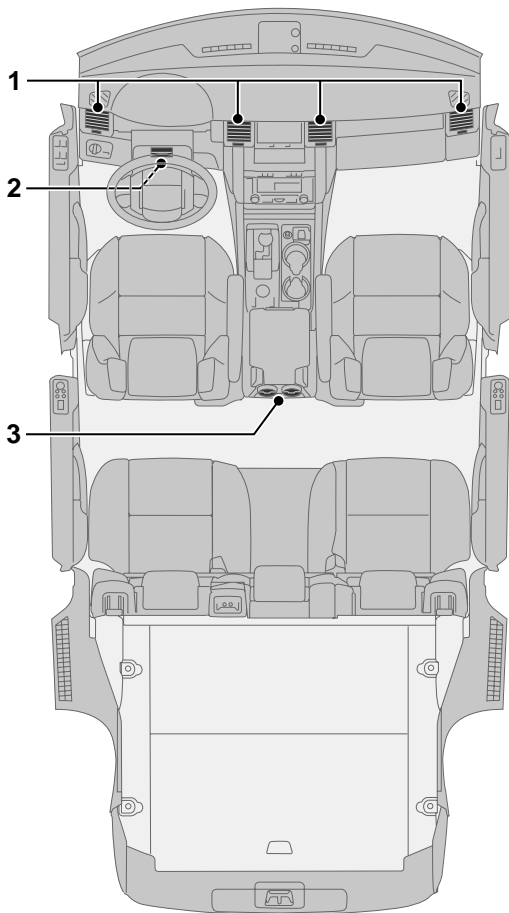
### Combined filter

Vehicles fitted with automatic temperature control have a combined carbon and particulate air filter.

The carbon layer reduces the level of odours coming through the heater system from outside.

# Heating and Ventilation

## AIR VENTS



# Heating and Ventilation

---

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

## **1. Face level vents**

Direct the air flow by moving the control in the centre of the louvres. Rotate the thumbwheel towards the right to fully open, or the left to fully close the vents.

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

## **2. Driver's lap vent**

Airflow can be directed to the driver's lap via an outlet located below the steering wheel. Control the airflow by adjusting the louvres.

## **3. Centre console rear vent controls**

Move the louvres to adjust the direction and volume of airflow. Rotate the bezel to direct the air flow.

**Note:** *The temperature cannot be set by the rear occupants.*

# Interior Lamps

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## LAMP TYPES

The vehicle's interior lighting falls into two categories:

- Courtesy lighting consists of approach lamps, footwell lamps, puddle lamps, starter switch glow ring and loadspace lamp. They enable safe entry into, or exit from the vehicle in low light conditions without the need to switch on individual lamps.
- Demand lighting consists of interior lamps, map lamps, glovebox and vanity mirror lamps. They offer lighting at the touch of a switch, usually part of the lamp fitting.

### Courtesy lighting

#### Front footwell lamps

These illuminate the front footwell areas of the vehicle.

#### Starter switch glow ring

This surrounds and illuminates the starter key slot.

#### Loadspace lamp

This illuminates the rear loadspace area during entry to and exit from the vehicle, also when the tailgate is opened.

### Automatic activation

All of the courtesy lighting comes on when:

- The position of the starter switch is changed to **0**, from **I** or **II**.
- Any door, including the tailgate is ajar.
- The vehicle receives an Unlock signal.

The courtesy lamp feature automatically turns off these lamps if:

- 60 seconds (customer adjustable) have elapsed since the courtesy lamps were activated.
- 60 seconds (customer adjustable) have elapsed since the last door was closed.
- the starter switch is switched to **II** with all doors closed.
- the last door is closed after the car is externally locked.

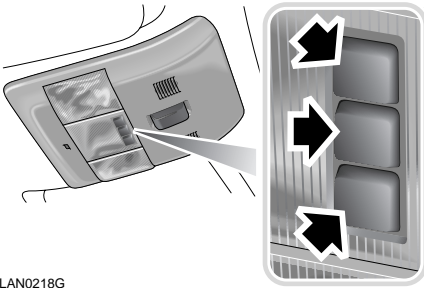
A battery-saving feature turns off all interior lamps 15 minutes after the starter switch has been turned from **II** or **I** to **0**. This timing feature will be restarted if any of the automatic switch-on criteria occur.

### Collision illumination

In the event of a collision occurring at a speed of less than 5 km/h (3 mph), all of the courtesy lamps (except approach lamps) will be turned on.

# Interior Lamps

## Front Interior lamps



LAN0218G

The front interior lamps are grouped together centrally above the front windscreen.

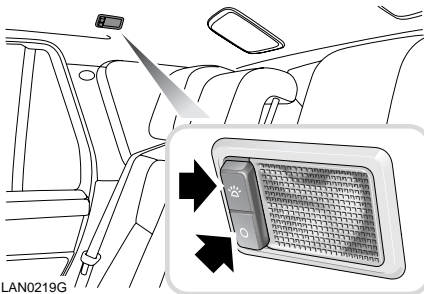
Any of the interior lamps can be switched on or off by pressing the switch adjacent to the lamp required.

It is possible to de-activate the courtesy lamps automatic mode by pressing the centre switch. The message **INTERIOR LIGHTS OFF** will flash in the message centre.

To switch the lamps off without disabling automatic mode briefly press the centre switch.

To enable automatic mode press the front centre switch for more than three seconds. The message **INTERIOR LIGHTS AUTOMATIC** will flash in the message centre.

## Rear interior lamps



LAN0219G

## Map lamp operation

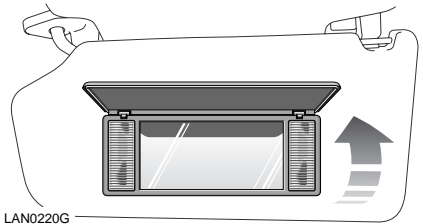
Press the required map lamp switch to turn on and off.

## Glovebox lamp

Illuminates automatically (with headlamps on) whenever the glovebox is opened and extinguishes when the glovebox is closed.

## Vanity mirror lamps

The vanity mirror lamps are turned on when the corresponding vanity mirror cover is opened and turned off when it is closed.



LAN0220G

Pivot the sun visor downward and raise the cover on the vanity mirror, to illuminate the mirror. Close the cover to extinguish the lamps.

**Note:** Map lamps, glovebox lamps and vanity mirror lamps will extinguish automatically after 15 minutes to prevent battery drain provided that the starter switch is in position **0**.

## Low-level night-time illumination

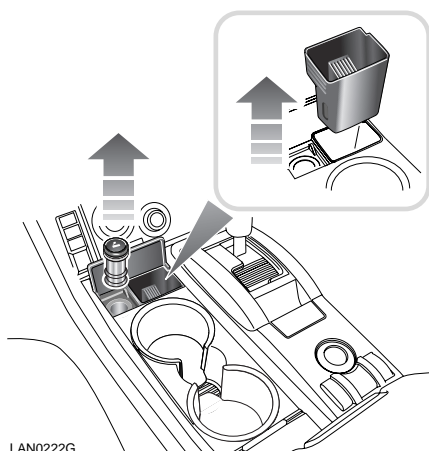
With the main lighting switch turned to side lamps or headlamps, LEDs in the front interior lamps provide very low level illumination. The level of illumination can be adjusted using the instrument pack illumination dimmer switch. See **Dimmer control, 111**.

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.

# Interior Equipment

## SMOKERS' EQUIPMENT

### Lighter



LAN0222G

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

- ONLY hold the lighter by the handle. After use, push the lighter back in to the first position.

### Ashtrays

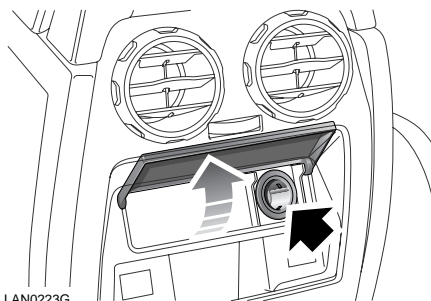
#### WARNING

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

To remove the ashtray, open fully, then pull the ashtray upwards.

## AUXILIARY POWER SOCKETS

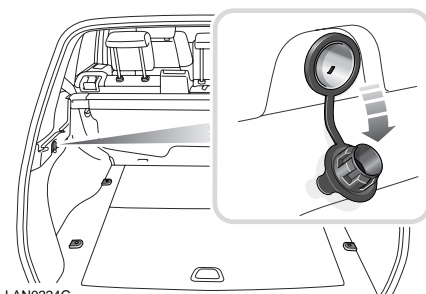
### Rear auxiliary power socket



LAN0223G

A power socket is located on the rear face of the centre console.

### Loadspace auxiliary power socket



LAN0224G

Another power socket is fitted in the left-hand side trim in the loadspace area.

### Using a power socket

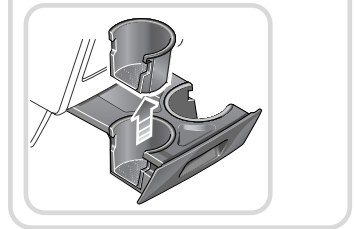
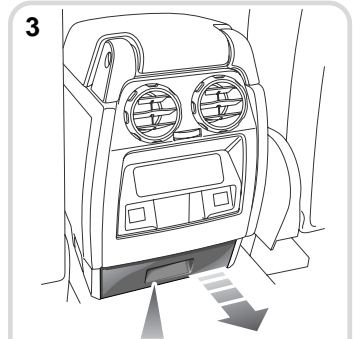
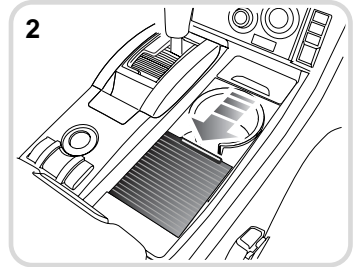
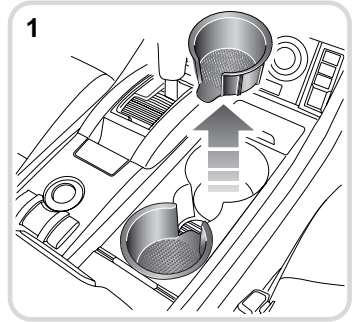
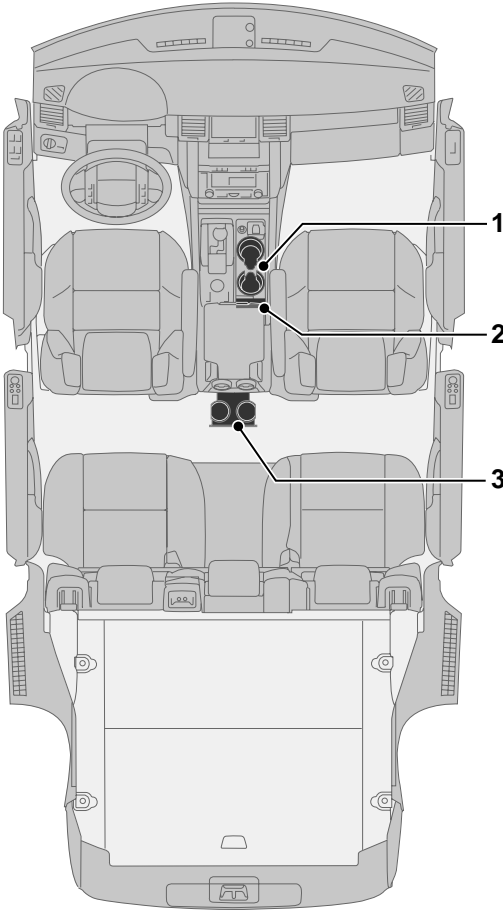
**Caution: NEVER plug non-approved accessories into a power socket - damage to the vehicle's electrical systems could occur.**

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

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

# Interior Equipment

## CUP HOLDERS



LAN0225G



# Interior Equipment

---

## **WARNING**

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

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

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

Use only for soft containers. **DO NOT** use to hold cups made of glass, china or hard plastic, as these may cause injury in the event of an accident or emergency manoeuvre.

Unopened, sealed containers (drinks cans, for example) are hard objects and may also cause injury.

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### **1 and 2. Front seat cup holders**

The inner core of the front passenger's cup holder can be lifted out for cleaning or to make a holder for a larger drinks container.

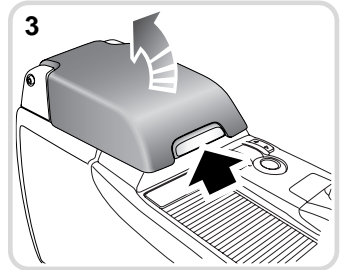
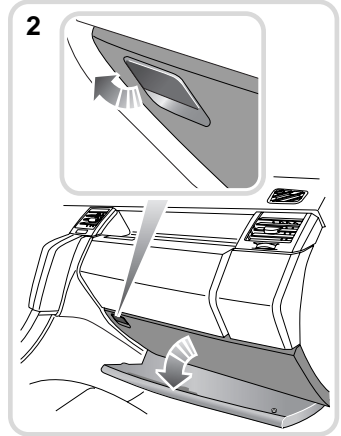
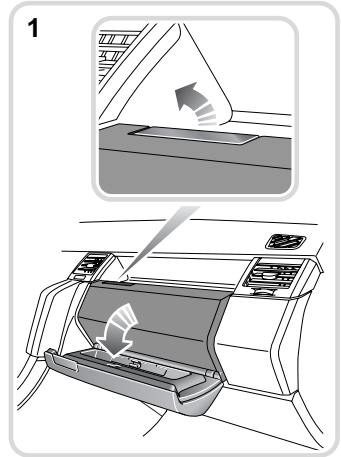
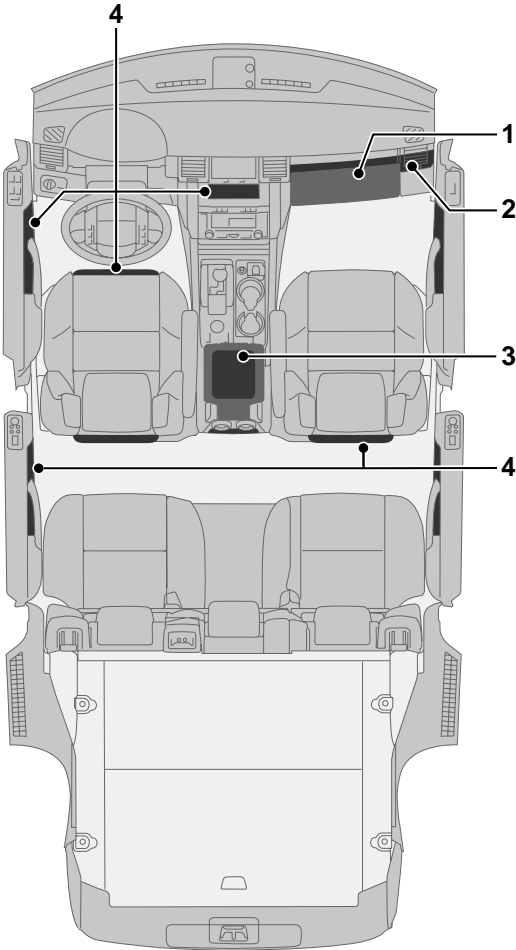
### **3. Rear seats cup holders**

The cup holders for the occupants of the rear seats are in the centre console. Pull out the tray to gain access to the cup holders. Press in again to close.

The inner cores of the cup holders can be lifted out for cleaning or to make a holder for a larger drinks container.

# Interior Equipment

## STORAGE COMPARTMENTS



LAN0226G

# Interior Equipment

## 1 and 2. GLOVEBOX

Lift the release catch to open the upper glovebox. The lid will naturally be returned by a spring to its closed position. It should be pushed fully closed.

Pull the release catch to open the lower glovebox. Close the lid by pushing it until it clicks.

### CD storage rack

If the optional cool box has been specified a CD storage rack is available for the glovebox.

The rack can be removed by pressing down the lock tab, and pulling the rack out of the glovebox.

## 3. CUBBY BOX

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

### Card holder

On the front inside face of the cubby box is a feature to hold a credit/toll card.

### CD storage

A rubber mat in the bottom of the cubby box is designed to hold CD cases and is removable for cleaning.

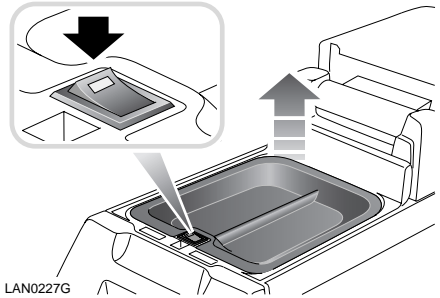
## 3. COOL BOX

Switch on/off using the switch on the inside front lip of the cool box. This switch has a built-in indicator which will illuminate to show that the cool box is operating. There is a short delay (1-2 seconds) between pressing the switch, and illumination of the indicator.

If the indicator does not illuminate when the cool box is switched on, or it goes out while the cool box is operating, battery voltage is low and the cool box has switched off. This will only happen when the engine is not running.

If the engine is started, the indicator will illuminate and the cool box will operate.

To protect the vehicle's battery, the cool box should be switched off when not needed.



The tray on top of the cool box should always be in place to ensure maximum cooling performance. This tray can be inverted to allow the storage of taller bottles while still maintaining the sealing.

The tray can be clipped onto the inside of the main lid when not required.

The cool box is most effective when filled with cold or pre-chilled items.

The cool box must be cleaned regularly to remove any condensation or contamination that could lead to odours.

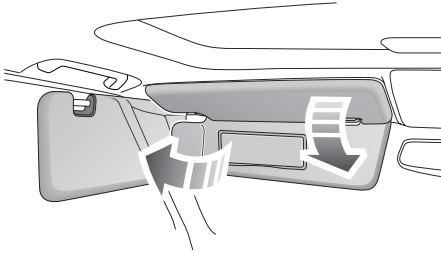
**Note:** The cool box will continue to operate for a short period after the starter switch is turned to position **0**.

## 4. ADDITIONAL STORAGE

Further storage areas as indicated.

# Interior Equipment

## SUN VISOR



H6136L

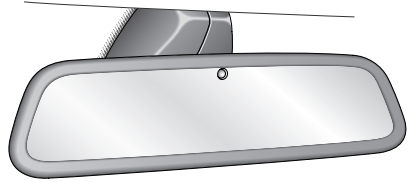
Pivot the sun visor downward to reduce sun glare through the front windscreen. If required, the visor can then be pivoted towards the side window to reduce sun glare from that side of the vehicle.

### Vanity mirror

Lifting the cover of the vanity mirror switches on the lamp; closing the cover switches off the lamp.

## REAR VIEW MIRRORS

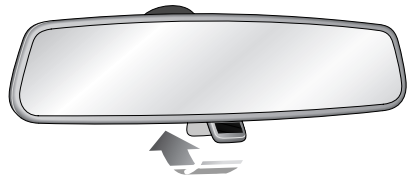
### Automatic dipping mirror



LAN0231G

A light sensor detects excessive light and automatically dips the mirror, to reduce glare from the headlamps of following vehicles in dark or low light conditions.

### Manual rear view mirror



LAN0230G

Adjust the mirror manually to suit.

Moving the lever at the bottom of the mirror forwards or backwards changes the mirror's position to and from dimmed.

# Interior Equipment

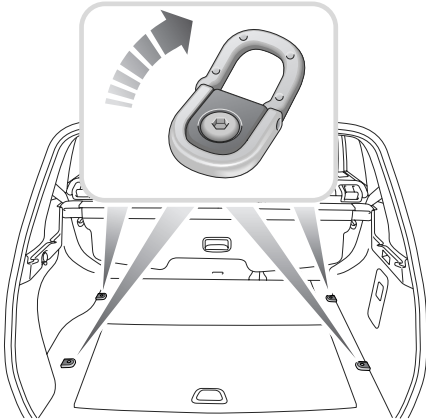
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## LUGGAGE ANCHOR POINTS

### 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.

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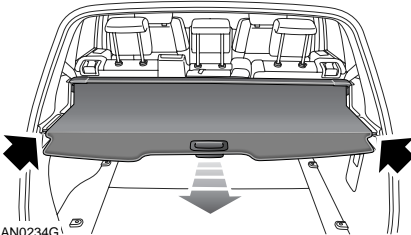
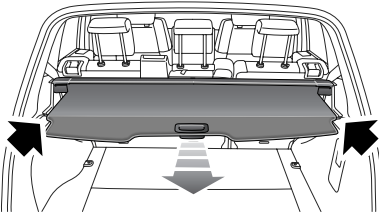
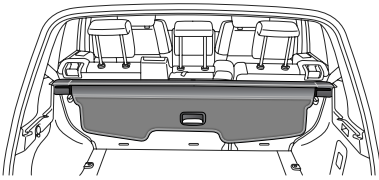


LAN0232G

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.

# Loadspace Cover

## LOADSPACE COVER



LAN0234G<sup>1</sup>

The loadspace cover is a roller-blind type of cover which can be extended to cover the rear loadspace.

To operate the loadspace cover

**Caution:** When retracting the cover ensure that nothing is left on top. If any items are left on top, including paper or fabrics, they may be drawn into the mechanism and cause it to jam.

**Caution:** If the cover is damaged in any way it should not be used as the damaged area may prevent the cover from operating correctly.

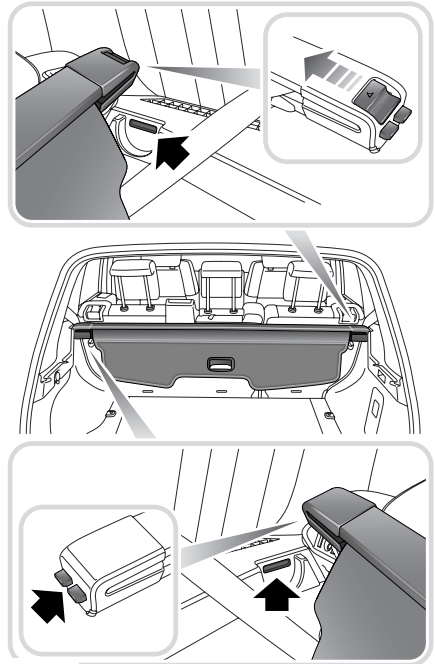
1. Pull the rigid portion of the blind to unroll the cover.
2. Engage the end pieces into the recessed features moulded into the loadspace sides.

# Loadspace Cover

To remove the deployed loadspace cover

## WARNING

When fitting the loadspace cover position ensure that the location pegs on the left hand side are fully engaged and the release button on the right hand side has returned fully home to ensure engagement. Failure to do so may allow the cartridge to move when the vehicle is in motion.



LAN0235G

1. Disengage the ends from the recess and fully retract the cover into the cassette unit.
2. Push the release button on the right hand side of the cassette housing and lift to release the right hand side of the cassette from the loadspace trim.
3. Manoeuvre the complete loadspace cover to the right hand side to release the left hand side location pegs and extract from the vehicle.
4. Installation of the loadspace cover is the reverse of the removal procedure above.

# In-Car Telephones

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## IN-CAR TELEPHONES

### WARNING

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

---

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

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



# Voice Recognition

## VOICE RECOGNITION

Voice control provides a safe and convenient way of operating certain vehicle systems 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 systems.

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, voice control converts your command into a control signal for the appropriate system. Your inputs take the form of dialogues or commands. You are guided through these dialogues by announcements or questions.

### Defined voice commands

The voice control system understands predefined commands which need to be quoted word for word.

An audio feedback of voice commands is available. To activate the feedback, pull the voice control paddle briefly and give one of the following commands:

### General commands

- **Voice help** - To list all commands.
- **Notepad help** - To list Notepad commands.

### Audio commands

- **Radio help** - To list Radio commands.
- **CD help** - To list CD commands.

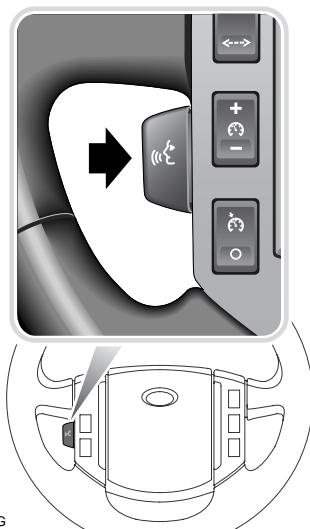
See **Audio Voice Recognition, 337**.

### Navigation and Telephone commands

- **Phone help** - To list telephone commands.
- **Navigation help** - To list Navigation commands.

Please refer to the **Navigation, TV and Telephone Systems Handbook**.

### Activating the system



LAN0237G

To activate voice control:

- Briefly pull the control paddle (your Audio will mute at this point). A brief acoustic signal 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 paddle at the beginning of each voice session.

# Voice Recognition

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## Using Notepad

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

You can record up to 10 notes for up to 30 seconds each in length.

Pull the voice paddle towards the steering wheel, wait for **LISTENING** to appear in the message centre, then give the Notepad command.

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

To stop voice recording at any time, pull the voice button towards the steering wheel.

Command	System response	Action
<b>Record note or Notepad record.</b>	The system gives a beep to indicate the start of recording.	You may start your recording after the beep. To stop recording, pull and hold in the steering wheel voice paddle.
<b>Play notepad or Read notepad.</b>	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 <b>Replay</b> will replay the previous message. Saying <b>Delete</b> will delete the previous message. Saying <b>Cancel</b> will end the Notepad session.
<b>Clear Notepad or Notepad delete.</b>	Do you want to clear the notepad?	Say <b>Yes</b> to delete all stored notes. Say <b>No</b> to cancel the command.
<b>Notepad help.</b>	The system will read out Notepad information and all the commonly used commands.	

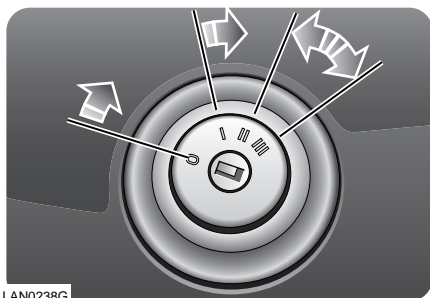
# Starting and Driving

## STEERING COLUMN LOCK

### 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.

**Caution:** The gear selector **MUST** be in the **P (park)** position, before the starter key can be removed. If the starter key is left in place, a continuous battery drain occurs which could completely discharge the battery.



The starter switch and steering column lock are located in the side of the steering column cover.

### To unlock the steering column

Insert the key into the starter switch and rotate key to position **I**. If the key will not rotate, turn the steering wheel left or right while rotating the key.

### To lock the steering column

Remove the key from the starter switch.

The lock is now set to operate. Rotate the steering wheel until the lock operates.

## STARTER SWITCH

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

### Position 0

- Steering locked.
- Some lighting circuits are operational, including: side lamps and hazard warning lamps.
- With the driver's door open, seat memory facility operational.

### Position I

- Steering unlocked.
- Clock, audio system and lighter can now be operated.
- Wipers/washers are operational.

### Position II

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

### Position III

- The starting sequence is initiated. Note that operation of position **I** electrical functions will be interrupted during engine cranking.

**Note:** The gear selector position **P** or **N** must be selected before the engine can be started.

# Starting and Driving

---

## STARTING - Petrol models

### WARNING

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

---

If the engine fails to start, continued use of the starter may result in unburnt fuel damaging the catalytic converter.

1. Check that the parkbrake is applied and that the gear selector is in the **P** (Park) or **N** (Neutral) position.
2. Switch off all unnecessary electrical equipment.
3. Turn the starter switch to position **II** and then on to position **III** and immediately release it. The starter will automatically switch off when the engine starts. **DO NOT** press the accelerator pedal while starting.

**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 require continuous operation 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 parkbrake AND FOOT BRAKE are firmly applied and the accelerator pedal is not depressed while moving the gear selector lever from **N** or **P**. An interlock will prevent this movement if the foot brake is not applied.

# Starting and Driving

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## STARTING - Diesel models

### WARNING

**Never start or leave the engine running in an unventilated building - exhaust gases are poisonous.**

---

### WARNING

**The diesel engine must not be run above idle speed until the oil pressure warning lamp 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.**

---

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

1. Check that the parkbrake is applied and that the gear selector is in the **P** (Park) or **N** (Neutral) position.
2. Switch off all non-essential electrical equipment.
3. Insert the starter key and turn the switch to position **II**. Wait until the glow plug warning lamp extinguishes.
4. Turn the key to position **III** and immediately release it. The starter will automatically switch off when the engine starts. **DO NOT** press the accelerator pedal while starting.

***Note:** The waiting time will vary according to the engine coolant temperature (when the engine is hot, the glow plug warning lamp will extinguish almost immediately, or may not illuminate at all).*

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:** 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 lamp may take several seconds to extinguish. Similarly, engine cranking times will also increase. At -25°C (-13°F) the starter motor may require continuous operation 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 parkbrake **AND** FOOT BRAKE are firmly applied and the accelerator pedal is not depressed while moving the gear selector lever from **N** or **P**. An interlock will prevent this movement if the foot brake is not applied.

# Starting and Driving

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## GENERAL DRIVING ADVICE

### Instruments and warning indicators

**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.

**In the case of the parkbrake, the above only applies if the vehicle is moving when the indicator illuminates.**

Before driving, it is important to fully understand the function of the instruments and warning indicators. See **INSTRUMENT PACK, 85**.

### 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 and of reducing engine wear, 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 while idling, until the engine is warm and running at normal speed and be aware of the need to take additional care when manoeuvring the vehicle.

### Vehicle height

**Caution:** The overall height of your vehicle exceeds that of ordinary passenger cars, see **DIMENSIONS, 292**. Always be aware of the height of your vehicle and check the available headroom before driving through low entrances. This is particularly important if the vehicle is fitted with a roof rack or if the sunroof is tilted open.

### 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 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 unauthorised vehicle modifications, such as fitting incorrect specification tyres, oversize tyres, body lifting, incorrect springs/dampers and 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.

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# Starting and Driving

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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 your 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 medication that affects 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 thoroughfare, preferably onto the shoulder as far as possible. If a breakdown occurs on a motorway, pull well over to the inside of the hard shoulder.
- 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 one.

# Starting and Driving

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## 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 neutral to improve fuel economy and air conditioning performance.

## 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 (68 mph) or 3,000 rev/min. Initially, drive the vehicle on a light accelerator and only increase engine speeds gradually once the running-in distance has been completed.
- DO NOT operate at full accelerator or allow the engine to labour in any gear. It is advisable NOT to use Sport mode when running in.
- AVOID fast acceleration and heavy braking except in emergencies.
- 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 operated in arduous conditions, particularly on dusty, muddy or wet terrain, and vehicles undergoing 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, use a hose to wash the underbody components and any exposed body panels with fresh water. This will help to protect the vehicle's cosmetic appearance and prevent impairment of parkbrake efficiency.



# Starting and Driving

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## Wading

**Caution:** The maximum advisable wading depth is normally 490 mm (19 in.) but can be increased to 540 mm (21 in.), when the air suspension system is operated at Off-road height. Wading at a depth greater than the maximum advisable wading depth is not recommended.

Severe electrical damage may occur, if the vehicle remains stationary for any length of time with the water level above the door sills.

Do not switch off the engine during wading. If the engine stalls during wading, restart it immediately and, as soon as possible, get the vehicle checked by a Land Rover Dealer/Authorised Repairer.

If, during wading, it is thought that water may have entered the engine air intake, switch off the engine immediately. Have the vehicle towed out and delivered to a Land Rover Dealer/Authorised Repairer for checking.

## BEFORE DRIVING OFF ROAD

Before venturing off-road, it is absolutely essential that inexperienced drivers become fully familiar with the vehicle's controls, in particular the transfer gear switch, CommandShift, Hill Descent Control (HDC) and the Terrain Response system.

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>**

## 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.

## EMISSION CONTROL SYSTEM

### WARNING

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

- DO NOT drive with the tailgate open.
- DO NOT modify the exhaust system from the original design.
- ALWAYS have exhaust system leaks repaired immediately.
- If you think exhaust fumes are entering the vehicle, have the cause determined and corrected immediately.

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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 Dealer/Authorised Repairer are properly equipped to perform repairs and to maintain the emission control system on your vehicle.

# 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.
- Do not fill petrol containers in the vehicle.

## 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.**



LAN0239G

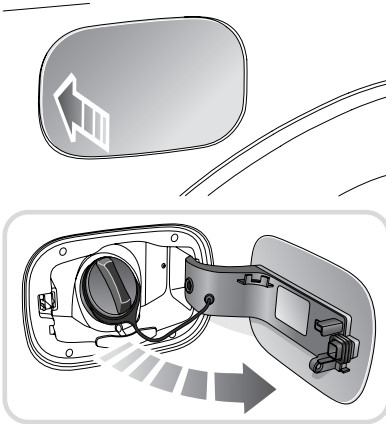
The fuel filler is located behind the rear right-hand wheel arch. An arrow on the fuel gauge points to that side of the vehicle.

# Fuel Filling

**Caution:** The fuel filler flap has a spring loaded release, do not force it open. If the flap has been forced open, it may fail to close properly. In this eventuality, take your vehicle to your Land Rover Dealer for attention, as this condition may be due to damaged or misaligned components.

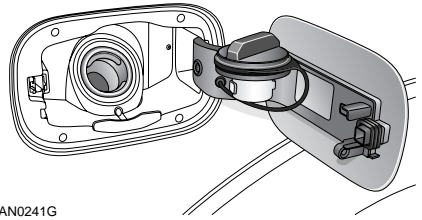
**Caution:** When replacing the fuel filler cap ensure that it is tightened until it clicks. Failure to do so may result in the engine warning lamp illuminating due to evaporative emission levels increasing.

With the vehicle fully unlocked (all doors and tailgate), press the left side of the fuel filler flap to open (shown in inset).



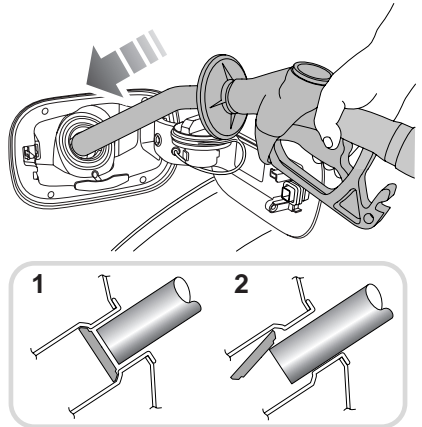
LAN0240G

The fuel filler flap springs out revealing the filler cap.



LAN0241G

Unscrew the filler cap and place it on the projection on top of the hinge of the fuel filler flap.



LAN0242G

Insert the pump nozzle (1) into the filler neck, pushing aside the spring-loaded cover (2).

When delivery is complete, withdraw the nozzle and replace the cap. Tighten the cap clockwise until you hear it click three times.

# Fuel Filling

---

## TYPE OF FUEL

### Fuel specification - petrol engines

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

See **ENGINES, 288**.

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.

Your engine will run on a lower grade of fuel but performance and fuel economy will be reduced.

Using petrol with a lower octane rating than 91 RON, however, can cause persistent, heavy engine knock (a metallic rapping noise). If severe, this can lead to engine damage.

If in doubt, seek advice from the territory concerned.

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 Land Rover Dealer/Authorised Repairer for advice.

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

### Fuel specification - diesel engines

**Caution: Maximum allowable Bio-diesel mix is 5%. To EN590 specification.**

See **ENGINES, 288**.

**Caution: If the fuel tank is accidentally filled with petrol, it is ESSENTIAL that you contact your Land Rover Dealer/Authorised Repairer BEFORE attempting to start the engine!**

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.

# Fuel Filling

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## FUEL FILLING

### WARNING

**DO NOT attempt to fill the tank beyond 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 until the filler nozzle automatically cuts-off the supply. DO NOT attempt to fill the tank beyond this point.

### Diesel engine vehicles

The use of commercial vehicle diesel pumps with a higher fill rate, may result in premature pump cut-off and fuel spillage.

## EMPTY FUEL TANK

**Caution: DO NOT RUN THE FUEL TANK DRY.**

**Running the fuel tank dry could create an engine misfire capable of damaging the engine, the catalytic converter or the fuel pump.**

***Note:** Should the vehicle run out of fuel, it will be necessary to add a minimum of 4 litres (0.8 gallons) of fuel in order to restart the vehicle. In some circumstances it will be necessary to drive a short distance, typically 1.6 - 5 km (1 - 3 miles) in order for the vehicles monitoring systems to register the additional fuel.*

## FUEL CUT-OFF SYSTEM

In the event of an accident, the Supplementary Restraint System (airbag system) may stop the operation of the fuel pump, depending on the severity and type of the impact.

If this happens, the system must be reset before attempting to restart the engine.

### Resetting the fuel cut-off system

### WARNING

**To avoid the possibility of fire or personal injury, do not reset the fuel cut-off system if you see or smell fuel.**

---

If no fuel leak is apparent, reset the system as follows:

1. Turn the starter switch to position **0** and wait for 1 minute.
2. Turn the starter switch to position **II** and wait for 30 seconds.
3. Make a further check for fuel leaks.
4. If no leak is found, start the engine as normal.

## 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.**

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**Caution: Catalytic converters can be easily damaged through improper use, particularly if the wrong fuel is used, or if an engine misfire occurs.**

# Park Distance Control

## USING PARK DISTANCE CONTROL (PDC)

**Caution:** The Park Distance Control is a parking aid for guidance only. It remains the driver's responsibility to detect obstacles and estimate the vehicle's distance from them. 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). Always be vigilant when reversing.

**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.



LAN0243G

Park Distance Control (PDC) is a system that assists the driver when manoeuvring the vehicle into a parking space, or anywhere that 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. (some vehicles are fitted with sensors only in the rear bumpers.)

The range of the front sensors, and the two sensors on the corners of the rear bumper is approximately 0.6 metres (2 feet). The two centre rear sensors have a range of approximately 1.5 metres (5 feet).

### PDC in operation

**Caution:** PDC is automatically switched off at the rear when a trailer is attached to the vehicle.

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 repetition frequency of the tones increases proportionally.

When the distance between the sensor and the obstruction is less than approximately 0.30 metres (1 foot), the tone becomes continuous.

# Park Distance Control

## Activating PDC

PDC is automatically activated whenever **R** (Reverse) is engaged, while the starter switch is turned on.

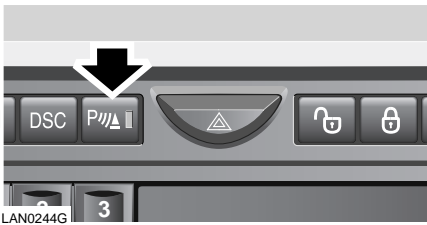
If **R** is selected, both front and rear sets of sensors become activated and a short confirmation tone sounds after one second.

In **R**, the sensors remain on regardless of speed.

If the driver selects **N** from **R**, both sets of sensors remain active.

Selection of Park **P**, or applying the EPB while the vehicle is stationary, will override other inputs and turn off the PDC system.

If a long, high-pitched tone sounds and the switch indicator flashes when PDC is activated, then a fault in the system has been detected - first check that the sensors on the bumpers are not obscured by dirt, ice or snow. If the fault persists after cleaning the sensors, contact your Land Rover Dealer/Authorised Repairer for assistance.



PDC is automatically cancelled when **D** (Drive) is selected and the vehicle exceeds 16 km/h (10 mph). When driving into a limited space, front PDC can be enabled manually.

Front PDC can be manually selected or deselected by pressing the switch (illustrated) on the centre front instrument panel. The switch indicator illuminates and a short tone sounds as confirmation.

**Note:** The confirmation tone only sounds when the rear PDC is activated by selecting reverse, or when the system is re-activated by pressing the switch.

# Automatic Transmission

## AUTOMATIC TRANSMISSION USE

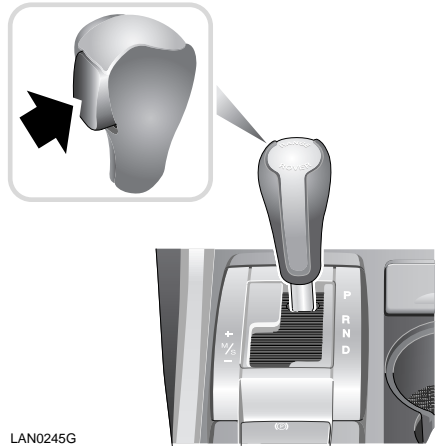
### Starting

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

- ALWAYS apply the parkbrake 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** or **N** 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.

- The selector release button (see inset) must be pressed while selecting **P** and **R**, and also to enable the lever to be moved between the **P** and **R** positions.
- 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 vehicle will tend to creep forward (or backward if reverse is selected).
- DO NOT allow the vehicle to remain stationary for any length of time with a drive gear selected and the engine running (always select **N** if the engine is to idle for a prolonged period).



LAN0245G

**Note:** The gear selector lever **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**.



# Automatic Transmission

## AUTOMATIC TRANSMISSION

### Selector lever positions

#### WARNING

Do not leave children unattended in the vehicle, especially with keys in the starter switch.

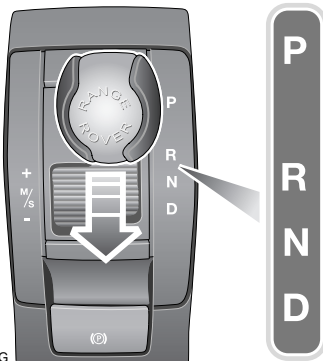
Select **P** and shut off the engine prior to exiting the vehicle.

**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.

An illuminated indicator on the selector panel and a number or letter on the gear selector display in the instrument pack, identify the selected gear position.



LAN0246G

### P - Park:

This position locks the transmission and should be selected before switching the engine off. To avoid transmission damage, ensure that the vehicle is completely stationary, with the parkbrake 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 engine starter switch is in position **II**.

### R - Reverse:

Before selecting **R**, ensure that the vehicle is stationary, with the brakes applied. The selector release button **MUST** be pressed before moving the selector lever into **R** position.

### N - Neutral:

Select **N** 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 parkbrake 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.

# Automatic Transmission

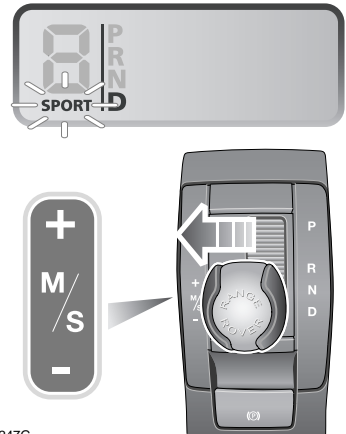
## Kick-down in automatic mode

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.

## 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.



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To select Sport mode, move the gear lever from the **D** position towards the left hand side of the vehicle (see illustration). The word **SPORT** will appear in the gear selector display in the instrument pack (for approximately 6 seconds) and the LED in the selector display to the side of the selector lever illuminates.

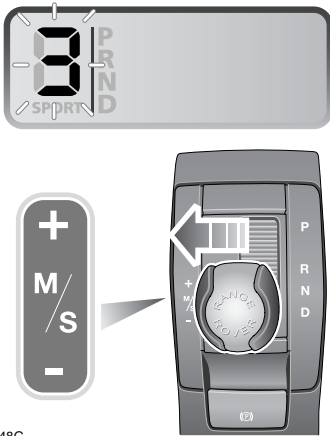
Sport mode can be deselected at any time, by returning the lever to the **D** position.

To return to Sport mode after CommandShift has been selected move the selector into the **D** position. Then move it back into Sport mode.

# Automatic Transmission

## CommandShift™

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.



LAN0248G

1. With **D** selected, move the gear selector from the **D** position towards the left-hand side of the vehicle (this is the same as selecting Sport mode).
2. The transmission then automatically selects the ratio most appropriate to the vehicle's road speed and accelerator depression. Move the selector forward or backward to manually select a higher or lower gear (when available). The message **TRANSMISSION COMMANDSHIFT SELECTED** appears in the main message centre.
3. A single forward (+) movement of the selector lever will change the transmission to a higher gear. Rearward (-) movement of the lever will change down to a lower gear. The selected gear will be indicated in the digital display in the instrument pack (see inset).

4. To deselect CommandShift, simply 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, 159**.

**Note:** When the Terrain Response is selected, the automatic transmission will go straight into CommandShift if the lever is moved into sport/CommandShift in any Special Program.

### Using CommandShift in HIGH range

If CommandShift 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 CommandShift 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 CommandShift

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 current vehicle speed.

# Automatic Transmission

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## **ELECTRONICALLY SELECTED AUTOMATIC MODES**

In automatic or Sport modes (not available in CommandShift), the transmission control system will electronically adjust gear change points to suit a variety of driving conditions.

### **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 manual 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, whilst enabling the gearbox to continue performing normally in high temperatures.

***Note:** When the Terrain Response system 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. Seek 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. For vehicles equipped with a message centre, the messages displayed will assist the experienced driver in carrying out a range change on-the-move.

### Stationary method

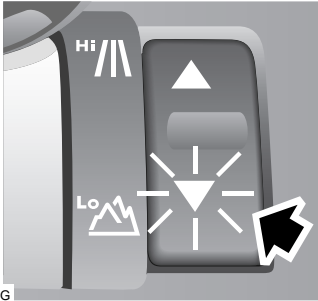
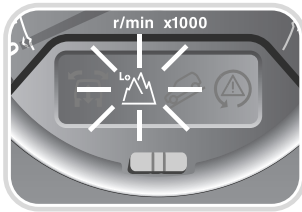
With the vehicle stationary and the engine running, apply the foot brake and move the automatic gearbox selector to **N** (neutral). Press the transfer gear switch to select HIGH or LOW and release it.



While the vehicle is in HIGH range, the range indicator in the instrument pack display is extinguished and the HIGH range indicator at the switch is illuminated.

The range indicator in the instrument pack display 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

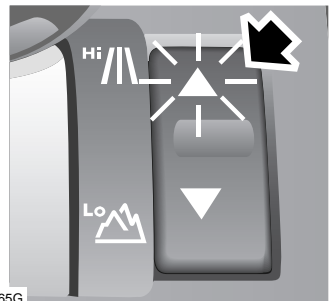
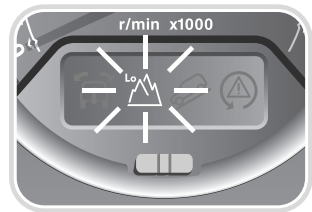


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While a HIGH to LOW range change is in progress, the HIGH range indicator in the switch will remain illuminated. The LOW range indicators in both the switch and the instrument pack display will flash.

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 ENGAGED** is displayed in the message centre for a few seconds.



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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 ENGAGED** 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.*

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 to the LOW position and release it.

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

**Caution: If the range change indicator still flashes when the starter key is turned from position II to position I, apply the parkbrake.**

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 to the HIGH position and release it.

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.

## Transmission fault message

If a fault occurs within the transmission, a message will be displayed in the main message centre. See **MESSAGE CENTRE MESSAGES, 92**.

## 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.**

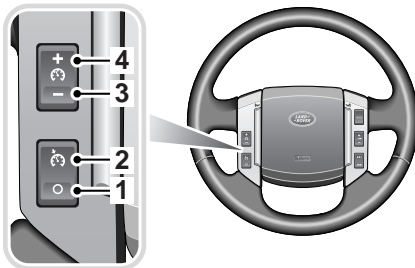
# Cruise Control

## CRUISE CONTROL

**Caution:** Always observe the following precautions:

- **DO NOT** use cruise control in traffic conditions where a constant speed cannot easily be maintained.
- **DO NOT** use cruise control on winding or slippery road surfaces, or in off-road conditions such as rough tracks or on sand.
- **Use of Sport mode is not recommended when cruise control is selected.**

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.



LAN0252G

The steering wheel switches operate as follows:

1. **CANCEL:** Cancels without erasing memorised speed.
2. **RESUME:** Resume set speed.
3. **SET - :** Set the speed (-) or decrease.
4. **SET + :** Set the speed (+) or increase.

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

It is also not available when using the Terrain Response system, when Mud Ruts, Sand or Rock Crawl is selected and also when Hill Descent Control (HDC) is selected.

### To operate

Accelerate until the desired cruising speed is reached. This must be above the system's operational minimum speed of 30 km/h (18 mph).

Press the **+** switch (4) to set the vehicle speed in the system's memory. Cruise control will now maintain that road speed.



The warning indicator in the instrument pack illuminates. With cruise control operating, speed can be increased by normal use of the accelerator e.g. for overtaking. When the accelerator is released, road speed will return to the previously set cruising speed.

**Note:** When cruise control speed is set and the accelerator pedal is pressed for more than 60 seconds, cruise control will be cancelled.



# Cruise Control

---

A speed can be set and stored whilst the vehicle speed is below 30 km/h (18 mph), or the vehicle is stationary but the gear selector is in **D** or **N**. Once the vehicle speed exceeds 30 km/h (18 mph) the set speed can be achieved by pressing the resume switch (2).

## Suspending cruise control

Cruise control can be suspended by a single press of the **CANCEL** switch (1). The warning indicator in the instrument pack extinguishes.

Cruise control will also suspend when the brake pedal is pressed, when the gear selector is moved into neutral or if HDC or DSC becomes active.

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

**Note:** *The set speed will NOT be erased by pressing the **CANCEL** switch (1). The set speed will only be erased when the starter switch is turned to position **0**, or the gear selector lever is moved to **R** or **P**.*

## Reducing the cruise speed

Press and hold the - switch (3); the vehicle will decelerate. Release the switch as soon as the desired speed is reached. The vehicle speed at the point of switch release becomes the new set speed.

Alternatively, the set speed can be decreased incrementally by tapping the - switch (3). Each press of the switch will decrease the speed by 2 km/h (1 mph).

## Increasing 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 speed 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 (4); 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 (4). Each press of the switch will increase the speed by 2 km/h (1 mph).

A further alternative is to increase speed by normal use of the accelerator. When the desired speed is reached, press the + switch (4) to set the cruise control.

**Note:** *If the accelerator pedal is pressed to increase speed, but the + switch (4) is not pressed, cruise control will be cancelled after 60 seconds.*

# Adaptive Cruise Control (ACC)

## ADAPTIVE CRUISE CONTROL (ACC)

### WARNING

**Adaptive Cruise Control is not a collision warning or avoidance system. Additionally, Adaptive Cruise Control will not detect:**

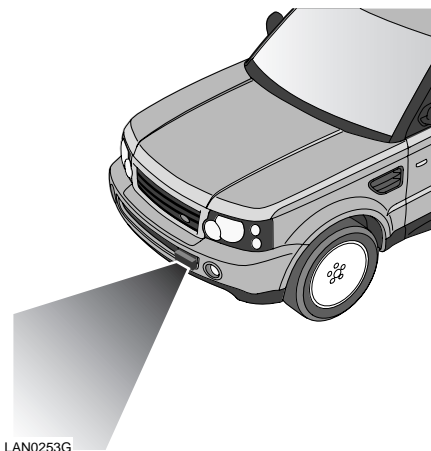
- **Stationary or slow moving vehicles below 10 km/h (6 mph).**
- **Pedestrians or objects in the roadway.**
- **Oncoming vehicles in the same lane.**

A radar sensor mounted in the front bumper, projects a beam directly forward to detect objects ahead.

ACC utilises this radar sensor to maintain a gap between your vehicle and a vehicle ahead. The gap can be adjusted to one of four distance settings to suit your driving style. If there is no vehicle ahead within radar range, a set road speed can be maintained. Any speed between 30 km/h (18 mph) and 180 km/h (110 mph) can be stored in the ACC memory.

When ACC is active, a set gap can be maintained behind a leading vehicle even if your stored speed is higher. If the road situation allows you to move into an adjacent lane, your vehicle will automatically accelerate up to your stored speed as long as there is no vehicle ahead within radar range.

In a situation where your set gap is reduced by a slowing lead vehicle, ACC will automatically apply the brakes to re-establish the gap.



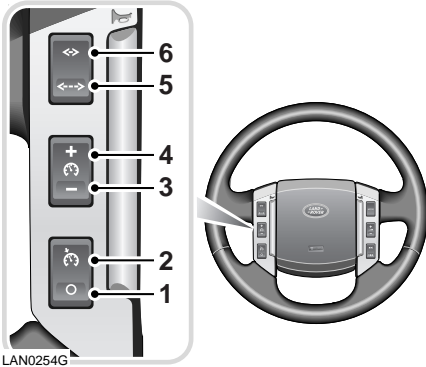
LAN0253G

- Only use ACC when conditions are favourable, that is, straight, dry, open roads with light traffic.
- Do not use in poor visibility, specifically fog, heavy rain, spray or snow.
- Do not use on icy or slippery roads.
- It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- Keep the front of the vehicle free from dirt, metal badges or objects, including vehicle front protectors, which may prevent the sensor from operating.
- Do not use ACC when entering or leaving a motorway.

# Adaptive Cruise Control (ACC)

## Steering wheel switches

The system is operated by switches mounted on the steering wheel. The driver can also intervene at any time by use of the foot brake or accelerator pedals.



The steering wheel switches operate as follows:

1. **CANCEL**: Cancels without erasing memorised speed.
2. **RESUME**: Resume set speed.
3. **SET -** : Set the speed - or decrease.
4. **SET +** : Set the speed + or increase.
5. **GAP <-->** : Gap increase.
6. **GAP <->** : Gap decrease.

## Setting a speed

Accelerate as normal until the required speed is reached.

Press the **SET +** button (4) briefly and the vehicle speed will then be stored in the memory and the system activated. The set speed will be displayed on the message centre (e.g. **SET SPEED 80KM/H 50MPH**).

## Entering the follow mode

### WARNING

**When in follow mode the vehicle will not decelerate automatically to a stop, nor will the vehicle always decelerate quickly enough to avoid a collision without driver intervention.**

Once a set speed has been selected, the driver can release the accelerator and the set road speed will be maintained.

When a vehicle ahead enters the same lane or a slower vehicle is ahead in the same lane and travelling in the same direction, the vehicle speed will be adjusted automatically until the gap to the vehicle ahead corresponds to the preset gap. The vehicle is now in follow mode.



The warning lamp in the instrument cluster will be illuminated.

## CRUISE GAP



The message centre will display the gap set.

# Adaptive Cruise Control (ACC)

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The vehicle will then maintain the constant time gap to the vehicle ahead until:

- The vehicle ahead accelerates to a speed above the set speed.
- The vehicle ahead moves out of lane or out of view.
- The vehicle ahead slows so that low speed automatic switch off occurs.
- A new gap distance is set.

If necessary, the vehicle brakes will be automatically applied to slow the vehicle to maintain the gap to the vehicle in front.

The maximum braking which is applied by the ACC system is limited and can be overridden by the driver applying the brakes, if required.

**Note:** *Driver braking will cancel ACC.*

If the ACC system predicts that its maximum braking level will not be sufficient, then an audible warning will sound while the ACC continues to brake. **DRIVER INTERVENE** will be displayed on the message centre. The driver should take IMMEDIATE action.

When in follow mode the vehicle will automatically return to the set speed when the road ahead is clear, for instance when:

- The vehicle in front accelerates or changes lane.
- The driver changes lane to either side or enters an exit lane.

The driver should intervene if appropriate.

## Low speed automatic switch off

If the speed of the vehicle decreases below 30 km/h (18 mph), the ACC system will be automatically switched OFF and the instrument warning lamp will go out.

If the brakes were being applied by the ACC system, they will be slowly released.

This will be accompanied by an audible warning, and **DRIVER INTERVENE** will be displayed on the message centre. The driver must take control.

## Overriding the set speed/follow mode

### WARNING

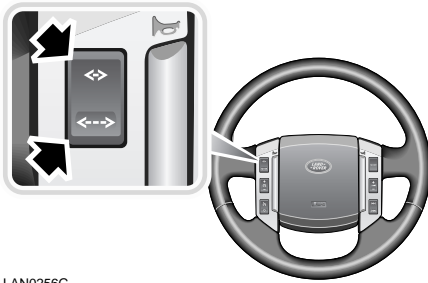
**Whenever the driver is overriding the ACC by depressing the accelerator pedal, the ACC will not automatically apply the brakes to maintain separation from any vehicle ahead.**

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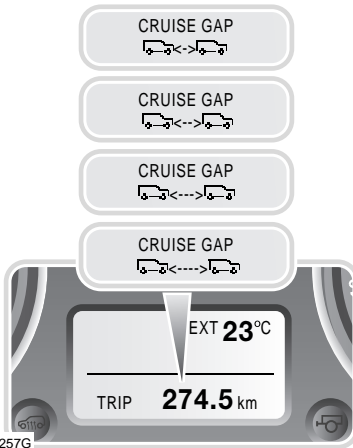
The set speed and gap can be overridden by pressing the accelerator pedal when cruising at constant speed or in follow mode. If the vehicle is in follow mode, the instrument warning lamp will go out when the ACC is overridden by the driver using the accelerator and **CRUISE OVERRIDE** will be displayed on the message centre. When the accelerator is released the ACC function will operate again and vehicle speed will decrease to the set speed, or a lower speed if follow mode is active.

# Adaptive Cruise Control (ACC)

## Adjusting the gap



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The gap from the vehicle ahead can be decreased or increased by pressing the rocker switch (5) or (6), on the steering wheel.

Four gaps are available and the selected gap setting will be displayed on the message centre when either button is pressed. After the starter is switched ON the default gap will be automatically selected ready for ACC operation.

**Note:** It is the driver's responsibility to select a gap appropriate to the driving conditions.

## Adjusting the set speed

There are three ways to change the set speed:

- Accelerate or brake to the required speed and press the **SET +** button (4).
- Increase or decrease the speed by pressing and holding either the **SET +** or **-** button (4) or (3) until the required set speed is shown on the message centre. The vehicle speed will gradually change to the selected speed.
- Increase or decrease the speed in steps of 2 km/h (1 mph) by briefly pressing the **SET +** (4) or **SET -** button (3).

ACC operates between approximately 30 km/h and 180 km/h (18 mph and 110 mph) dependent on the country specification.

Set speeds outside this range will not be captured.

The ACC may apply the brakes to slow down the vehicle to the new set speed. The new set speed will be displayed on the message centre for four seconds after it has been changed.

# Adaptive Cruise Control (ACC)

## ACC automatic switch off

ACC will disengage, but not clear the memory when:

- The CANCEL button (1), is pressed.
- The brake pedal is pressed.
- The vehicle speed falls below 30 km/h (18 mph).
- **N** is selected.
- Dynamic Stability Control (DSC) activates.
- Electronic Traction Control (ETC) activates.
- Hill Descent Control (HDC) is selected.

ACC will disengage, and clear the memory when:

- The starter switch is set to position **0**.
- Maximum vehicle speed is reached.
- A fault occurs in the ACC system.

## Resuming the set speed/follow mode

**Caution: RESUME should only be used if the driver is aware of the set speed and intends to return to it.**

By pressing the resume button (2), after ACC has been cancelled, for example, after braking, the ACC will become active again provided that the set speed memory has not been erased. The set speed will be displayed for four seconds and the original set speed will be resumed, unless a vehicle ahead causes the follow mode to become active.

## Forward alert

Limited warning of vehicles ahead is provided during ACC operation by the ACC **DRIVER INTERVENE** warning. The forward alert feature additionally provides warnings whilst ACC is not engaged; if a vehicle is detected close ahead, then the warning tone and message will be issued. The brakes will not be applied.



This additional feature may be switched on or off using the forward alert switch as indicated

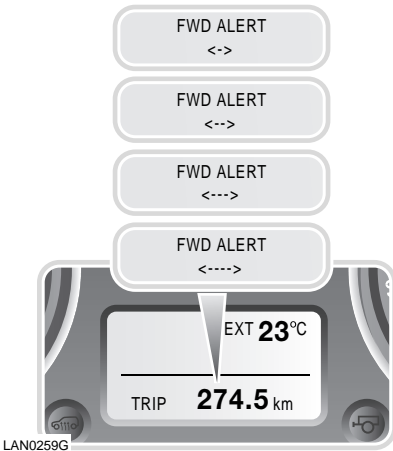
When the indicator lamp in the switch is on, forward alert is active.

The sensitivity of the warning may be changed:

- Press the gap decrease button when ACC is disengaged to display and then decrease the sensitivity of the alert.
- Press the gap increase button to display and then increase the sensitivity of the alert.

Both of these alerts are accompanied by the **FWD ALERT <---->** message in the message centre.

# Adaptive Cruise Control (ACC)



## Driving with ACC active

The system acts by regulating the speed of the vehicle using engine control and the brakes. Gear changes may occur in response to deceleration or acceleration whilst in ACC.

ACC is not a collision avoidance system, however, during some situations the system may provide the driver with an indication that intervention is required.

An audible alarm will sound, accompanied by the message **DRIVER INTERVENE** if the ACC detects:

- A failure has occurred whilst the system is active.
- That using maximum ACC braking only is not sufficient.
- That the vehicle speed has decreased below the minimum for ACC operation.

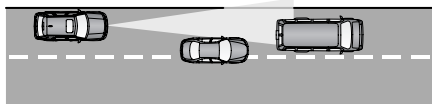
### **Note:**

- *ACC operates when the gear selector lever is in position **D**.*
- *When engaged, the accelerator pedal rests in the raised position. Fully release the pedal to allow normal ACC operation.*
- *When braking is applied by the ACC the brake pedal may move down and up as braking is applied or removed. The vehicle brake lamps will be switched on while braking is applied.*

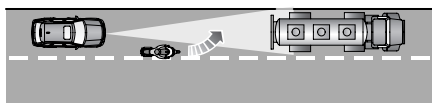
# Adaptive Cruise Control (ACC)

## Detection limitations

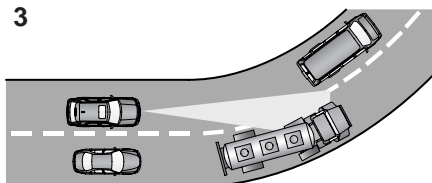
1



2



3



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Detection limitations can occur:

1. When driving on a different line to the vehicle in front.
2. With vehicles which edge into your lane which can only be detected once they have moved fully into your lane.
3. There may be issues with the detection of vehicles in front when going into and coming out of a bend.

In these cases ACC may brake late or unexpectedly. The driver should stay alert and intervene if necessary.

## ACC failure

If a fault occurs during operation of the system in cruise or follow modes, the ACC system will switch OFF and cannot be used until the fault is cleared. The message **DRIVER INTERVENE** appears briefly, and is then replaced by the message **CRUISE NOT AVAILABLE**.

If failure of the ACC or any related system occurs at any other time the message **CRUISE NOT AVAILABLE** will be displayed. It will not be possible to activate the ACC system in any mode.

Accumulations of dirt, snow or ice on the sensor or cover may inhibit ACC operation. Fitting of a vehicle front protector or metallised badges may also affect ACC operation.

If this occurs in ACC cruise/follow mode, the audible alarm sounds and the message **DRIVER INTERVENE** appears briefly. The message **ACC SENSOR BLOCKED** is then displayed. The system is no longer active.

Clearing the obstruction allows the system to return to normal operation. If the obstruction is present when ACC is inactive, e.g. on initial starting or with the ACC system switched off, the message **ACC SENSOR BLOCKED** will be displayed.

Tyres other than those recommended may have different sizes. This can affect the correct operation of the ACC.



# Brakes

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## 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, 104.**

**Never place non-approved floor matting or any other obstructions, under the brake pedal. This restricts pedal travel and braking efficiency.**

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For your safety, the hydraulic braking system operates through dual circuits. If one circuit should fail, the other will continue to function.

However, in the event of brake failure where only one circuit is operational, the vehicle should only be driven at slow speed to the nearest qualified Land Rover Dealer/Authorised Repairer.

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.

## 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.

## 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.

# Brakes

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## ANTI-LOCK BRAKES

### WARNING

**ABS cannot overcome the physical limitations of braking distance, 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 safety. 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.**

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

Under normal braking conditions, where sufficient road surface friction exists to slow the vehicle without the wheels locking, ABS will not be activated. However, if the wheels begin to lock under braking, then ABS will automatically come into operation. This will be recognisable by a rapid pulsation felt through the brake pedal.

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

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

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

### Warning indicator



A fault with the ABS system is indicated by illumination of the amber ABS warning indicator. If the indicator illuminates, drive with care, avoiding heavy brake applications and seek qualified assistance urgently. See **Anti-lock Braking System (ABS) - AMBER, 108**.

# Brakes

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## 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 as 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.

## Cornering Brake Control (CBC)

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

## Emergency Brake Assist (EBA)

If rapid full brake application is made, EBA automatically boosts the braking force to the maximum and 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 **INDICATOR GROUPING, 104**.

In the event of a fault, the system should be checked by a Land Rover Dealer/Authorised Repairer at the earliest opportunity.

## Electronic Brake Force Distribution (EBD)

Your vehicle is equipped with Electronic Brake Force Distribution (EBD), which balances the distribution of braking forces between front and rear axles 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. If this illuminates while the vehicle is being driven, gently stop the vehicle as soon as safety permits and seek qualified assistance.

# Brakes

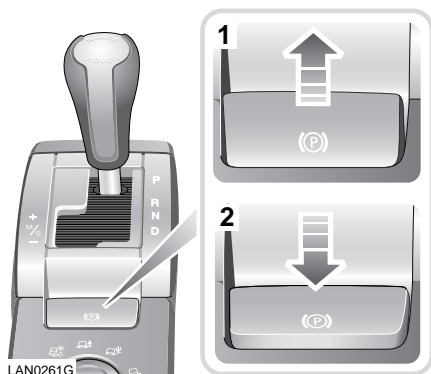
## PARKBRAKE (EPB)

### WARNING

**DO NOT** rely on the parkbrake system to hold the vehicle stationary if the amber parkbrake warning indicator is illuminated and/or the red warning indicator is flashing. Seek qualified assistance urgently.

**Caution: Driving the vehicle with the parkbrake applied or repeated use of the parkbrake to decelerate the vehicle may cause serious damage to the brake system.**

Your vehicle is equipped with an electrically operated parkbrake (EPB).



### Applying the parkbrake manually

With the vehicle stationary, pull up the lever (1) and release it. The lever will return to the neutral position and the red parkbrake warning indicator in the instrument pack will illuminate.

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 parkbrake, the amber parkbrake warning indicator will illuminate and the message **PARKBRAKE FAULT** will appear on the instrument pack. If a fault is detected while EPB is operated, the red warning indicator will flash and the amber indicator will illuminate. Also the message **PARKBRAKE FAULT. SYSTEM NOT FUNCTIONAL** will appear in the main message centre. The red indicator will continue to be illuminated for at least ten seconds after the starter switch has been turned off.

### Dynamic operation

In an emergency, the parkbrake 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 gradual reduction in speed. The brake warning indicator will illuminate accompanied by a harsh sound and **CAUTION! PARKBRAKE APPLIED** appears on the main message centre. The stop lamps will illuminate.

Releasing or depressing the lever will cancel the parkbrake application.

# Brakes

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## Releasing the parkbrake manually

### WARNING

**The parkbrake 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 parkbrake to operate effectively if the vehicle has been subjected to immersion in mud and water.**

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To disengage the parkbrake, the starter key must be in position **I** or **II**. Apply pressure to the foot brake while pressing down on the parkbrake lever.

It is not possible to manually release the parkbrake without pressing the foot brake.

If the parkbrake cannot be released manually, seek qualified assistance immediately.

## Releasing the parkbrake automatically

If the vehicle is stationary with the parkbrake applied and in **D** or **R**, pressing the accelerator will release the parkbrake and allow the vehicle to move off.

To delay the automatic release feature, hold the lever in the apply position, then at the desired point, release it.

To assist in a smooth drive-away, the system anticipates the requirement and reduces the system load depending on the gradient (it may be possible to hear this pre-arm operation).

If the reduction in load causes the vehicle to move after a valid gear is engaged, the full system load will be re-applied to the parkbrake. This may cause a small reduction in the refinement of the subsequent drive-away. It is also possible to override this load reduction by lifting the parkbrake lever after gear engagement.

In the event of a fault, **PARKBRAKE FAULT. AUTO RELEASE NOT FUNCTIONAL** will appear in the main message centre. In this event, release the parkbrake 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.

If the vehicle is used in severe off-road conditions, such as wading, deep mud, etc., additional maintenance and adjustment of the parkbrake will be required. Consult your Land Rover Dealer/Authorised Repairer.

## Fault management

If a fault is diagnosed by the system when the starter is on but the parkbrake is not in use, the amber parkbrake warning indicator will flash and the message **PARKBRAKE FAULT** will be displayed in the main message centre.

**Note:** *Under some transmission fault conditions the parkbrake may not function, or may not operate automatically.*

# Dynamic Stability and Traction Control

## DYNAMIC STABILITY CONTROL (DSC)

### WARNING

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

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

### Warning indicator



The indicator illuminates briefly as a bulb and system check when the starter switch is turned to position II.

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

If the indicator illuminates constantly, and does not extinguish when the DSC switch is pressed, a fault has been detected in the system. Any fault will deactivate DSC. Drive with care and seek qualified assistance as soon as possible.

### Deactivating DSC operation

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

In some driving conditions, to maximise traction, it may be beneficial to deactivate DSC. Such conditions include:

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



To deactivate DSC, press and briefly hold the DSC switch on the instrument panel (the DSC warning indicator will illuminate continuously). Deactivating DSC has no effect on traction control operation.

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

### Reactivating DSC

To reactivate DSC, press and briefly hold the DSC switch on the instrument panel. DSC will automatically reactivate when the engine is started.

# Dynamic Stability and Traction Control

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## ELECTRONIC TRACTION CONTROL (ETC)

ETC is continuously available to boost vehicle traction when one or more wheels has a tendency to spin, while others do not. 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 allows the engine power to be transmitted 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 illumination of the amber DSC warning indicator. This could also indicate that the DSC has been manually deactivated. See **INDICATOR GROUPING, 104**.

If the indicator illuminates constantly, and does not extinguish when the DSC switch is pressed, 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 is fully functional and should only be used in first and reverse gears in HIGH range and all gears in LOW range.

HDC is fully functional and should only be used in **D**, **R** and CommandShift **1** in HIGH range and in **D**, **R** and all CommandShift gears in LOW range. When in **D**, the vehicle will automatically select the most appropriate gear. The vehicle should not be driven with the HDC active in **N** neutral.

**Note:** *Some of the Terrain response program/range combinations will activate or deactivate HDC automatically.*

### Warning indicator



HDC can be selected at speeds below 80 km/h (50 mph). The green warning indicator will

illuminate continuously when vehicle speed reduces below 50 km/h (30 mph) and full HDC function is activated.

If the vehicle speed exceeds 80 km/h (50 mph), HDC will deselect and the green HDC indicator will extinguish.

If HDC is already selected and vehicle speed rises above 50 km/h (30 mph) in HIGH range, HDC function is suspended and the green HDC 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. To deselect, press and release again.

The green information indicator will extinguish. 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 controls the vehicle speed more aggressively. Use LOW range gears when steep descents are to be attempted.

**Note:** *HDC is automatically deselected if the vehicle starter is switched off for more than 6 hours.*

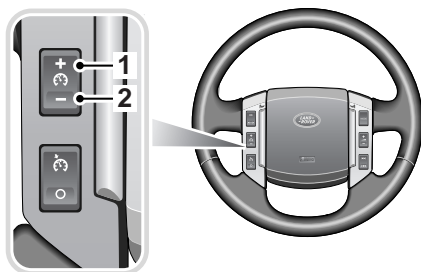


# Hill Descent Control

## HDC in action

HDC should be used in conjunction with an appropriate gear selection.

During a hill descent, 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.



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While HDC is controlling the vehicle speed, descent speeds can be varied using the steering-wheel-mounted cruise control (1) + and (2) - switches. To reduce the descent speed, press and hold the - switch. The vehicle speed at the point of switch release will become the new descent speed.

To increase the descent speed, press and hold the + switch. The vehicle speed at the point of switch release will become the new descent speed. Alternatively, the descent speed can be adjusted by tapping the + or - switches. Each press of the switch will adjust the descent speed by approximately 0.5 km/h (0.3 mph).

**Note:** Each gear has a pre-defined minimum descent speed.

**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.

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 display. 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.

# Hill Descent Control

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## **HDC fade-out**

HDC fade-out gradually decreases the HDC function with the effect that the rate of hill descent will increase. HDC will be disabled completely once the descent is complete.

If required (e.g. the angle of the descent levels out significantly), fade-out may be achieved deliberately by deselecting HDC while the system is operating.

## **HDC information indicator - GREEN**

If HDC is selected and the operating conditions are met, the indicator will illuminate continuously.

If the indicator flashes while HDC is active, HDC operating conditions are not met.

# Air Suspension

## AIR SUSPENSION

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 **DIMENSIONS, 292**.

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*

### Extended mode

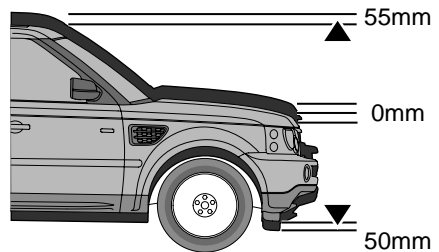
If the vehicle is grounded while at off-road height and traction control is induced, the system provides additional lift to clear the obstruction. Extended mode is activated automatically and cannot be selected manually.

## Access height

### 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 105 mm (4.1 in.) less at Access height than at Off-road height.**

This is 50 mm (2 in.) lower than On-road height. It provides easier entry, exit and loading of the vehicle.



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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.

# Air Suspension

- 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 is turned off, provided that the driver's door has not been opened within this time.

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 lowers the suspension ride height by 20 mm if the vehicle exceeds 160 km/h (100 mph) for longer than five seconds. This action is automatic and cannot be over-riden. 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)

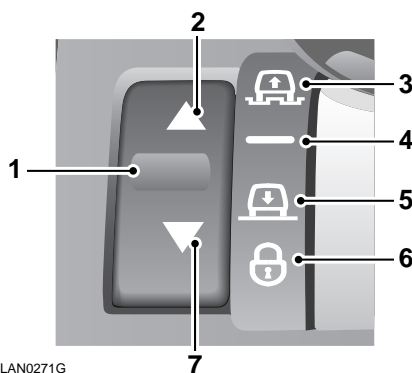
This mode enables the vehicle to be driven at low speeds at Access height to give increased roof clearance in low car parks, etc.

Crawl can be selected when the vehicle speed is below 35 km/h (22 mph), but will not be activated until vehicle speed drops below 10 km/h (6 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

When a message centre is fitted to the vehicle, messages relating to the air suspension system may be displayed. See **MAIN MESSAGE CENTRE, 90**

## 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

# Air Suspension

## 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.

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.

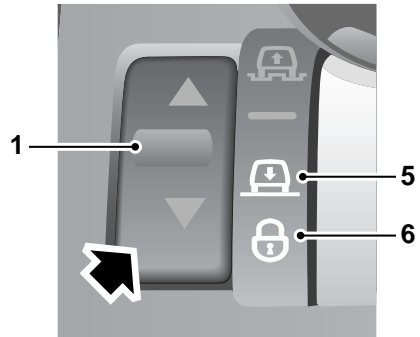
## Selecting Access height

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.

## Selecting and cancelling Crawl (locked at Access height)



LAN0272G

When the suspension is at On-road or Access height and the vehicle speed is below 10 km/h (6 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).

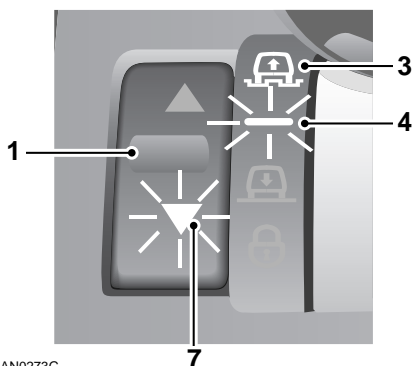
## Selecting Access height directly from Off-road height

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



LAN0273G

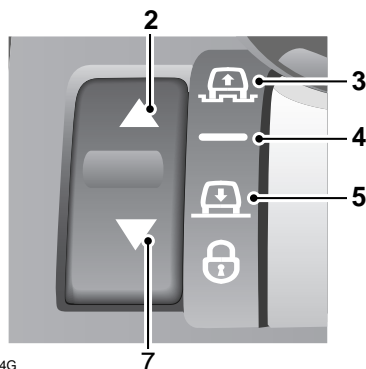
When the suspension is at Off-road height, Access or Crawl, the suspension height will change automatically when vehicle speed exceeds predetermined levels.

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.



LAN0274G

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.

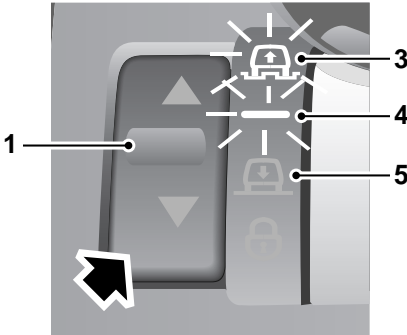
If the doors are not closed within this time, the raising indicator (2) or the lowering indicator (7) will extinguish and the indicators showing the heights above and below the current position will be illuminated.

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.



LAN0275G

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 whilst 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).

# Air Suspension

## Remote operation

### WARNING

The remote control will operate effectively from inside the vehicle. It is therefore important to keep it out of reach of children at all times.

When operating the remote control from inside the passenger compartment, ensure that the underside of the vehicle has been checked for obstructions before lowering, and that a responsible adult has been posted outside the vehicle to supervise the lowering process.

**Care should be taken with all suspension height changes when a trailer is attached to the vehicle.**

The remote control is programmable to give a range of functions. See **REMOTE CONTROL PROGRAMMING, 41**. If the vehicle's remote control has been configured to operate the air suspension, height may be controlled remotely to assist in loading the vehicle or attaching a trailer.

After programming, to change the suspension height via the remote control, remove the starter key, turn on the hazard warning lamps and close all doors. Remote operation is not possible unless this is done.



LAN0276G

To raise the vehicle, press and hold the Land Rover button (3) and Lock button (1).

To lower the vehicle, press and hold the Land Rover button (3) and Unlock button (2).

If any button is released during the raising or lowering of the suspension, all movement of the suspension will stop. It will restart once the buttons are pressed again.

The height will initially change slowly but, after three seconds, the speed will increase. While the height is changing, a indicator on the raise/lower switch will be lit according to the direction of movement.

If the starting height is above or below On-road height, movement will stop when On-road height is reached. Further movement can be achieved by releasing the buttons and pressing them again.

Normal height control will resume when the vehicle is driven away.

**Note:** Remote operation is disabled when the vehicle is moving.



# Dynamic Response

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## DYNAMIC RESPONSE

**Caution:** If the warning lamp illuminates RED a system fault has occurred that may result in serious damage to vehicle components. Stop the vehicle and switch off the engine as soon as safety permits. Seek qualified assistance immediately.

Dynamic Response is a patented feature unique to Land Rover. The system is designed to eliminate vehicle body roll at low cornering speeds and reduce body roll at higher cornering speeds, while maintaining a soft, car-like, suspension for straight line travelling. On uneven surfaces and rough tracks, the Dynamic Response system will adjust the suspension according to the vehicle speed and roughness of the surface to provide improved passenger comfort.

At very low speeds the roll bars are effectively decoupled, giving significant benefits in off-road axle articulation and improved traction.

The system is entirely automatic in operation and cannot be influenced by the driver in any way. However, the functionality of the warning indicator in the instrument panel is very important and drivers should be aware of the following:

### Warning indicator



The warning indicator illuminates RED when the starter switch is turned to position II. After two seconds, the RED illumination changes to AMBER and, after a further two seconds, the indicator extinguishes. This process is a system check that takes place every time the vehicle is used. Provided the Dynamic Response system and air suspension system are operating correctly, illumination will not occur at any other time.

If illumination occurs while driving, a fault with the system is indicated, as follows:

- **If the indicator shows RED** (a flashing red indicator, which changes to constant illumination after two minutes, and is accompanied by a warning chime):

This indicates a system fault that may result in serious damage to vehicle components and reduced Dynamic Response performance. You must stop the vehicle as soon as safety permits and switch off the engine. **DO NOT CONTINUE DRIVING!** Seek qualified assistance immediately

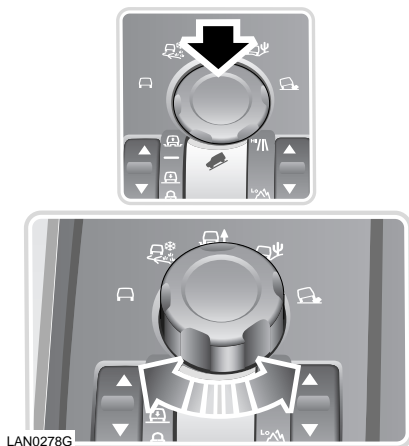
- **If the indicator shows AMBER** (constant illumination):

This indicates a system fault that will result in reduced Dynamic Response performance, but will not leave the vehicle in a dangerous condition. You may continue driving, but reduce speed, take additional care, and consult a Land Rover Dealer/Authorised Repairer at the earliest opportunity.

# 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.



To raise the rotary knob, press down on it lightly and release. To lower the rotary knob, press down until it clicks.

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, e.g. 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.

# Terrain Response

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**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 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.

## Using Terrain Response

### 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 message 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.**

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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. 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.

# Terrain Response

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**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 re-act 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 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.

## Driver over-ride options

### WARNING

**This height increase will start regardless of whether the vehicle is moving or not.**

---

All systems will be set to optimum parameters for the terrain conditions reflected in the choice of control program. Two of the 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.

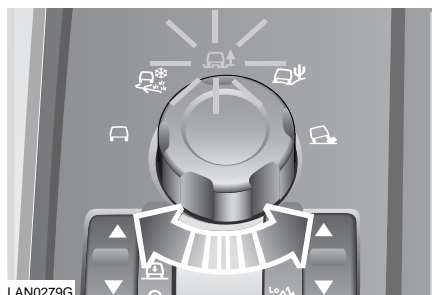
Both the HDC and ride height automatic selections can be cancelled by the driver at any time. Conversely, if HDC or a specific ride height has not been automatically selected by the system, the driver can always choose to operate it as normal at any time.

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 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.

In addition to the Terrain Response General setting, 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 the graphics night illumination 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.

If a special program is active, the special program symbol will also be displayed on the message centre.



If the starter switch is turned off when any special program is 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. After more than six hours, the system will automatically revert back to the General program (special programs off).

# Terrain Response

## Terrain Response general



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, 181**.

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, 241**.

**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

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## 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-override 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, 179.**

## Rock Crawl

**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.**



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.

# Terrain Response

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## **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 a message.

The air suspension system provides an automatic levelling function. See **AIR SUSPENSION, 184**. 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**

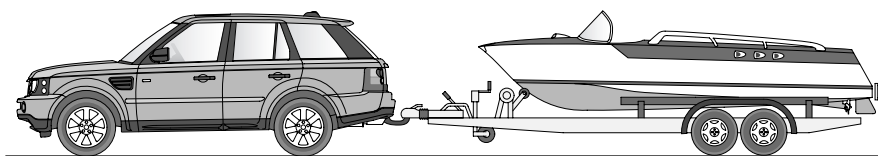
Messages relating to the Terrain Response system are displayed on the message centre.

For an explanation of those messages, see **MAIN MESSAGE CENTRE, 90**.



# Towing

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LAN0282G

## TOWING

### 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.**

**Caution: An equalising or other form of weight distributing hitch should NOT be used with your vehicle.**

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.

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!

- The trailer should be level with the ground when loaded.
- The height of the drawbar hitch point should be set so that the trailer is level when connected to the loaded vehicle.

# Towing

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## Points to remember:

- When calculating the laden weight of the trailer, remember to include the weight of the trailer PLUS the load.
- The recommended trailer nose weight, plus the combined weight of the vehicle's load-carrying area and rear seat passengers, must never exceed the specified maximum rear axle load. See **Vehicle Weights, 291**.
- Before balancing the combination, ensure that:
  - All doors are closed.
  - The engine is running.
  - On-road ride height is selected.This ensures that the towing hitch is at the correct height.
- Where the load can be divided between trailer and tow vehicle, loading more weight into the vehicle will generally improve the stability of the combination.
- 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 **Vehicle Weights, 291**.

**Note:** When towing do not exceed 100 km/h (60 mph), or 80 km/h (50 mph) when the temporary spare wheel is in use. See **WHEELS AND TYRES, 290**.

## Gear range selection

To avoid overheating the gearbox, it is not advisable to tow heavy trailer loads at speeds of less than 32 km/h (21 mph) using the transfer gearbox in HIGH range. Select LOW range instead.

## Vehicle weights

### 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.**

**The nose weight, plus the combined weight of the vehicle's load carrying area and rear seat passengers, must never exceed the specified maximum rear axle load. See Vehicle Weights, 291.**

**Exceeding allowable vehicle and axle loads will increase the risk of tyre and suspension failure, increase stopping distance and adversely affect vehicle handling and stability. This may result in a crash or roll-over.**

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When loading a vehicle to its maximum weight (gross vehicle weight), ensure that axle loading does not exceed the permitted maximum values. It is the driver's responsibility to limit the vehicle load in such a way, that neither the maximum axle loads, nor the gross vehicle weight, 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 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.

# Towing

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## Trailer socket

The trailer socket is located alongside the rear towing eye, behind the rear bumper cover. See **Removing the rear cover, 207**.

The vehicle's electrical system is configured to support all towing requirements and the electrical socket fitted complies with legal requirements for the specific territory in which the vehicle was sold.

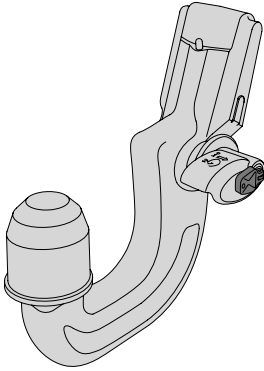
All towing circuits are independently fused in a satellite fusebox located in the lower loadspace trim panel. See **Tow hitch fuses, 270**.

### ESSENTIAL TOWING CHECKS

<b>Tyre pressures:</b>	Increase rear pressures of towing vehicle to those for Maximum gross vehicle weight conditions. See <b>WHEELS AND TYRES, 290</b> . Ensure trailer/caravan tyres are at recommended pressures.
<b>Nose weight:</b>	If the vehicle is loaded to the Gross Vehicle Weight (GVW), the nose weight is limited to 150 kg (330 lb). If a greater nose weight is necessary (up to 250 kg (550 lb) maximum), vehicle load should be reduced to ensure the GVW and rear axle weights are not exceeded. See <b>Vehicle Weights, 291</b> .
<b>Breakaway cable or secondary coupling</b>	A breakaway cable or secondary coupling <b>MUST</b> 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 manufacturer's 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

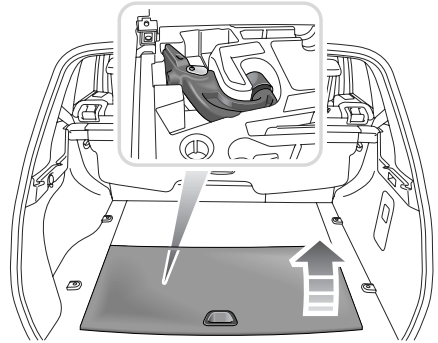
## TOW BAR



LAN0284G

Your vehicle is fitted with a towing housing which will accept a detachable tow bar.

## Detachable tow bar stowage

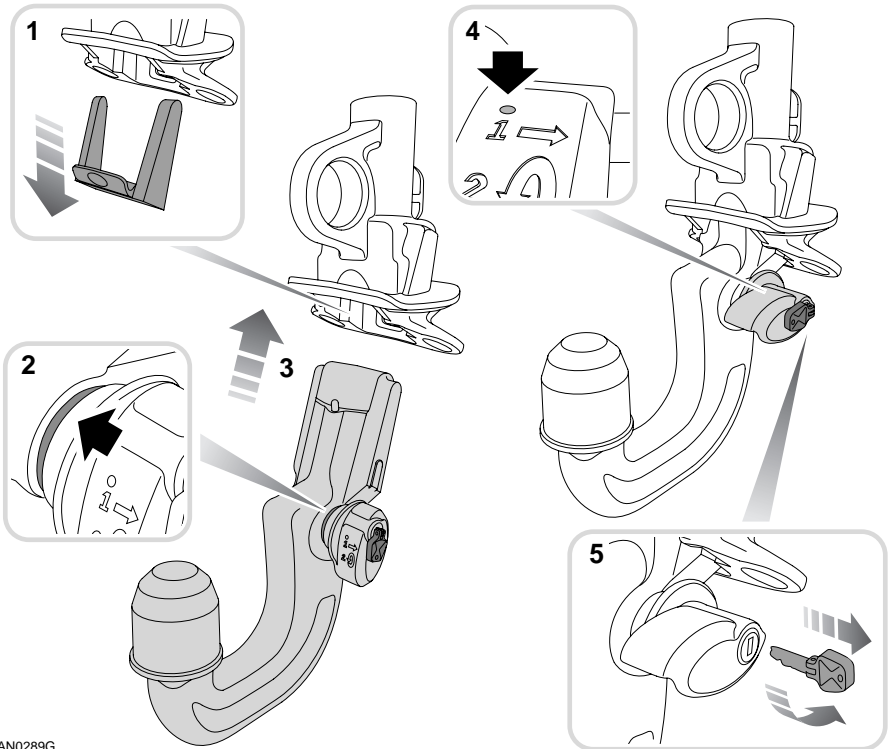


LAN0287G

The tow bar is stowed under an access hatch in the rear loadspace floor.

# Towing

## Fitting the detachable tow bar



LAN0289G

### WARNING

The tow bar is heavy. Care must be taken when handling it.

### WARNING

When handling the tow bar, hold the bottom of the component. Locking into position occurs automatically and causes the locking lever to rotate under spring pressure.

# Towing

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1. Remove the protective cover from the tow bar mounting.

**Note:** *The protective cover should be stowed in the tow bar stowage area, while the tow bar is installed.*

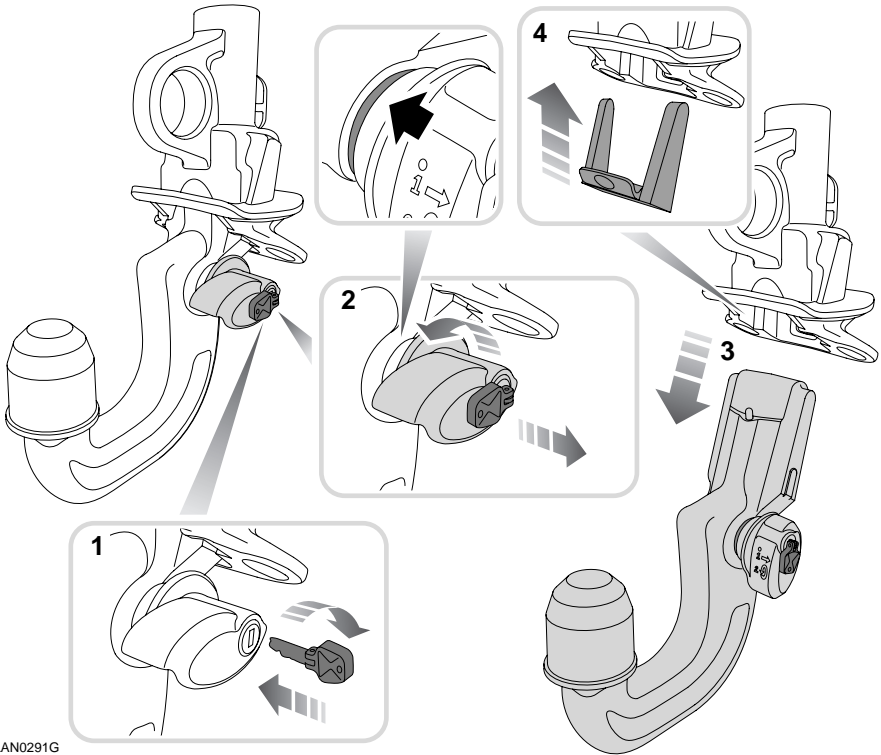
2. The tow bar can only be installed when the green locking lever is in the unlocked position.
3. Insert the tow bar into the mounting and push firmly upwards until the tow bar locks into position.
4. The red marker should be completely covered by the green locking lever.
5. A key is provided to prevent theft from the vehicle. Turn the key anticlockwise to lock the tow bar. Remove the key and store in a safe place.

The tow bar must be locked in position before towing. The tow bar can only be locked if it is installed correctly into the tow bar mounting.

It is advised that the tow bar be removed and stored within the vehicle stowage when not in use.

# Towing

## Removing the tow bar



LAN0291G

### WARNING

The tow bar is heavy. Care must be taken when handling it.

1. Insert the key and turn it clockwise to unlock the tow bar.
2. To remove the tow bar, pull the handle outwards and rotate the handle anticlockwise until a click is heard. The marker on the handle should show red.
3. Carefully lower the tow bar and place it in its stowage area and fully secure it.
4. Replace the protective towing cover in the tow bar mounting. Press the bottom of the cover to fix it in position.

# Towing Eyes

## TOWING EYES

### 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.

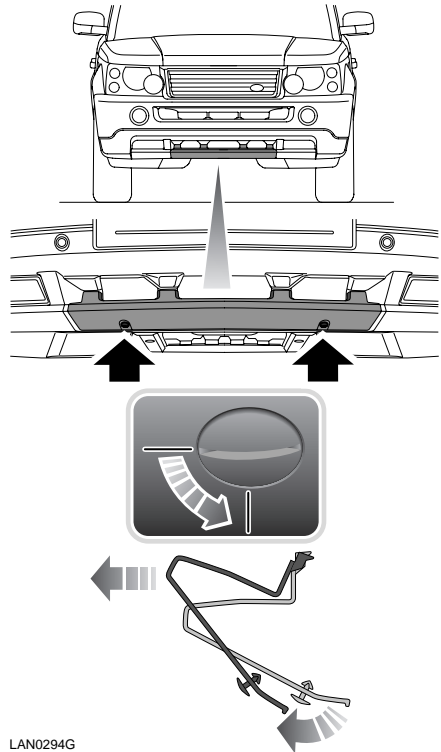
Use of the towing eyes for purposes other than their designed intention could result in damage or injury.

### Front towing eye

A front towing eye, set behind a removable panel in the lower front bumper, is provided at the front of the vehicle for on-road recovery.

Before driving off-road, remove the panel from the lower front bumper, as a precaution against accidental loss.

### Removing the panel



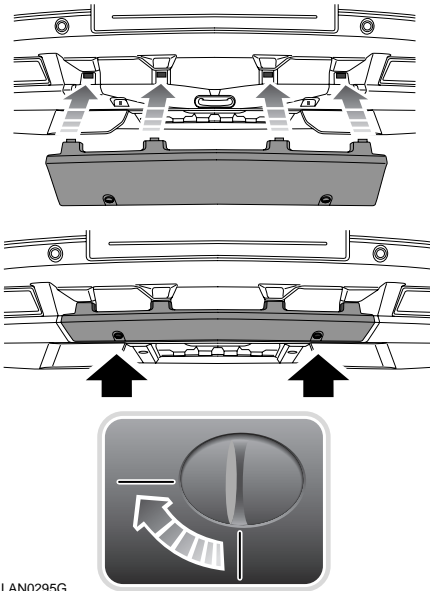
LAN0294G

Rotate each of the fasteners through a quarter turn with a coin (or something similar), to loosen the panel. Rotate the lower edge forwards then pull the panel to release the four top edge hooks from their locating holes.



# Towing Eyes

## Refitting the panel

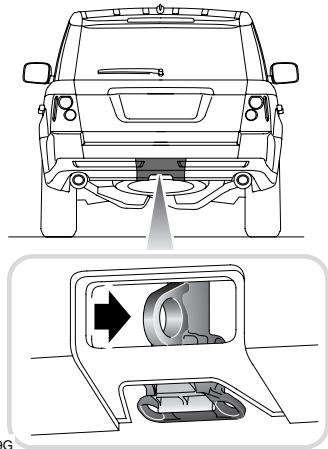


LAN0295G

Offer up the panel to the bumper and ensure that the four hooks on the top edge engage with the holes in the bumper. Rotate the lower edge backwards ensuring that the lower edge is located in the bumper channel.

Tighten the fasteners by turning each clockwise through a quarter turn.

## Rear towing eye

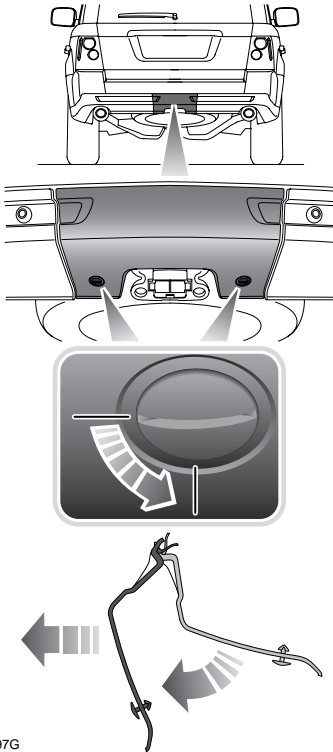


LAN0299G

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 Eyes

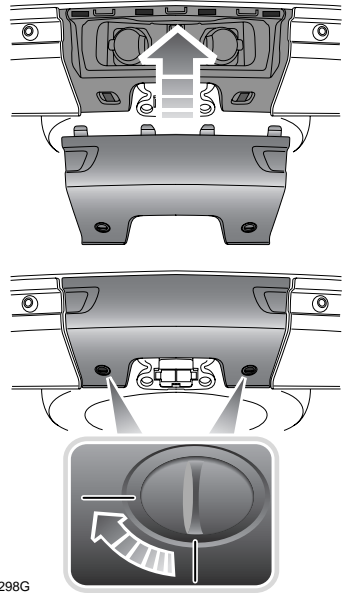
## Removing the rear cover



LAN0297G

Rotate each of the fasteners through a quarter turn with a coin (or something similar) to release the lower edge. The cover can then be rotated to release the hooks at the top.

## Refitting the rear cover



LAN0298G

Offer up the cover and ensure that the four hooks on the top edge engage with the holes in the bumper.

Tighten the fasteners by turning each clockwise through a quarter turn.

# 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, use the following procedure:

### Towing the vehicle on four wheels

#### WARNING

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

**Without the engine running, the brake servo and power steering pump cannot provide assistance; greater effort will therefore be required to operate the brake pedal and turn the steering wheel. Longer stopping distances will also be experienced.**

**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 N is selected on the transmission. Before selecting N, ensure that the parkbrake is applied and properly secured.**

**Note:** Your vehicle has permanent four-wheel drive and is fitted with a steering lock. The following procedure must be carried out carefully to prevent damage to the vehicle.

1. Secure the towing attachment from the recovery vehicle to the front towing eye. See **TOWING EYES, 205**.
2. With the parkbrake applied, insert the starter key and turn it to position **II**.
3. Apply the foot brake and place the gear selector lever into the **N** (neutral) position.
4. Turn the starter switch to position **I**. Do not turn the starter switch to position **0**.
5. If required, the starter switch may be turned to position **II**, to operate the brake lamps and direction indicators.  
*Note: Leaving the starter switch in position I or II for extended periods may drain the vehicle battery.*
6. Release the parkbrake before towing the vehicle.

If the above conditions are met, the vehicle may only be towed for a distance of 50 km (30 miles) at a maximum speed of 50 km/h (30 mph).

If the gearbox cannot be set in **N**, the vehicle must not be towed under any circumstances.

If the rear electronic differential has failed while locked, the vehicle must not be towed under any circumstances.

### After towing on four wheels

After towing, perform the following steps:

1. Apply the parkbrake.
2. Turn the starter switch to position **II** and apply the foot brake.
3. Place the auto selector lever in the Park position.
4. Turn the starter switch to position **0**.
5. Remove the towing attachment and replace the panel in the front bumper.

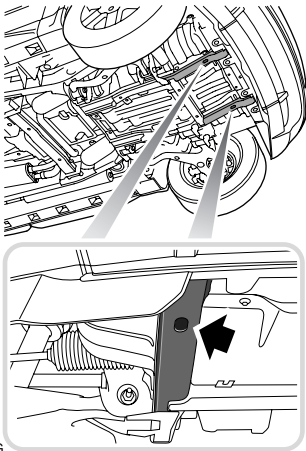
# Towing the Vehicle

## RECOVERY ON A TRAILER

**Caution:** Once the vehicle is loaded onto the trailer and if the vehicle electronics are operational, the air suspension must be set to **Access height**. This should be done **BEFORE** securing the vehicle to the trailer.

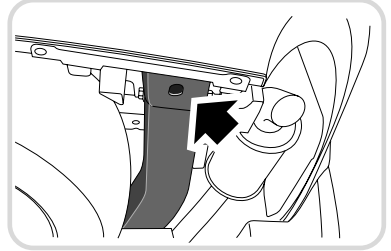
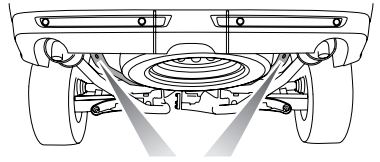
Recovery by trailer is the recommended method. Most vehicle recovery specialists will load the vehicle onto a trailer or have a combined wheel lift and dolly arrangement, to lift it clear of the ground.

### Lashing eyes



LAN0300G

*Front lashing eyes*



LAN0301G

*Rear lashing eyes*

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 (either side of the towbar attachment bracket). **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.

# Load Carrying

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## ROOF RACKS

### WARNING

The **MAXIMUM** load for approved roof rack systems is 75 kg (165 lb). This weight includes the mass of the roof rack system.

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

Check to ensure the roof rack and load are secure after 50 km (30 miles) of any journey.

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

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A range of roof rack systems are available as Land Rover approved accessories. For further information about roof rack systems approved for use with your vehicle and advice as to which system would suit your requirements best, please consult your Land Rover Dealer/Authorised Repairer.

### ***Always observe the following precautions:***

- Only fit a roof rack 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.

# Front Lighting Systems

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## HEADLAMPS

### WARNING

**Bi-Xenon lamp units operate at a high temperature. If they have recently been in use, allow sufficient time for them to cool down before touching them.**

**Used Xenon lamp units contain mercury, which is hazardous and can be injurious to health.**

**The Xenon system generates up to 28 000 volts and contact with this voltage could lead to fatality. Ensure that the headlamps are switched off and turn off the starter switch, before working on the system.**

**Replacement or maintenance of Xenon lamps should be carried out only by qualified personnel.**

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There are three types of headlamp 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 units use a Xenon bulb for both high beam 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 light 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.



*Seek advice about the proper disposal of Bi-Xenon lamp units, from a Land Rover dealer or your local authority.*

# 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 headlamp unit and a static bending lamp, with a beam set to 45 degrees from the centre line of the vehicle.

The headlamp 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 to braking or acceleration in the vertical plane, to maximise headlamp performance. Additional lighting is supplied by the static bending lamps, at speeds between 30 km/h (18 mph) and 70 km/h (44 mph). If the higher speed is exceeded, the static bending lamps will only reactivate when speed reduces to 60 km/h (37 mph). These headlamps broaden the beam of the headlamps when cornering.

The system takes inputs from the vehicle's road speed and steering angle, to determine the amount of horizontal swivel. The amount of swivel is highest at low manoeuvring speeds and reduces as speed increases.

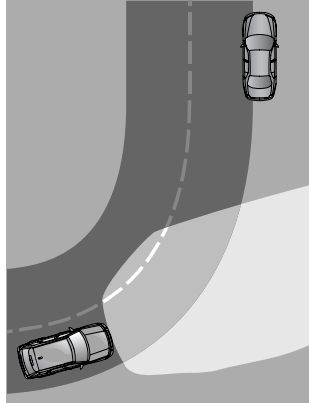
Static bending lamps operate when the system detects a steering wheel rotation of 70 degrees or more.

If reverse gear is selected, the lamps return to the central position and the unit's swivelling capability is disabled.

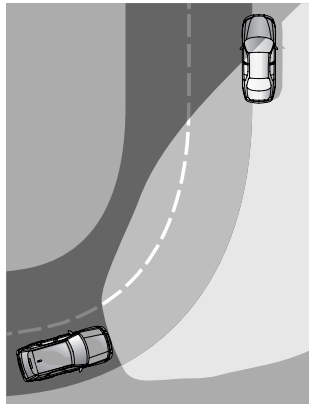
## The AFS advantage

1. Shows the light spread of a vehicle not fitted with AFS.
2. Shows the light spread of a vehicle fitted with AFS.

1



2



LAN0303G

# Front Lighting Systems

## Static bending lamps

These lamps broaden the beam of the headlamps when cornering during normal night driving.

Additional lighting comes from the static bending lamps which have a beam set to 45 degrees outward from the centre line of the vehicle.

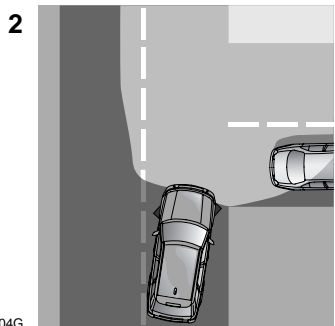
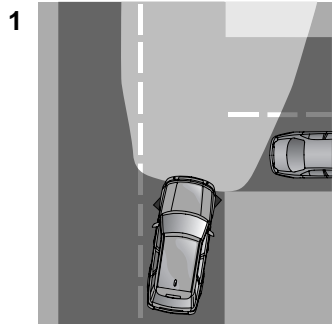
The system switches on the lamp if it has received an input from the direction indicator. As the system is ignition-based, the lamps will not stay on, even if the vehicle is parked with the direction indicator lever in the operating position.

Only the lamp on the same side as the operating direction indicator comes on.

Operating the direction indicators will also activate the relevant lamp.

If reverse gear is selected, the lamps return to the central position and the unit's swivelling capability is disabled unless the direction indicators are operating.

1. Shows the light spread of a vehicle not fitted with AFS.
2. Shows the light spread of a vehicle fitted with AFS.



LAN0304G



# Maintenance

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## 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

**Caution: Any significant or sudden drop in fluid levels, or uneven tyre wear, should be reported to a Land Rover Dealer/Authorised Repairer without delay.**

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.

### 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.

### 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.
- Dynamic Response fluid level.
- Screen washer fluid level.
- Tyre pressures and condition.
- Operate air conditioning.

All fluid specifications and capacities are shown in **LUBRICANTS AND FLUIDS, 286**.

# Maintenance

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## 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 motor vehicle technician. Failure to comply with this instruction may result in fuel spillage with a consequent serious 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

- **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

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## 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 practised by Land Rover Dealers/Authorised Repairers. Contact your Land Rover Dealer/Authorised Repairer for further information.

## DRIVING IN ARDUOUS CONDITIONS

### Special operation conditions

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

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

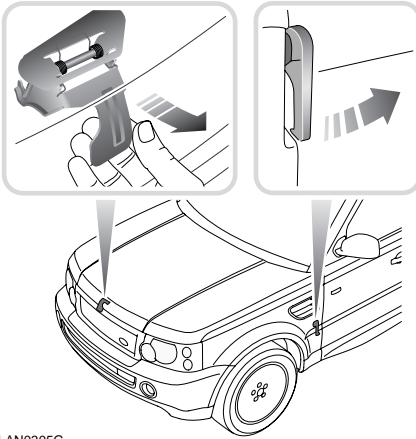
Arduous driving conditions include:

- 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.

# Bonnet Opening

## BONNET OPENING



LAN0305G

1. From inside the vehicle on the left hand side, pull the bonnet release handle (see upper inset).
2. Lift the bonnet safety catch lever located below the centre point of the words LAND ROVER (lower inset). While holding the lever, raise the bonnet.

## Closing the bonnet

### WARNING

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

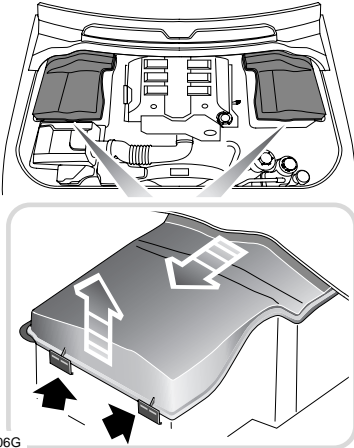
Lower the bonnet until the safety catch engages, then using both hands, press the bonnet down until the catches click.

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.

# Under-bonnet Covers

## UNDER-BONNET COVERS

### Removal



LAN0306G

Press the two forward tabs and lift the front edge of the cover. Once the front edge of the cover is free, slide the cover towards the front of the vehicle.

### Fitting

**Caution:** Ensure that no pipes, cables, or other items have been trapped between the cover and casing.

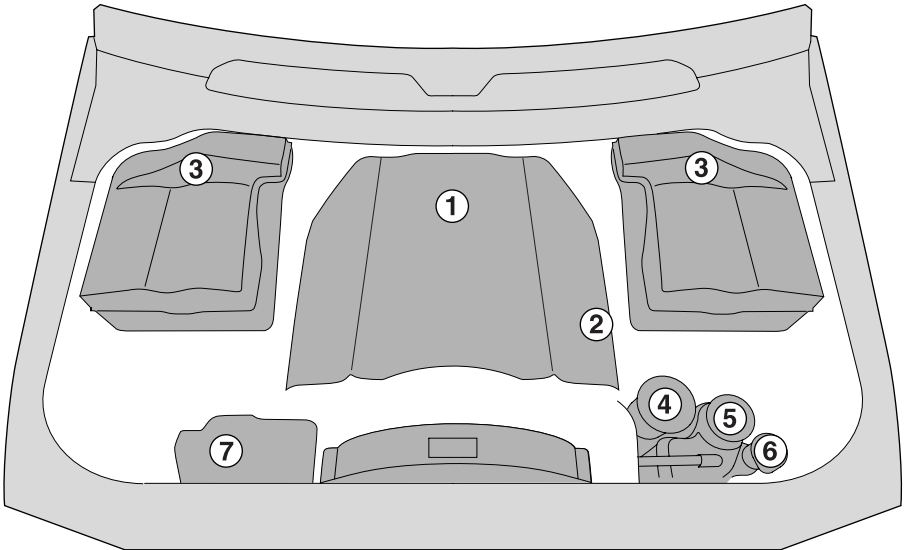
Slide the rear edge of the cover under the rubber trim fitted to the scuttle panel. Once the front edge of the cover is aligned with the front edge of the casing, press the front of the cover down until the two tabs click into place.

# Engine Compartment

## WEEKLY FLUID CHECKS

### WARNING

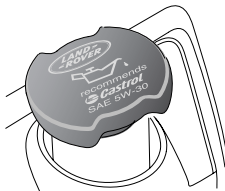
While working in the engine compartment, **ALWAYS** observe the safety precautions listed under **SAFETY IN THE GARAGE, 215**.



LAN0307G

*Typical Engine Compartment*

### 1. Engine oil filler (Black cap)



LAN0308G

### 2. Engine oil dipstick (Yellow)

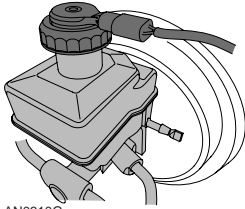


LAN0309G

# Engine Compartment

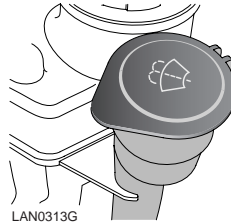
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## 3. Brake fluid reservoir (White cap)



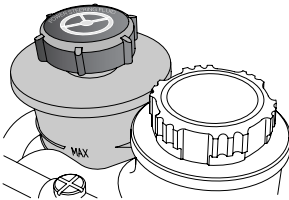
LAN0310G

## 6. Washer reservoir (Blue cap)



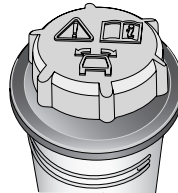
LAN0313G

## 4. Power steering reservoir (Yellow cap)



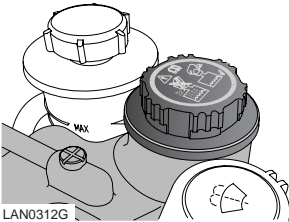
LAN0311G

## 7. Dynamic Response reservoir (Yellow cap)



LAN0314G

## 5. Cooling system reservoir (Black cap)



LAN0312G

# Engine Oil

## CHECK AND TOP-UP

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 at least every 400 km (250 miles), 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 or hole than the lower, add no oil.
- is nearer to the lower mark or hole than the upper, add half a litre (one pint) of oil.
- is below the lower mark or hole, add one litre (two pints) of oil and re-check the level after a further five minutes.

## Oil specification

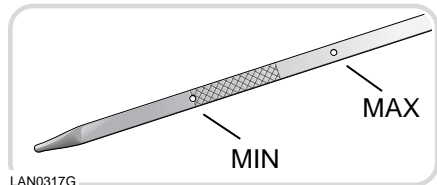
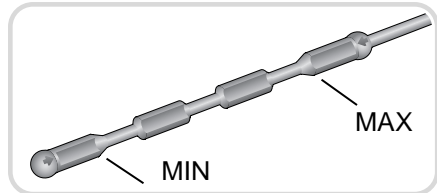
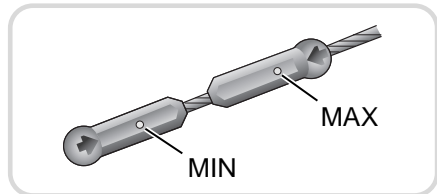
**Caution:** Your vehicle warranty may be invalidated if damage is caused by use of improper engine oil. Low quality or obsolete oils DO NOT provide the protection required by modern, high performance engines.

Failure to use an oil that meets the required specification could cause excessive engine wear, a build up of sludge and deposits, and increase pollution. It could also lead to engine failure.

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, 286**. If in doubt, contact your Land Rover Dealer/Authorised Repairer.

## Checking oil level

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 or hole 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 or holes on the dipstick.  
**DO NOT OVERFILL!** Clean up any oil spillage incurred when topping-up.
4. Check the oil level again.



LAN0317G



# Cooling System

## ENGINE COOLANT

### 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.

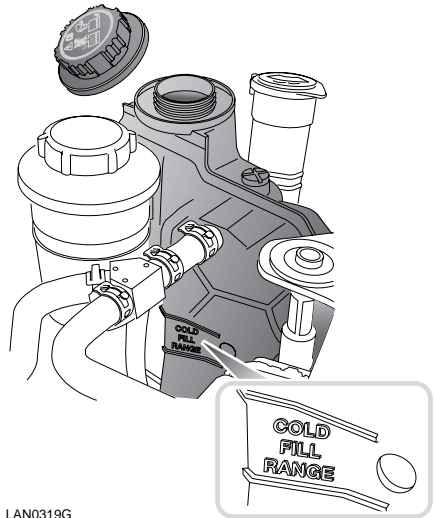
**NEVER** top-up with salt water. When travelling in territories where the water supply contains salt, always ensure you carry a supply of fresh (rain or distilled) water.

The coolant level in the expansion tank should be checked at least weekly (more frequently in high mileage or arduous operating conditions).

Always check the level WHEN THE SYSTEM IS COLD. Coolant expands when hot and may cause the level to extend beyond the upper level indicator mark.

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



LAN0319G

Top-up with a 50% mixture of antifreeze and water. See **LUBRICANTS AND FLUIDS, 286**.

Top-up to the upper level indicator mark located above the COLD FILL RANGE 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 by turning the cap until the ratchet cap clicks.

If the level has fallen appreciably, suspect leakage or overheating and arrange for your Land Rover Dealer/Authorised Repairer to examine the vehicle.

# Cooling System

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## 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.**

**If the fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.**

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Antifreeze contains important corrosion inhibitors. The antifreeze content of the coolant must be maintained at 50%  $\pm$  5% all year round (not just in cold conditions). To ensure the anti-corrosion properties of the coolant are retained, the antifreeze content should be checked once a year and completely renewed every ten years, regardless of distance travelled. Failure to do so may cause corrosion of the radiator and engine components.

The specific gravity of a 50% antifreeze solution at 20°C (68°F) is 1.075 and protects against frost down to -40°C (-40°F).

### Coolant specification

Use ONLY a 50% mix of water and an approved antifreeze. See **LUBRICANTS AND FLUIDS, 286**.

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.

# 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 the fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.

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

**DO NOT** drive the vehicle with the fluid level below the MIN mark.

### WARNING

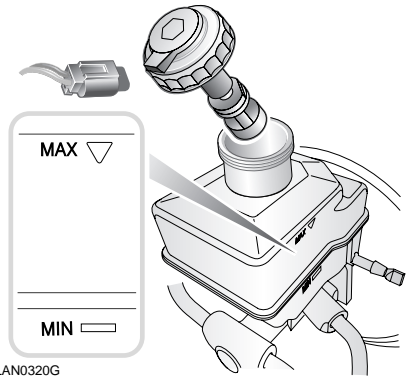
Contact your Land Rover Dealer/Authorised Repairer immediately if brake pedal travel is unusually long or if there is any appreciable drop in brake fluid level.

**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.**

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/Authorised Repairer.

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.

Disconnect the electrical lead.

Unscrew the cap (1/8 turn) and top-up the reservoir to the **MAX** mark using a specified brake fluid. See **LUBRICANTS AND FLUIDS, 286**.

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!**

Replace the cap and reconnect the electrical lead, ensuring that the lead points to the centre-line of the vehicle.

Brake fluid must be completely renewed every two years regardless of distance travelled.

**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 the 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.**

**Caution: The engine must NOT be started if the fluid level has dropped below the lower mark - severe damage to the steering pump could result.**

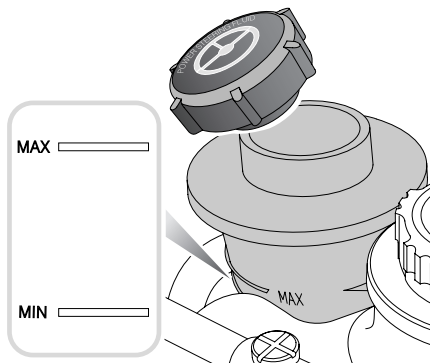
Any large or sudden drop in the fluid level must be investigated by a qualified Land Rover Dealer/Authorised Repairer.

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 qualified Land Rover Dealer/Authorised Repairer for examination.

Driving of the vehicle to repair should not be attempted if there is danger that the leaked fluid will come into contact with a hot surface such as the exhaust.

### 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.



LAN0321G

The level of fluid can be seen through the translucent body of the reservoir which has two marks on it to indicate maximum and minimum levels.

If necessary, add fluid to the reservoir until the level is between the upper and the lower marks.

**DO NOT fill above the upper mark. See LUBRICANTS AND FLUIDS, 286.**

# Dynamic Response

## DYNAMIC RESPONSE FLUID

### WARNING

Dynamic Response 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 the 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:** Dynamic Response 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.

**Caution:** The engine must NOT be started if the fluid level has dropped below the lower mark - severe damage to the Dynamic Response system could result.

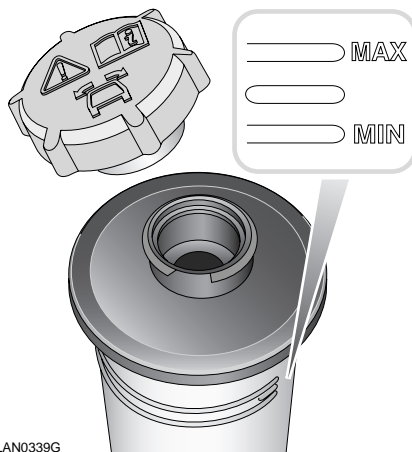
Any large or sudden drop in the fluid level must be investigated by a qualified Land Rover Dealer/Authorised Repairer.

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 qualified Land Rover Dealer/Authorised Repairer for examination.

Driving of the vehicle to repair should not be attempted if there is danger that the leaked fluid will come into contact with a hot surface such as the exhaust.

### Check and top-up

Check and top-up the fluid level ONLY with the engine switched off and the system cold.



The level of fluid can be seen through the translucent body of the reservoir which has two marks on it to indicate maximum and minimum levels.

If more fluid is needed, first wipe the filler cap clean to prevent dirt from entering the reservoir, then twist the cap a quarter turn anti-clockwise and pull to remove. Add fluid to the reservoir until the level is between the upper and the lower marks. **DO NOT fill above the upper mark.** See **LUBRICANTS AND FLUIDS, 286.**

# Washers

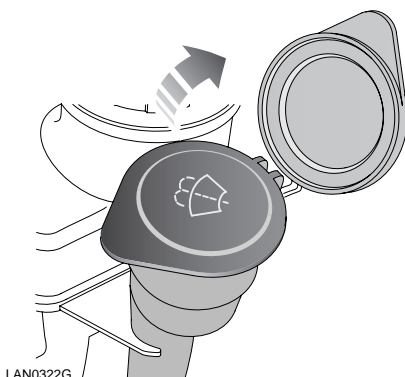
## WINDSCREEN WASHER TOP-UP

### WARNING

Some windscreen wash products are inflammable, particularly if high or undiluted concentrations are exposed to sparking. **DO NOT** allow windscreen wash 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 windscreen washer pump.

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.

Operate the washer switches periodically to check the nozzles are clear and properly directed.

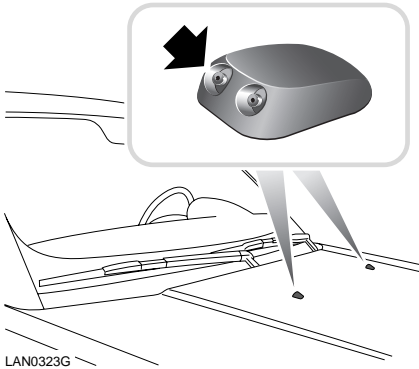
**Note:** Ensure an approved screen washer solvent is used in the windscreen washer reservoir to prevent freezing.

# Washers

## WASHER JETS

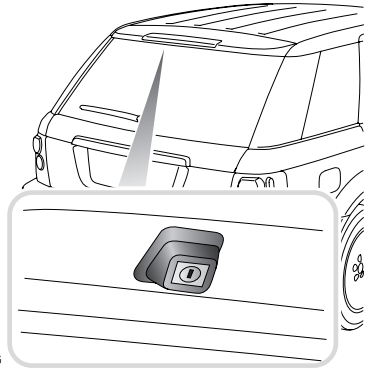
### Front

The windscreen washer jets are set during manufacture and should not need adjusting. However, if adjustment is ever necessary, insert a needle into the jet orifice and lever gently to position each jet, so that the spray is directed towards the centre of the windscreen.



Should any jet become obstructed, insert a needle or thin strand of wire into the orifice to clear the blockage.

### Rear



### Headlamp

The spray jets are set during manufacture and should not need to be adjusted.

# Wiper Blades

## WIPER BLADE REPLACEMENT

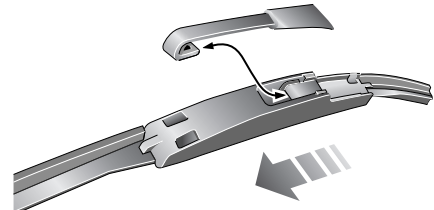
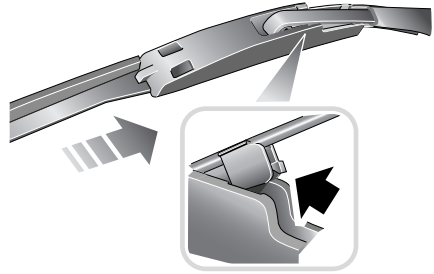
Only fit replacement wiper blades that are identical to the original specification.

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



LAN0325G

Lift the wiper arm away from the 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.

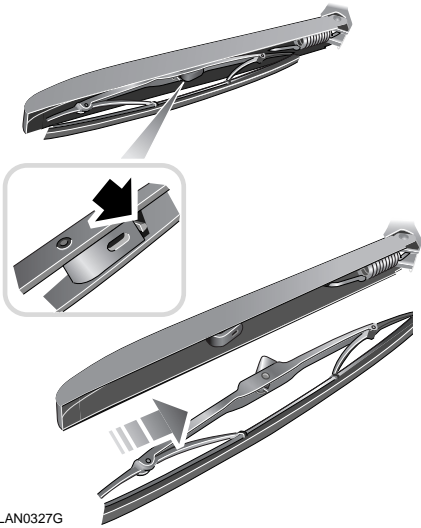
To replace, position the wiper arm into the aperture in the middle of the blade assembly and push firmly into position until the blade clips into place.



# Wiper Blades

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## Rear



LAN0327G

Lift the wiper arm away from the rear window. 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 blade assembly onto the inside of the wiper arm 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 CARE

### WARNING

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

- **On clothing or the skin - remove any contaminated clothing immediately, flush the skin with large amounts of water, and seek medical attention urgently.**
- **In the eyes - flush with clean water immediately for at least 15 minutes. Seek medical attention urgently.**

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

**Always wear eye protection when working with batteries.**

**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.**

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.

If a new battery is to be fitted, it must be the same type as the original. The use of unapproved batteries is not recommended and could invalidate the vehicle warranty.

# Battery

We recommend that the battery charge is checked frequently if the vehicle is used mostly for short distance trips or if it is not used for long periods of time.

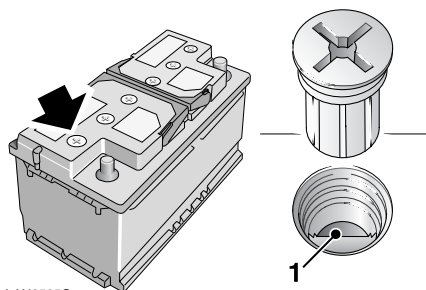
**Note:** *The service life of the battery is dependent on its condition of charge. It must always be sufficiently charged for the battery to last the optimum length of time.*

**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.*

## Check and replenish battery electrolyte

### WARNING

**Do not allow naked lights near the battery (batteries generate hydrogen gas which is highly flammable).**



LAN0585G

Unscrew the six cell plugs.

Check that the electrolyte is level with the plastic level indicator **1**. If necessary, top up with distilled water, but do not overfill.

**Note:** *In normal climates this must be carried out at least once a year. During hot weather or in hot climates the electrolyte level must be checked at least every three months.*

**Note:** *If illumination is required, use a hand held flashlight to inspect the electrolyte level. Refit the six cell plugs.*

# Battery

## CHARGING THE VEHICLE BATTERY

### WARNING

**Batteries generate explosive gases, contain corrosive acid and produce levels of electric current sufficient to cause serious injury.**

**While charging, shield your eyes or avoid leaning over the battery and keep the area around the top of the battery well ventilated.**

While charging, always heed the precautions:

- Before charging, disconnect and remove the battery from the vehicle - charging the battery with the cables connected may damage the vehicle's electrical system.
- Make sure the battery charger leads are securely clamped to the battery terminals before switching on the battery charger. Do not move the leads once the charger is switched on.
- When charging is finished, switch off the battery charger before disconnecting the leads from the battery terminals.

**Note:** *Be aware that a battery will take longer to charge in a cold environment.*

After charging, leave the battery for one hour before reconnecting to the vehicle - this will allow time for explosive gases to disperse, thereby minimising the risk of fire or explosion.

### Disconnecting the battery

If the vehicle is already locked and alarmed, you will first have to unlock and disarm it using the remote control.

See **LOCKING/UNLOCKING, 47**.

**Note:** *If the battery is flat and the vehicle is locked and alarmed, you will first have to unlock the left-hand front door using the starter key.*

Insert the starter key and turn it to position **II**.

Engage the Electric Parking Brake (EPB) or fit wheel chocks. See **CHANGING A WHEEL, 255**.

Remove the starter key and wait two minutes for the engine management system to power down.

Open the bonnet. See **BONNET OPENING, 217**.

Disconnect only the negative (-) terminal of the battery.

### Reconnecting the battery

Ensure that everything requiring power from the battery - lights, audio, etc - is switched off.

Reconnect the battery lead.

**Note:** *If the battery was disconnected while it had an insufficient charge to disarm the alarm, the alarm could sound on reconnecting.*

*Operating the remote control or inserting the key into the starter switch will disarm the alarm.*

Insert the starter key and turn to position **II**.

Operate the Electric Parking Brake (EPB) to extinguish the amber warning lamp.

### Effects of battery disconnection

After reconnecting the battery, a number of the vehicle systems will be reset automatically.

This may take a few minutes. Some systems have to detect certain conditions while the vehicle is being driven before full operability returns. This in no way affects the safe operation of the vehicle.

### Battery warning indicator



The red warning indicator in the instrument pack illuminates as a bulb check when the starter switch is turned to position **II** and extinguishes once the engine is running. If it remains on, or illuminates whilst driving, a fault with the battery charging system is indicated. Seek qualified assistance urgently.

# Battery

## CHANGING THE VEHICLE BATTERY

### WARNING

**Always remove the starter key before disconnecting the battery. Failure to do this may cause a failure of the airbag SRS.**

**Do not reverse the polarity of the battery - the electrical system may be damaged if the battery leads are connected to the wrong terminals.**

**Caution: Keep the battery upright at all times - damage will be caused if the battery is tilted more than 45 degrees.**

**Do not run the engine with the battery disconnected; or disconnect the battery with the engine running.**

Disconnect the negative (-) cable first and then the positive (+) cable. When reconnecting, connect the positive cable first and then the negative cable. Do not allow the battery terminals to make contact with metal parts of the vehicle.

### Removal

To release the battery from the vehicle, undo the nuts securing the battery clamping plate and remove the clamping plate.

### Replacement

Ensure that the battery is fitted the right way round (terminal posts towards the rear of the vehicle) and that the clamping plate is secure. Tighten the clamping plate nuts until the clamping plate is free from movement, but do not over tighten.

### Replacement batteries

Only fit a replacement battery of the same type and specification as the original - other batteries could cause a fire hazard when connected to the vehicle's electrical system.

Petrol vehicles	H7 75 amp/hr
Diesel vehicles	H8 90 amp/hr

### Battery disposal



Used batteries should be recycled. However, batteries are hazardous - you should seek advice about disposal from a Land Rover Dealer or your Local Authority.

# 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



### 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

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## 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. Degradation can be caused by ultra violet (U.V.) exposure, hot climates or frequent high loading conditions.

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.**

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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.**

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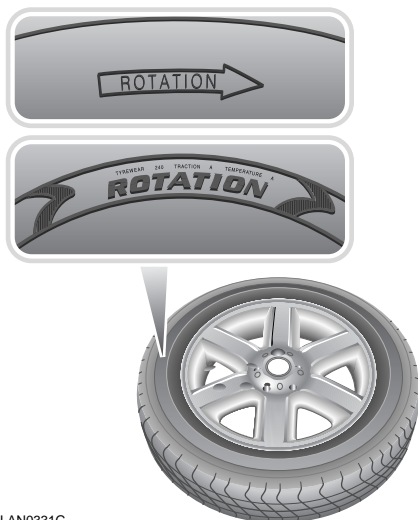
Ideally, tyres should be replaced in sets of four. If this is not possible, replace the tyres in pairs (front and rear). When tyres are replaced, the wheels should always be re-balanced and alignment checked.

The correct tyre specification for your vehicle can be found on the tyre information label. See **Tyre pressure and loading label, 239**. For an explanation of the label information, see **WHEELS AND TYRES, 290**.

# 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 pressure and loading label, 239**.

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 3 miles (5 km).



# Tyres

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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 3 miles (5 km), 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/in<sup>2</sup>). 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/in<sup>2</sup>). 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 pressure and loading label, 239.***

## 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.

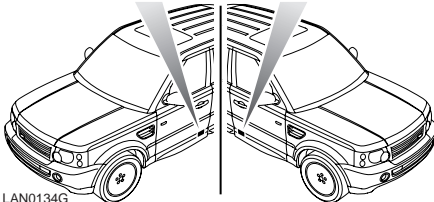
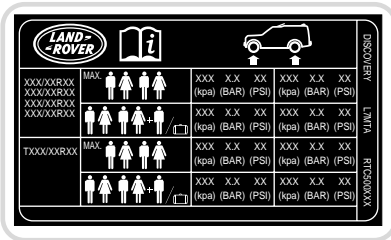
# Tyres

## Tyre pressure and loading label

### WARNING

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.

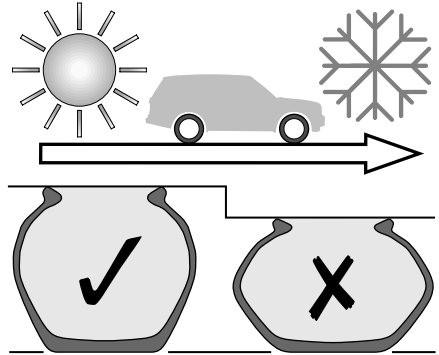


LAN0134G

The tyre pressure and loading 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.

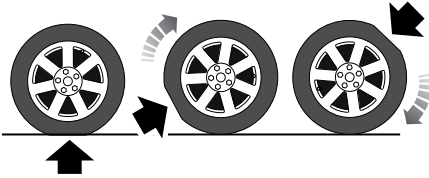
**Note:** If the tyre pressures are to be adjusted in the lower temperature area, the vehicle should be left standing for at least one hour prior to adjustment.

Tyre pressures should be increased by 0.14 bar/14 kPa (2 lbf/in<sup>2</sup>) 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/in<sup>2</sup>) 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

#### 18 inch wheels:

235/65 R18 110H Dunlop Winter Sport M3

235/65 R18 110H Michelin Pilot Alpine XSE

#### 19 inch wheels:

255/55 R19 111H Goodyear Ultra Grip

***Note:** If your vehicle is fitted with 20 inch wheels, it will be necessary to fit a set of 18 or 19 inch wheels before winter tyres can be fitted.*

### 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

**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.**

**Snow chains are designed for use on hard-surface roads in extreme snow conditions only, and are not recommended for off-road use.**

**Snow chains MUST NOT be fitted to a temporary spare wheel.**

**NEVER exceed 50 km/h (30 mph).**

---

If it is necessary to fit snow chains to your vehicle, ALWAYS observe the following:

- **Front wheels:** Snow chains can only be fitted to the front wheels of vehicles equipped with 17, 18 and 19 x 8 inch wheels.

***Note:** If your vehicle is fitted with 20 inch wheels, it will be necessary to fit a set of 19 inch wheels before snow chains can be used.*

- **Rear wheels:** Snow chains MUST NOT be fitted to the rear wheels of any vehicle.
- 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 (30 mph).
- ONLY fit snow chains in pairs.
- Avoid tyre damage by removing the chains as soon as the road is free from snow.
- In some driving conditions, it may be beneficial to deactivate Dynamic Stability Control (DSC) in order to maximise traction.

# 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.

The TPM system cannot register damage to a tyre. Regularly check the condition of your tyres, especially if the vehicle is driven off-road.

**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.

**Note:** Non-approved accessories may interfere with the system. If this occurs, **TYRE MONITORING SYSTEM FAULT** is displayed in the message centre.

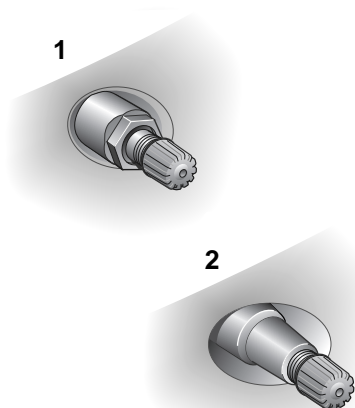
See **MESSAGE CENTRE MESSAGES, 92**.

Different types of tyre may affect the performance of the TPM system. Always replace tyres in accordance with recommendations.

See **Tyre pressure and loading label, 239**.

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.



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

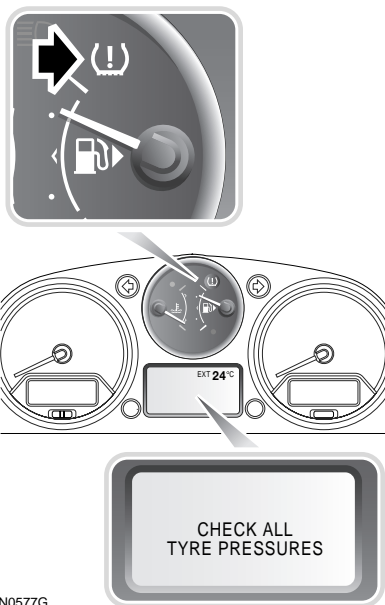
The TPM system monitors the pressure of the tyres via sensors located in each wheel and a receiver located within the vehicle. Communication between sensor and receiver is via Radio Frequency (RF) signals.



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. When the low tyre pressure warning is indicated, one or more of your tyres is significantly under-inflated.

# Tyres



LAN0577G

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 pressure and loading label, 239**. 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.

## TPM system malfunction

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 causing 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 18 mph (25 km/h), 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**.

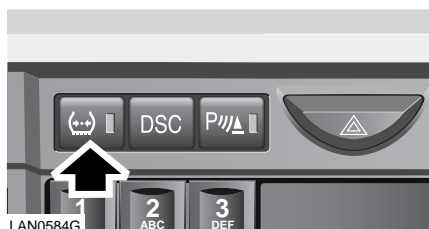
This TPM system display sequence will be activated at every ignition cycle until the temporary spare wheel is replaced by a fully operational full size wheel and tyre assembly.

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.

## Vehicle loading

It is possible to select different pressure levels that correspond to the placard pressures for a lightly laden and a heavily laden vehicle. The indicator on the TPM system button will display the system status.

If the indicator is illuminated, the system is in lightly laden mode and if the indicator is not illuminated then the system is in heavily laden mode. If the vehicle is to be used heavily laden or for towing, the tyre pressures must be increased to cope with the additional load, and the tyre pressure monitoring system must be set into heavily laden mode.



This can be accomplished by pressing the TPM system button on the switch pack for at least 4 seconds with the ignition in position **II** and the engine **NOT** running.

To indicate that the system has switched to heavily laden mode, the indicator in the switch will extinguish and the message **TYRE PRESSURE MONITORING SET FOR HEAVY LOAD** will be displayed in the message centre.

When the vehicle load is returned to normal and the tyre pressures are reset, the system should be put back into lightly laden mode by pressing the button as before. The indicator in the switch will illuminate and the message **TYRE PRESSURE MONITORING SET FOR LIGHT LOAD** will be displayed in the message centre. This change to and from heavily laden mode can be operated only when the ignition is in position **II** and the engine is not running.

See **Tyre pressures, 237**, **Tyre pressure and loading label, 239**, **WHEELS AND TYRES, 290** and **VEHICLE WEIGHTS, 291**.

# Tyres

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## **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

## WASHING YOUR VEHICLE



LAN0337G

**Caution: Never aim a high pressure water jet directly at the engine air intake, heater air intakes, body and sunroof seals, or at any components that might easily be damaged. Do not use a high pressure washer in the engine bay area. Damage to components could occur.**

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 car shampoo. Rinse and dry off with a chamois leather.

- Do not use hot water.
- Do not use detergent soap products or washing-up liquid.
- In hot weather, do not wash the vehicle in direct sunlight.

### Removing tar spots

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

### Underbody maintenance

Corrosive materials used for snow and ice removal and dust control can collect on underbody parts. If these materials are not removed, accelerated rusting can occur. Use a hose to regularly flush the underbody with plain water, taking particular care to thoroughly clean those areas where mud and other debris can easily collect.

Similarly, after off-road driving or wading in muddy or salt water conditions, use a hose to wash underbody components and other exposed parts of the vehicle.

When using a hose, do not direct the jet into the engine air intake, which is located on the right-hand-side front wing (viewed from driver's position), or the heater air intake ducts, or through the wheel trim apertures onto the brake components, or at the door, window or sunroof seals, where water pressure could penetrate the seals.

If damage or corrosion to the underbody area is detected, please have the vehicle checked by a Land Rover Dealer/Authorised Repairer at the earliest opportunity.

### Cleaning after off-road driving

**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.

Use a low pressure hose to flush water through the lower grille area, to clean the cooling system components.

# Cleaning and Vehicle Care

## Body protection

After washing, inspect the paintwork for damage. Any stone chips, fractures or deep scratches in the bodywork should be repaired promptly. Bare metal will corrode quickly and can develop into major repair expense. Some exterior panels of your vehicle are made of aluminium which will not corrode in the same manner as steel. However, any damage should still receive prompt attention. Minor chips and scratches can be repaired with touch-up materials available from your Land Rover Dealer/Authorised Repairer. Larger areas of damage need to be corrected to professional standards immediately.

## Polishing

**Caution: DO NOT apply car polish to the unpainted areas of the bumper mouldings - polish will become ingrained in the textured finished.**

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.

## Glass and mirrors

Clean the rear window with a soft cloth to avoid damaging the heating elements. DO NOT scrape the glass or use an abrasive cleaning fluid.

Mirror glass is particularly susceptible to damage. Wash with soapy water. DO NOT use abrasive cleaning compounds or metal scrapers to remove ice.

## CLEANING THE INTERIOR

### WARNING

**Read individual product warnings before using any car cleaning or washing products.**

CAR CARE PRODUCTS	
Facia cleaner (300 ml aerosol)	STC4683
Fabric cleaner (300 ml aerosol)	STC4685
Leather cleaning kit	BAC500490
Insect remover (300 ml aerosol)	STC4686
Glass cleaner (300 ml aerosol)	STC4681
Bumper cleaner (300 ml aerosol)	STC4679
De-icer (300 ml aerosol)	STC4677
De-icer (500 ml trigger spray)	STC4676
Screenwash (250 ml bottle)	STC4672
Screenwash (500 ml bottle)	STC4687
Alloy wheel cleaner (500 ml trigger spray)	STC4675
Wash and Wax (300 ml bottle)	STC4680
Wax polish (300 ml bottle)	STC4682

# Cleaning and Vehicle Care

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## Plastic materials

### **WARNING**

**DO NOT polish instrument panel components - for safety, these should remain non-reflective.**

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Clean plastic-faced or cloth-covered surfaces with warm water and a non-detergent soap and wipe with a clean cloth.

## Leather

**Caution: Some materials/fabrics are prone to dye-transfer which can cause unsightly discolouration of lighter coloured leathers. Affected areas should be cleaned and re-protected as soon as possible.**

Land Rover recommends that leather is cleaned and protected at least every six months, but maybe as often as every one to two months for high mileage vehicles, or vehicles kept in a hostile environment.

Leather cleaning kit, BAC500490, is recommended and endorsed by Land Rover for this purpose. Use in accordance with the instructions printed on the label.

DO NOT use chemical or abrasive materials to clean leather. Petrol, white spirit, alcohol, detergents, washing-up liquid, household cleaners, furniture polishes/creams or solvents should never be used on leather. While these products may give initially impressive results, their use will lead to rapid deterioration of the leather and will invalidate the warranty.

## Carpet and fabrics

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

## Instrument pack, clock and radio

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

## Seat belts

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

## Airbag module covers

### **WARNING**

**To prevent airbag damage, the steering wheel centre pad, side airbags and area of the instrument panel containing the passenger airbag should ONLY be cleaned sparingly with a damp cloth and upholstery cleaner.**

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

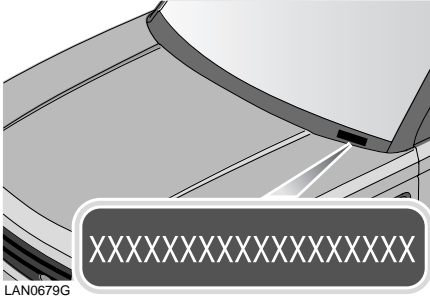
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# Identification Numbers

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## VEHICLE IDENTIFICATION NUMBER (VIN)

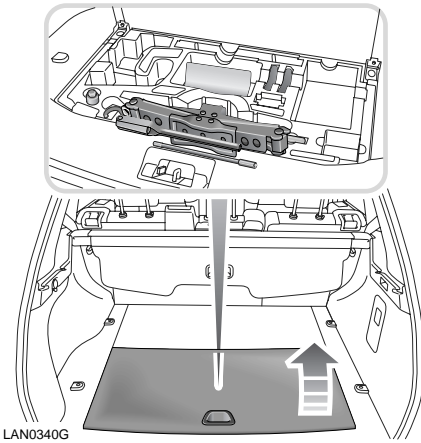
If you need to communicate with a Land Rover Dealer/Authorised Repairer, you may be asked to quote the Vehicle Identification Number (VIN).



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.

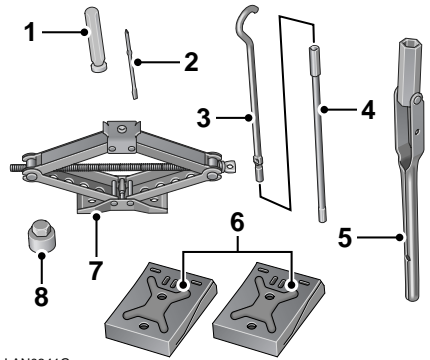
# Wheel Changing

## TOOL KIT



The tool tray is located under a lift-up panel set in the loadspace floor.

**Note:** Take careful note of the stowage position of each of the tools as it is important to return them to their correct position after use.



LAN0341G

The tool kit consists of:

1. Screwdriver handle.
2. Screwdriver blade.
3. Jack screw rotating hook.
4. Extension piece.
5. Wheel nut brace.
6. Wheel chocks.
7. Wheel change jack.
8. Locking wheel nut key.

### Care of the jack

#### WARNING

**After wheel changing, always secure tools, chocks, jack and replaced wheel in their correct storage positions.**

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

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## PUNCTURED TYRES

If you have a flat tyre while driving:

- Do not brake heavily.
- Gradually decrease the vehicle's speed.
- Hold the steering wheel firmly.
- Slowly move to a safe and suitable place at the side of the road.

## Wheel changing safety

### WARNING

**Switch on the hazard warning lamps and set the hazard warning triangle a suitable distance behind the vehicle to alert other road users.**

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If possible, choose a safe place to stop away from the main road. Always ask your passengers to get out of the vehicle and wait in a safe area away from other traffic.

Before changing a wheel, ensure that the front wheels are in the straight-ahead position (if possible), apply the parkbrake, 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 that 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 wheel(s). See **Using wheel chocks, 252**.
- 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.

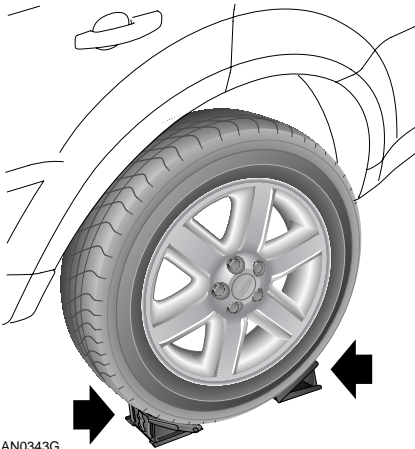
If you wish to have the doors locked while jacking up the vehicle, for any reason, lock the doors by pressing the lock button on the remote control twice within three seconds.

# Wheel Changing

## Using wheel chocks

### WARNING

As an additional safety precaution, it is necessary to chock the road wheels in two places before raising the vehicle.



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 tool kit, as shown in **TOOL KIT, 250**.

# Wheel Changing

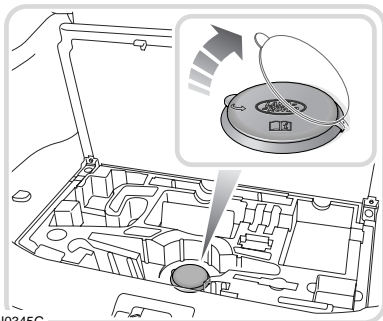
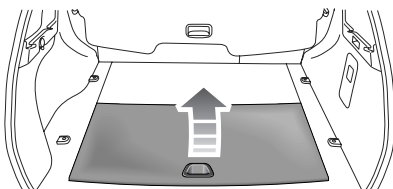
## REMOVING THE SPARE WHEEL

### WARNING

The wheels are extremely heavy. Take care when manoeuvring the spare wheel.

Always remove the spare wheel before jacking up the vehicle.

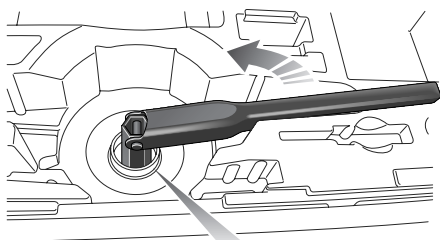
**Note:** Before removing the spare wheel from the vehicle, take a look at the position that the spare wheel is stowed in, as you will need to check that the wheel about to be removed from the vehicle is returned to the correct storage position.



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### With the tailgate open:

1. Lift open the spare wheel mechanism access hatch in the rear loadspace.  
Remove the jack from the tool tray.
2. Tilt up the circular locking cap covering the spare-wheel storage nut.



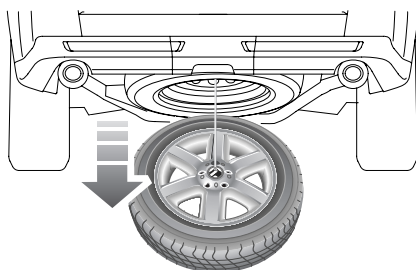
LAN0346G

3. Fit the wheel nut brace to the wheel-hoist winch nut and rotate anticlockwise to lower the spare wheel.

**Caution:** The mechanism has been designed for use with the wheel nut brace. **DO NOT use power tools on the wheel-hoist winch.**

When the wheel has reached the ground, continue to wind the handle until the cable is slack.

Do not attempt to turn the winch beyond the physical stop.

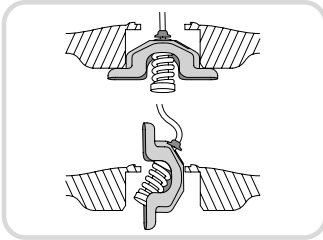
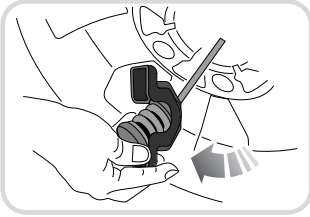
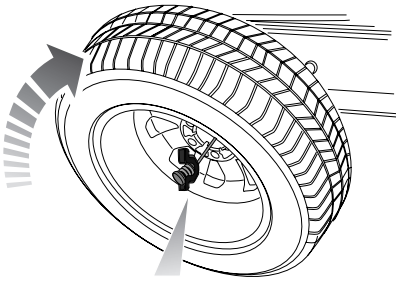


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# Wheel Changing

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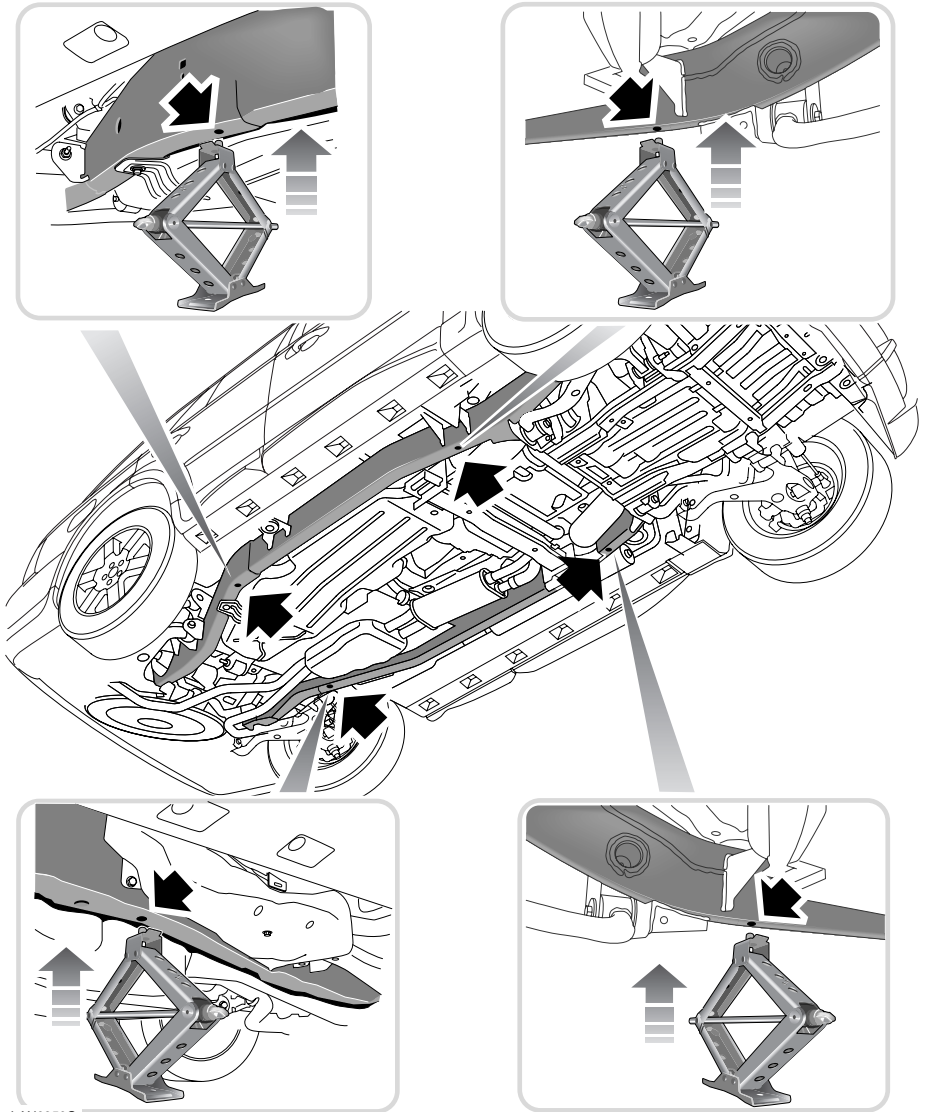
LAN0348G

4. Hold the cable and tilt the lifting lug until it can be lifted through the hole in the wheel, as shown above.

# Wheel Changing

## CHANGING A WHEEL

### Positioning the jack



LAN0350G

# Wheel Changing

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## **WARNING**

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

**Always** remove the spare wheel before jacking up the vehicle.

---

## **WARNING**

**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.
- 

## **WARNING**

**ALWAYS** use the complete, two-piece, jack lever throughout to minimise any chance of accidental damage or injury.

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## **WARNING**

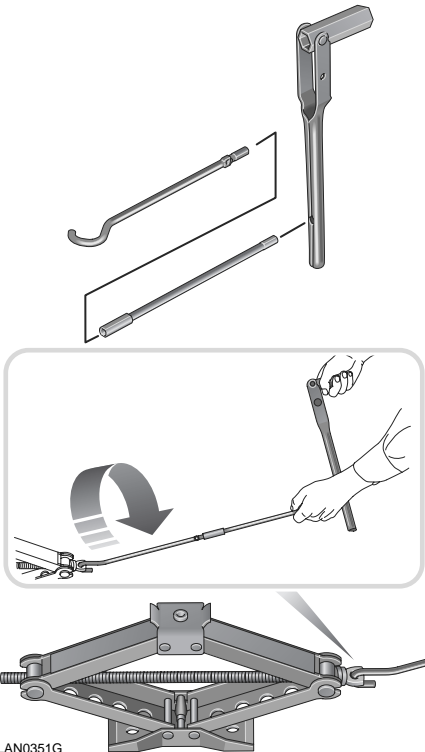
**ONLY** jack the vehicle using the jack location points described, or damage to the vehicle could occur.

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**Caution:** Before positioning the jack under the vehicle, ensure that the air suspension is set to Off-road height.

# Wheel Changing

## Operating the jack



Before raising the vehicle, use the wheel nut brace to slacken the wheel nuts half a turn anticlockwise.

Attach the jack cranking lever to the jack. Fit the wheel nut brace onto the end of the cranking lever.

Turn the jack lever clockwise to raise the jack cradle until it engages with the jacking point. Ensure that the base of the jack is in full contact with the road surface.

## Changing a wheel

### 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.

Always remove the spare wheel before jacking up the vehicle.

1. Raise the vehicle until the tyre is clear of the ground.
2. Remove the wheel nuts and place to one side to prevent them from being lost.
3. Remove the road wheel.

**Note:** DO NOT damage the style surface of the wheel by placing it face down on the road.

4. 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.

5. Fit the spare wheel with the valve stem outwards and lightly tighten the wheel nuts, ensuring they are firmly seated. DO NOT fully tighten whilst the tyre is clear of the ground.

# Wheel Changing

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6. Ensure that the space under and around the vehicle is free from obstructions then lower the vehicle and remove the jack and wheel chocks.
7. 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 nut brace, as this could overstress the wheel nuts. Check the wheel nut torque at the earliest opportunity.

Road wheel nut torque to hub	140 Nm ( $\pm$ 10 Nm)
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8. Using a suitable blunt tool, apply light pressure to the rear of the displaced wheel centre cap and remove. Using hand pressure only, fit the centre cap into the newly fitted wheel. Return tools, chocks, jack and the displaced wheel to their correct storage positions.
9. **REMEMBER** to change to **H** (HIGH range) before driving.
10. Finally, check the tyre pressure at the earliest opportunity. See **WHEELS AND TYRES, 290**.

**Note:** During jacking, the air suspension system may enter an automatic freeze state. See **Suspension freeze, 188**.

## Temporary spare wheel

### 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 spare wheel/tyre should be as detailed on the tyre pressures label. See Tyre pressure and loading label, 239.
- 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

## Stowing the changed wheel

### WARNING

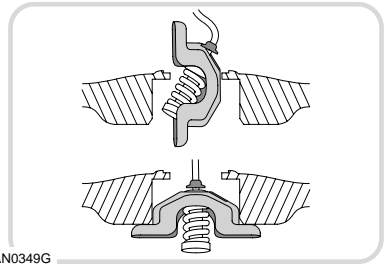
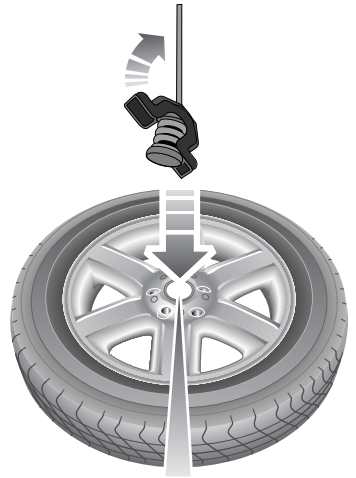
**DO NOT** stow the wheel while the vehicle is still raised on the jack.

### WARNING

The wheel must be securely retained in its correct position by the winch mechanism or it could become loose.

**Caution: DO NOT** stow 20 inch wheel and tyre assemblies under the vehicle as this may result in damage to the wheel face.

1. Place the wheel under the rear of the vehicle with its style surface uppermost.
2. Place the lifting lug through the wheel aperture and locate it in position.
3. Winch up the wheel using the wheel-hoist mechanism.  
The mechanism has been designed for use with the wheel nut brace. **DO NOT** use power tools on the wheel-hoist winch.
4. Continue to wind up until the mechanism clutches out. This is confirmed by a clear physical feedback from the wheel nut brace and an audible noise.
5. Check that the wheel has returned to the same position as the spare wheel as previously noted. If in any doubt, unwind the winch slightly and repeat the previous step.
6. Replace the circular locking cap over the wheel-hoist nut. As the underside of this cap is exposed to the same conditions as the underside of the vehicle, ensure that it is firmly in place.
7. Place the tools back into their stowage location.



LAN0349G

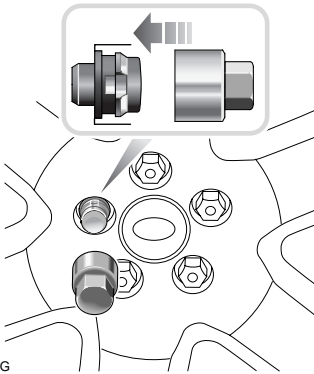
**Note:** If, for any reason, the spare wheel is not to be fitted back under the vehicle, the wheel hoist should be rewound as follows.

Position the lifting lug level on the cable and wind up the wheel hoist mechanism until it clutches out.

# Wheel Changing

## LOCKING WHEEL NUTS

Vehicles may be equipped with a locking wheel nut on each wheel. These are similar to standard wheel nuts, and can only be removed using the special adaptor provided in the tool kit.



LAN0352G

**Note:** A code number is stamped on the side of the side of 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.

Be sure to return the locking wheel nut adaptor to the correct storage position.

# Emergency Starting

---

## STARTING AN ENGINE WITH A DISCHARGED BATTERY

### WARNING

Always wear eye protection when working around batteries.

During normal operation 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.

---

### WARNING

**DO NOT** use a 24 volt booster start system.

These produce excessive voltage and can damage the vehicles electrical system.

---

Caution: **DO NOT** push or tow start!

### Using booster cables

Using booster cables (jump leads) from a donor battery, or a battery fitted to a donor vehicle, is the only approved method of starting a vehicle with a discharged battery.

### Boosting from another vehicle

If a donor vehicle is to be used, both vehicles should be parked with their battery locations adjacent to each other. Ensure that the two vehicles do not touch.

Apply the handbrakes and ensure that the transmission of both vehicles is set in neutral (**P** or Park for vehicles with automatic transmission).

Turn off the starter switch and ALL electrical equipment of BOTH vehicles.



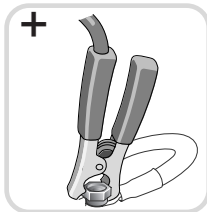
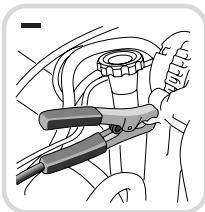
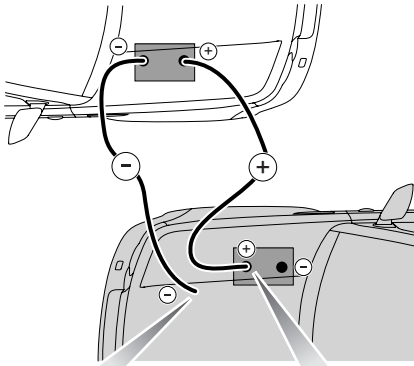
# Emergency Starting

## Boosting procedure

### WARNING

For safety reasons:

- **DO NOT connect the black cable to the negative terminal of the discharged battery. 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 the battery terminals. This could cause sparking, which can lead to a fire or explosion.**



LAN0353G

Always adopt the following procedure, ensuring the cables are connected in the order shown below:

1. On the donor vehicle, connect one end of the RED booster cable to the positive (+) terminal of the battery or the vehicle's positive (+) connection point.
2. On the disabled vehicle, connect the other end of the RED booster cable to the positive (+) battery terminal.
3. On the donor vehicle, connect one end of the BLACK booster cable to the negative (-) terminal of the battery or the vehicle's negative (-) connection point.
4. On the disabled vehicle, connect the other end of the BLACK booster cable to a good earth point (e.g. an engine mounting or other unpainted metal surface) at least 0.5 m (20 in.) from the battery and well away from fuel and brake lines.

Check that the cables are clear of any moving parts of both engines, then start the engine of the donor vehicle and allow it to idle for a few minutes.

Now start the vehicle with the discharged battery. Once both engines are running normally, allow them to idle for two minutes before switching off the donor vehicle engine.

DO NOT switch on any electrical circuits on the previously disabled vehicle until AFTER the booster cables have been removed.

Disconnecting the booster cables must be an EXACT reversal of the procedure used to connect them, i.e. disconnect the black cable from the negative (-) connection terminal on the donor vehicle first.

# 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:

### Blade 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

### Cartridge fuse colours (engine bay only)

BLUE	20 amp
PINK	30 amp
GREEN	40 amp
RED	50 amp
YELLOW	60 amp

**Note:** Owners are advised against removing or replacing the relays (identified as R1-R19 on the relays) and fusible links (identified as FL1-FL20 on the fusible links). Failure of any of these items should be investigated by a qualified technician.

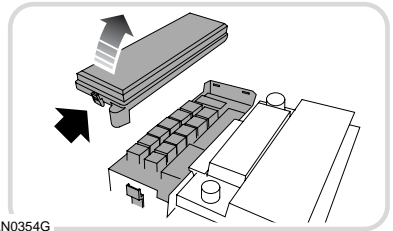
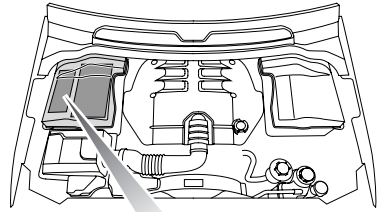
## Checking or renewing a fuse

### WARNING

To prevent a possible fire or damage to the electrical system, fit only replacement fuses of the same rating and type. Do not replace a blown fuse with a fuse of a higher amperage rating. Always rectify the cause of the failure before replacing a fuse. Seek qualified assistance if necessary.

Always turn the starter switch to position **0** and switch off the affected electrical circuit before removing a fuse.

### Engine compartment fuse box

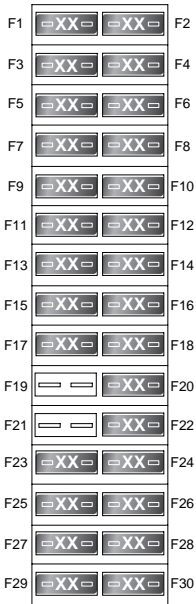


LAN0354G

The engine compartment fuse box is located at the rear of the engine bay. To view the fuse box, the under-bonnet cover will have to be removed. See **UNDER-BONNET COVERS, 218**. The plastic lid of the box is removed by pressing the plastic tabs in.

# Fuses

## Engine compartment fuses



LAN0356G

**Note:** Fuse removal tweezers and spare blade fuses are located in the passenger compartment fuse box. See **Passenger compartment fuse box, 266**.

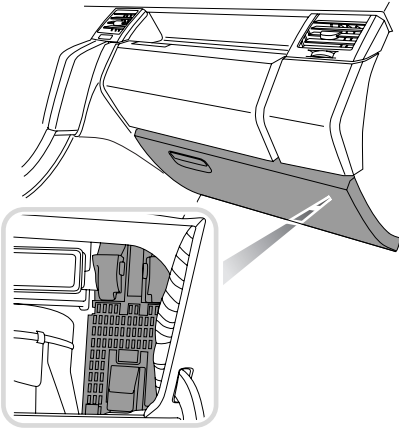
# Fuses

## Engine compartment fuse specification

Fuse number	Rating (amps)	Circuit protected
1	25	Fuel pump
2	-	
3	5	Air suspension ECU
4	25	Petrol - V8 Supercharged - supercharger cooling pump
4	25	Diesel - EMS (ECU and fuel pump relay control)
5	10	Petrol - EMS (purge valve, EGR, inlet manifold tune valve), E-Box fan, Adaptive cruise control
5	10	Diesel - Adaptive cruise control
6	15	Petrol - EMS (coils), Diesel - EMS, glow plug relays
7	25	Hevac - front seat heat
8	25	Rear seat heat
9	15	Dynamic response
10	15	Petrol - EMS (throttle motor, MAF), cool fan
10	15	Diesel - cool fan
11	15	Petrol - EMS (rear oxygen sensors)
12	10	Heated washer jets
13	10	Petrol - EMS (ECU, VVT's and fuel pump relay control)
13	10	Diesel - EMS (PCV, VCV)
14	20	Petrol - EMS (front oxygen sensors)
15	30	Heated front screen
16	10	Heated door mirrors
17	15	Petrol - EMS (injectors)
17	15	Diesel - EMS (MAF, EGR), E-Box fan, Dual MAF sensors, MTV
18	30	Heated front screen
19	-	
20	5	Alternator
21		
22	-	
23	25	Dynamic Stability Control system
24	20	Petrol - brake boost pump
25	10	Lighting switch
26	20	Air suspension ECU
27	5	Engine control module (EMS)
28	20	Diesel - Fuel burning heater
29	30	Front wipers
30	10	Auto transmission ECU

# Fuses

## Passenger compartment fuse box

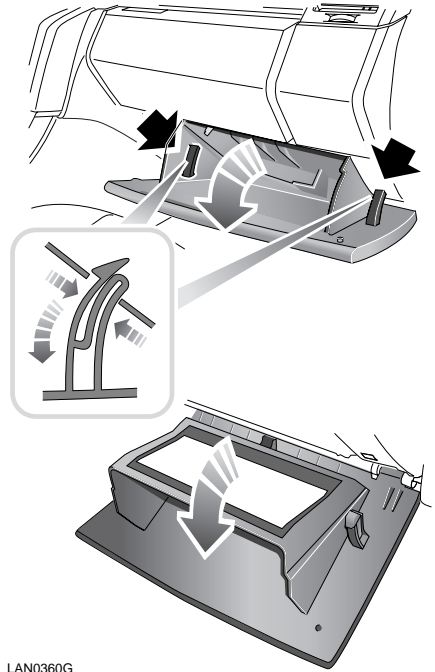


LAN0357G

The passenger compartment fuse box is fitted behind the glovebox. To access the fuses, open the glovebox to the service position.

This is done by opening the glovebox normally and then pinching the top of the support stays located either side of the hopper. This allows the glovebox to be lowered into the footwell.

A label on the rear of the glovebox shows the circuits protected, the fuse values and their locations. They are also listed on the following page.



LAN0360G

# Fuses

## Checking or renewing a fuse

### WARNING

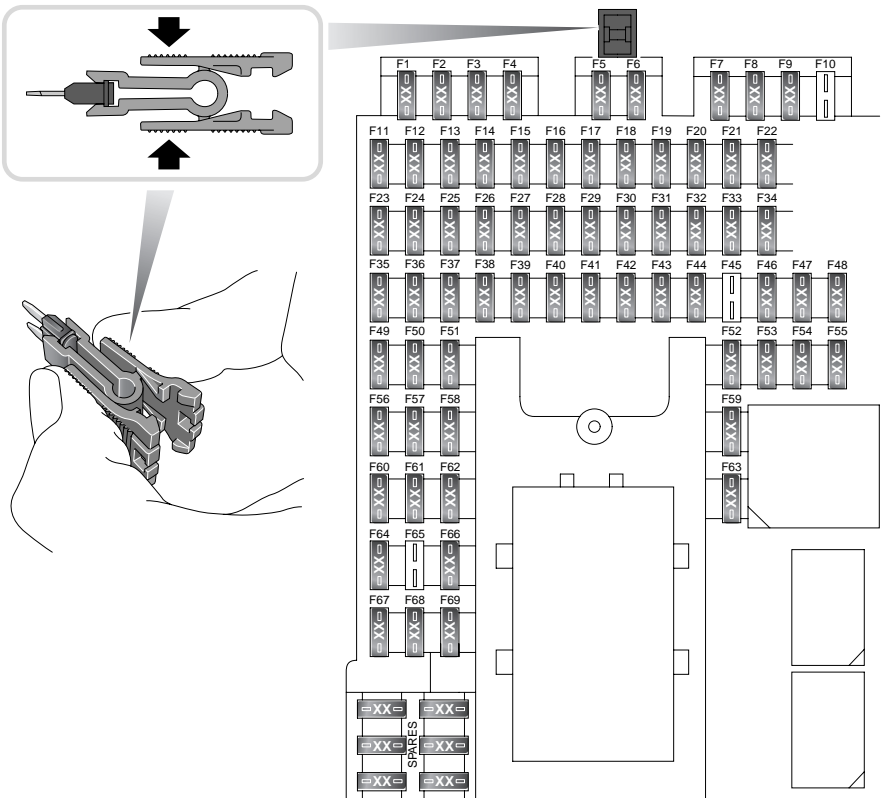
To prevent a possible fire or damage to the electrical system, fit only replacement fuses of the same rating and type. Do not replace a blown fuse with a fuse of a higher amperage rating. Always rectify the cause of the failure before replacing a fuse. Seek qualified assistance if necessary.

Always turn the starter switch to position **O** and switch off the affected electrical circuit before removing a fuse.

## Passenger compartment fuses

The fuse removal tweezers are located in the passenger compartment fusebox. Place the tweezers onto the head of the suspect fuse (as shown), squeeze the middle (arrowed) and pull to remove. A break in the wire inside the fuse indicates that the fuse has blown and must be replaced.

Always replace a fuse with another of the same value, however, if the replacement fuse blows immediately the circuit **MUST** be checked by a qualified Land Rover Dealer/Authorised Repairer.



LAN0358G

# Fuses

## Passenger compartment fuse specification

Fuse number	Rating (amps)	Circuit protected
1	10	Interior lamps - glovebox lamp, vanity mirror lamp, map lamps, switchable roof lamps
2	10	RH side lamps
3	-	
4	10	LH side lamps
5	10	Reverse lamps
6	10	Tow reverse lamp
7	25	Driver's window
8	30	Trailer pick-up (battery feed)
9	5	SRS
10	-	
11	15	Washer pump
12	15	Horn
13	25	Heated Rear Window
14	10	Tow sidelamp
15	15	Brake lamps, Brake switch
16	10	Powerfold mirror
17	20	Rear RH window
18	5	Rain sensor, ambient light sensor (auto lamps)
19	15	Auxiliary power socket - centre console
20	15	Sunroof
21	25	Passenger window
22	10	Trailer pick-up (starter feed)
23	5	Adaptive cruise control
24	5	Transfer box - centre diff, Terrain Response
25	5	Engine control module
26	5	Battery back-up sounder
27	10	Adaptive front lighting / Headlamp levelling
28	5	Fusebox engine compartment - starter
29	30	Passenger electric seat
30	-	
31	20	Rear LH window
32	15	Rear fog lamps
33	5	Mirror adjust, PRNDS - Auto transmission selector, passenger electric seat, driver non memory electric seat
34	15	

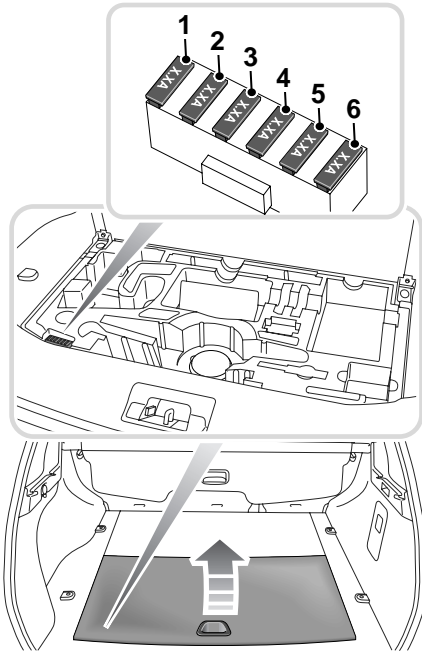
# Fuses

Fuse number	Rating (amps)	Circuit protected
35	5	Air suspension ECU/Speed variable steering
36	5	Park Distance Control, Tyre Pressure Monitoring system
37	5	Dynamic Stability Control
38	15	Front fog lamps
39	5	Instrument pack
40	5	Key in sensor
41	5	Electric parkbrake
42	30	Audio amp
43	10	RF receiver, Tyre Pressure Monitoring system
44	5	PRNDS Auto transmission selector
45	-	
46	30	Driver's electric seat
47	15	Auxiliary power socket - loadspace
48	15	Rear wiper
49	30	CDL (central door locking)
50	10	Electric fuel flap actuator
51	10	Heating/ventilation/air conditioning (HeVAC) ECU
52	5	Telephone, traffic message centre
53	15	Head module, media player, infotainment display, DVD player
54	5	Electric seat - memory, lumbar pump
55	15	Lighter
56	10	Adaptive front lighting (Left hand unit)
57	10	Rear seat entertainment module
58	10	Telephone, infotainment display, multi-media module, TV tuner
59	10	Cubby box cooler
60	5	Engine control module (ECM) - starter signal
61	10	Adaptive front lighting (Right hand unit)
62	5	Low beam, auto lamps
63	10	Diagnostic socket
64	5	Auto transmission
65	10	Tailgate power striker
66	5	HDC switch, Brake switch, Steering angle sensor/DSC switch
67	5	Auto lamps
68	5	Instrument pack
69	5	Electrochromatic mirror



# Fuses

## Tow hitch fuses



Fuse number	Rating (amps)	Circuit protected
1	7.5	Brake lamp
2	15	Ignition feed
3	15	Battery feed
4	7.5	Rear fog lamps
5	5	Right-hand tail lamp
6	5	License plate and left-hand tail lamp

The supplementary fuse box that protects the tow hitch circuits, is located under the cover in the luggage compartment.

LAN0359G

# Bulb Replacement

## REPLACING BULBS

**Caution:** Before replacing a bulb, always switch off the starter switch and appropriate lighting switch to prevent any possibility of a short circuit. Only replace bulbs with the same type and specification.

Check the operation of all exterior lamps before you drive the vehicle.

### Replacement bulbs

**Note:** All bulbs must be rated at 12 volts.

Bulb	Watts
Headlamps, low and high beam (Halogen)	55 (H7)
Headlamps, low and high beam (Xenon)	55 (D2S)
Cornering lamps (Halogen)	35 (H8)
Front side lamps	W5W
Front direction indicators	S8
Rear direction indicators	P21
Front fog lamps (Halogen)	55 (H11)
Side repeater lamps	W5W
Reverse lamps	P21
Rear fog guard lamps	P21
Stop/tail lamps	P21/5
Number plate lamps	W5W
Door/puddle lamps	W5W
Interior lamps	W5W
Luggage/footwell lamps	W5W
Luggage/tailgate lamps	W5W
Glovebox lamp	W5W
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 and front fog 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 lamp units

#### WARNING

- **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.**

Some vehicles are fitted with Xenon low/high beam headlamp units. Xenon lamps provide significantly improved visibility, especially during adverse weather and driving conditions.

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 Xenon lamp units from a Land Rover Dealer/Authorised Repairer or your local disposal authority.*

# Bulb Replacement

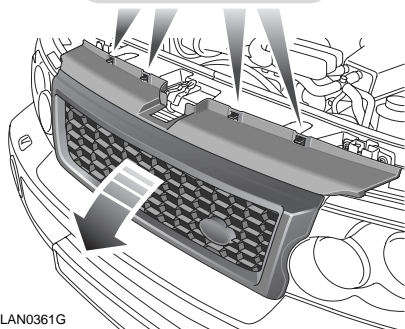
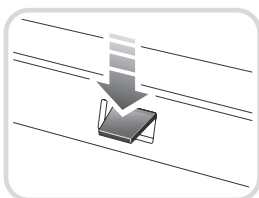
## HEADLAMP UNIT

### 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 down. Handling them in a hot condition may cause personal injury.

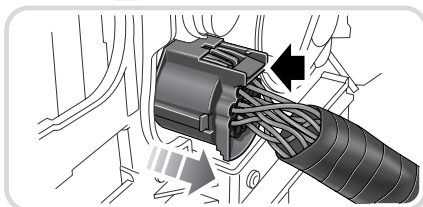
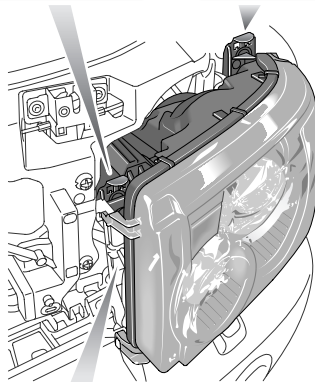
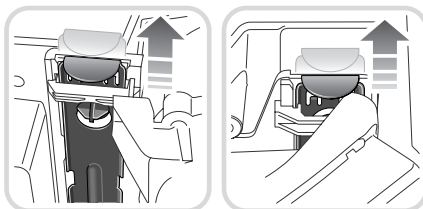
The headlamp unit contains four lamps and it is necessary to completely remove the unit from the vehicle in order to change any of the bulbs.

### To remove the headlamp unit



LAN0361G

1. Remove the grille by pressing down on the four upper clips securing the grille to the vehicle body. Lift the grille clear of the vehicle and place it where it will not sustain any damage.

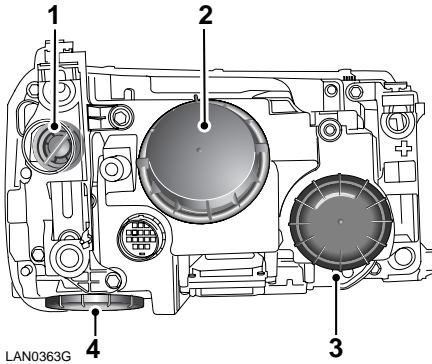


LAN0362G

2. Carefully pull up the two locking bars.
3. Disconnect the wiring plug from the back of the unit and remove the unit from the vehicle. Place face down on a flat surface covered in a soft material to prevent damage to the unit's lenses.

# Bulb Replacement

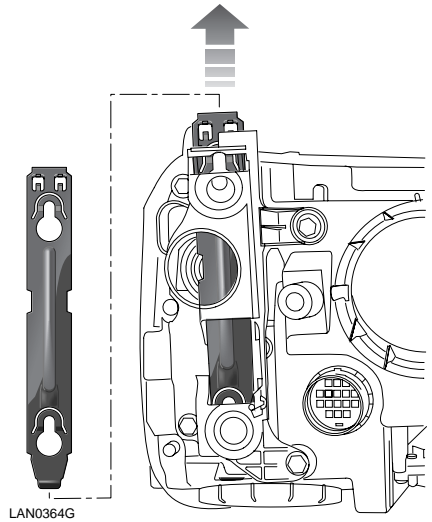
## Bulb access



The four bulbs within the headlamp unit, accessible under domed caps are:

1. Direction indicator
2. Low beam/xenon
3. High beam
4. Side lamp and static bending lamp

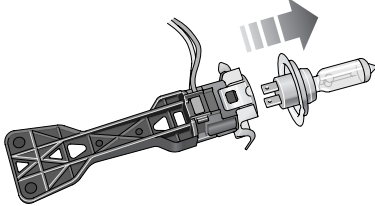
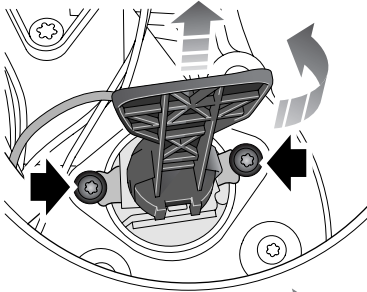
See **Replacement bulbs, 271**.



**Note:** To access the direction indicator, the headlamp unit locking slide must be completely removed from the unit.

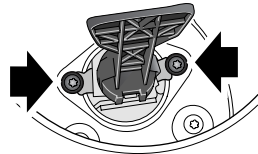
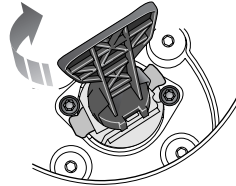
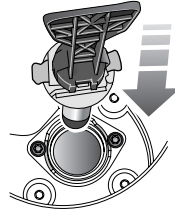
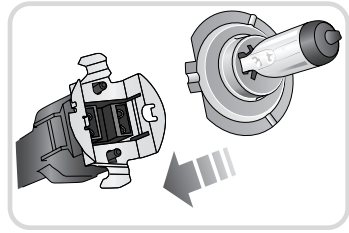
# Bulb Replacement

## To change a high beam bulb (Halogen only)



LAN0365G

1. Twist and lift off the domed cap.
2. Note the position of the bulb locator extension. Two locking tabs at the sides of the locking ring locate under small bolt heads.
3. Turn the locator extension counter-clockwise and withdraw it, complete with bulb, from the headlamp unit.
4. Prise the bulb from the holder.



LAN0366G

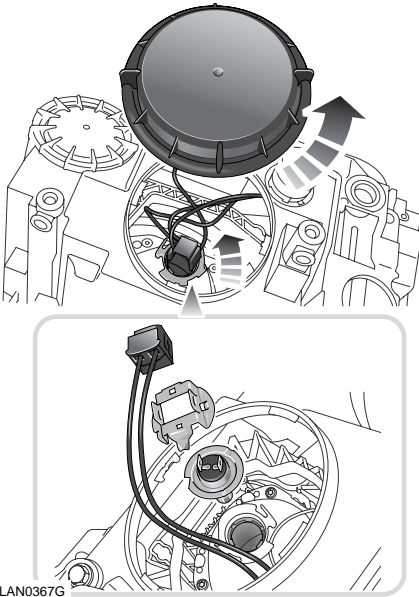
5. The new bulb will only fit in one position. As you press the new bulb into the electrical connections, squeeze the locking ring so that the two protruding pins locate with the bulb correctly.
6. Replace the bulb holder and locator extension into the headlamp unit and turn clockwise, ensuring the two locking ring tabs locate under the small bolt heads.

See **Replacement bulbs, 271**.

# Bulb Replacement

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To change low beam bulb (Halogen only)



LAN0367G

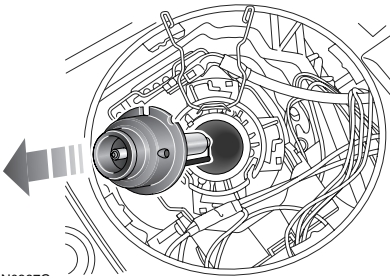
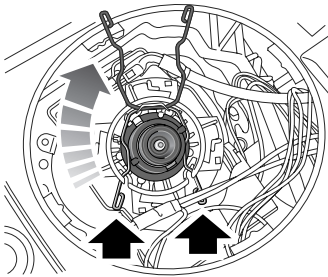
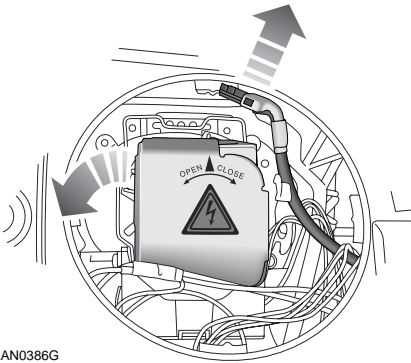
1. Twist and lift off the domed cap.
2. Pull off the electrical connector.
3. Release the spring clip holding the bulb in place and lift out the bulb.
4. Insert the new bulb and repeat the above procedure in reverse order. When replacing the cap, align the arrowheads on the cap and the body of the unit.

See **Replacement bulbs, 271**.

**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 bulb



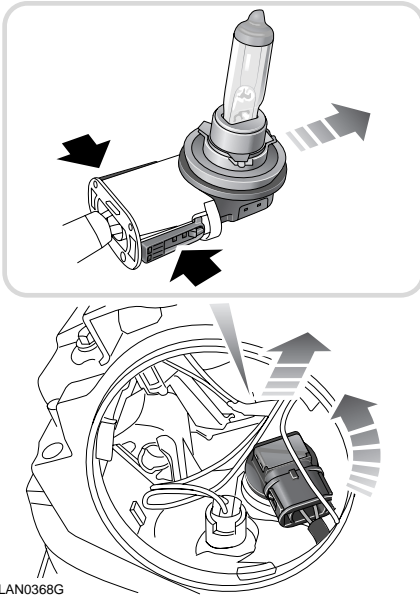
1. Twist and lift off the domed cap.
2. Pull off the electrical connector.
3. Twist the connector cap anti-clockwise to unlock it. Pull clear of the bulb.
4. Release the spring clip holding the bulb in place and lift out the bulb.
5. Insert the new bulb and repeat the above procedure in reverse order. When replacing the cap, ensure that the lugs are in contact with the bulb base.

See **Replacement bulbs, 271.**

**Note:** After the replacement of any main or dipped beam bulb, the alignment of the headlamps should be checked by a Land Rover Dealer/Authorised Repairer.

# Bulb Replacement

## To change a static bending bulb

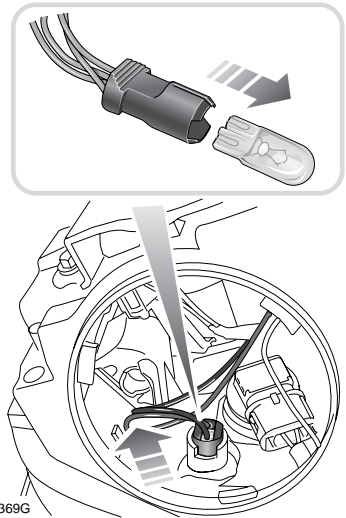


1. Twist and lift off the domed cap.
2. Twist the bulb holder anti-clockwise to unlock, then pull out the bulb complete with electrical connector.
3. To release the bulb, depress the two catches (solid arrows in inset), then pull out to remove the bulb from the holder.
4. Insert the new bulb and repeat the above procedure in reverse order.

See **Replacement bulbs, 271**.

When replacing the cap, align the arrowheads on the cap and the body of the unit.

## To change a front side lamp bulb



1. Twist and lift off the domed cap.
2. Pull out the bulb complete with electrical connector.
3. Pull the bulb out of the electrical connector.
4. Insert the new bulb and repeat the above procedure in reverse order.

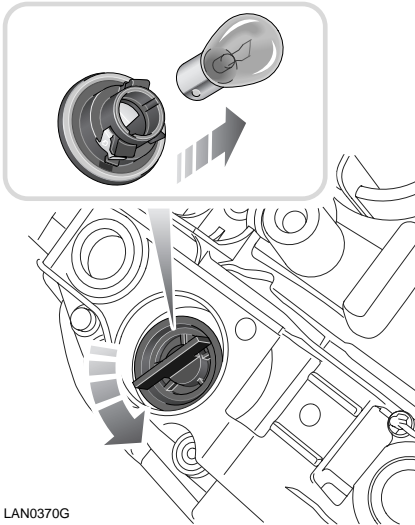
See **Replacement bulbs, 271**.

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



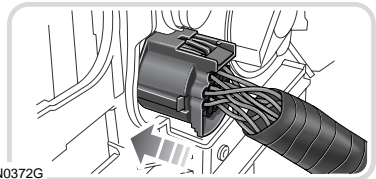
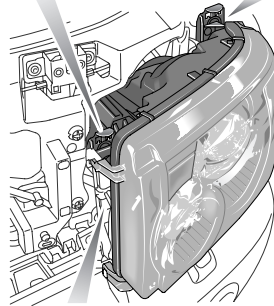
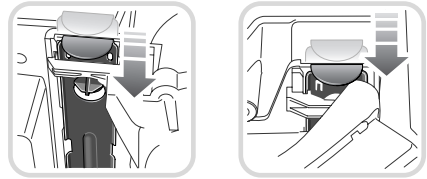
LAN0370G

1. Twist and lift off the domed cap.
2. Twist the bulb holder anti-clockwise to unlock, then pull out the bulb complete with electrical connector.
3. Pull the bulb out of the electrical connector.
4. Insert the new bulb and repeat the above procedure in reverse order.

See **Replacement bulbs, 271**.

When replacing the cap, align the arrowheads on the cap and the body of the unit.

## To refit the headlamp unit

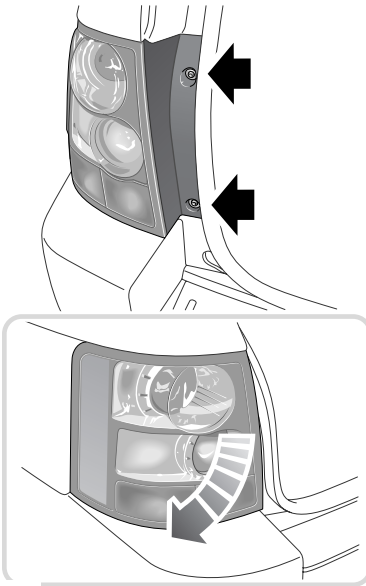


LAN0372G

1. Reconnect the wiring plug.
2. Offer up the unit into position.
3. Push down on the two locking slides as shown.
4. Refit the grille.

# Bulb Replacement

## REARLAMP UNIT

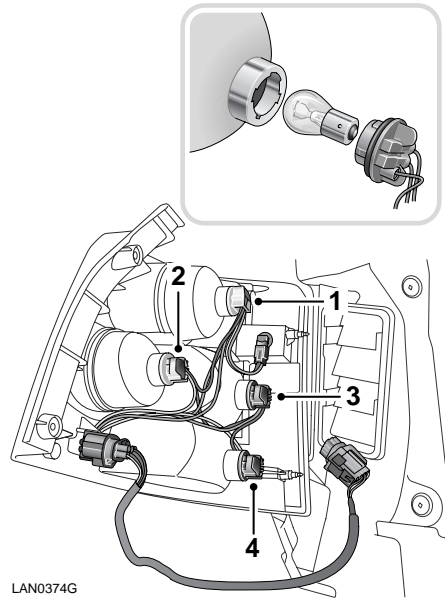


LAN0373G

The rearlamp unit contains four lamps and it is necessary to completely remove the unit from the vehicle in order to change any of the bulbs.

### Removal of rearlamp unit

1. With the tailgate open, remove two screws from the edge of the unit nearer the tailgate aperture.
2. Pull the unit away from the vehicle.
3. Disconnect the wiring multi-plug and remove the unit from the vehicle. Place face down on a flat surface covered in a soft material to prevent damage to the unit's lenses.



LAN0374G

Each bulb is now accessible by twisting off its electrical connection cap. See **Replacement bulbs, 271**.

1. Stop/tail lamp
2. Reversing lamp
3. Direction indicator
4. Rear fog guard lamp

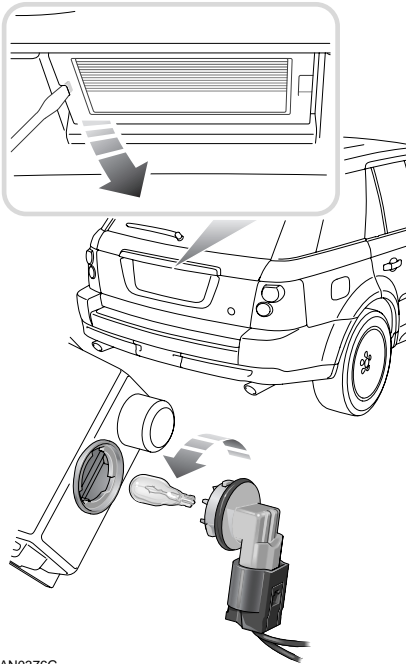
### Refitting the rearlamp unit

1. Reconnect the electrical multi-plug.
2. Locate the unit's two studs in the sockets at the outer side of the mounting face.
3. Insert and tighten the two screws on the side of the unit nearer the tailgate aperture.
4. Check that all of the bulbs work.

# Bulb Replacement

## NUMBER PLATE LAMP

To change a number plate lamp bulb



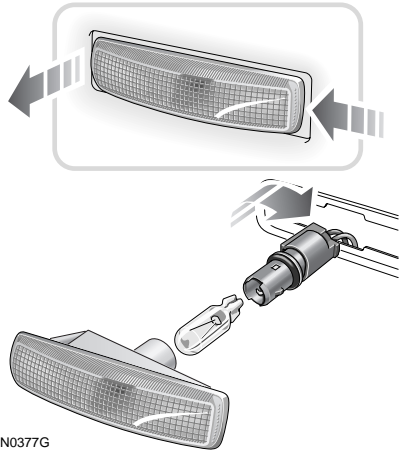
LAN0376G

1. Using a suitable tool, carefully lever the lens from the number plate lamp.
2. Twist the bulb holder anti-clockwise to unlock, then pull out the bulb complete with electrical connector.
3. Pull the bulb to remove it from the connector.
4. Insert a new bulb and refit the components.

See **Replacement bulbs, 271**.

## SIDE REPEATER LAMP

To change a side repeater lamp bulb



LAN0377G

1. Push the lens firmly towards the front of the vehicle and withdraw the lamp unit from the wing.
2. Twist to release the bulb holder from the lens unit, then pull the bulb from its socket.
3. Insert a new bulb and refit the components.

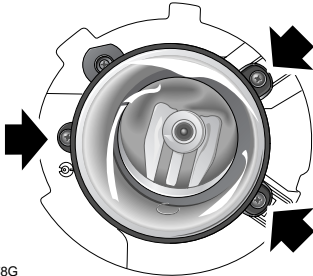
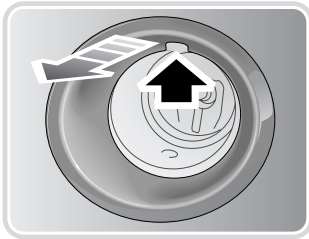
See **Replacement bulbs, 271**.

# Bulb Replacement

## FRONT FOG LAMPS

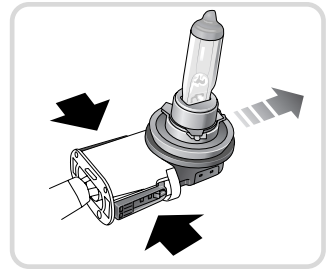
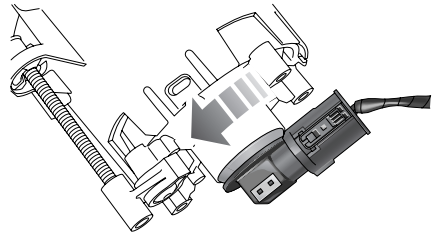
### To change a front fog lamp bulb

1. To gain access, use the finger slot at the top of the fog lamp surround and pull it forward to remove.



LAN0378G

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.



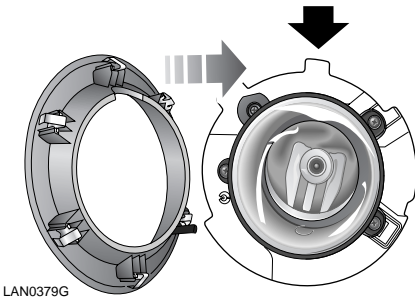
LAN0380G

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 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.  
See **Replacement bulbs, 271**.

# Bulb Replacement

## DOOR/PUDDLE/FOOTWELL LAMPS

To change a door/puddle/footwell lamp bulb

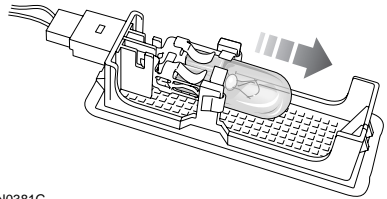
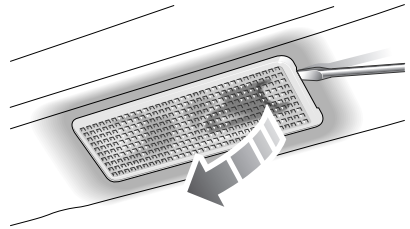


LAN0379G

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.



LAN0381G

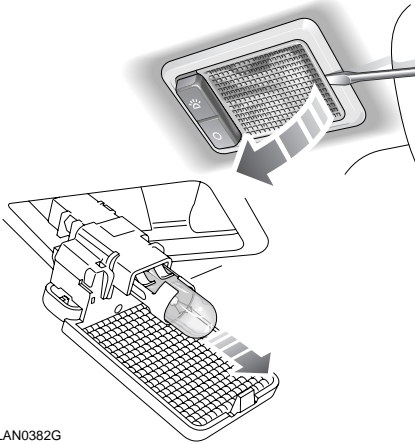
1. With the relevant door open, insert a small flat-bladed screwdriver under the forward edge of the lens to carefully lever the lamp unit out.
2. Pull the bulb out of the electrical connector.
3. Insert a new bulb and refit the components.

See **Replacement bulbs, 271**.

# Bulb Replacement

## COURTESY LAMPS

To change a courtesy lamp bulb

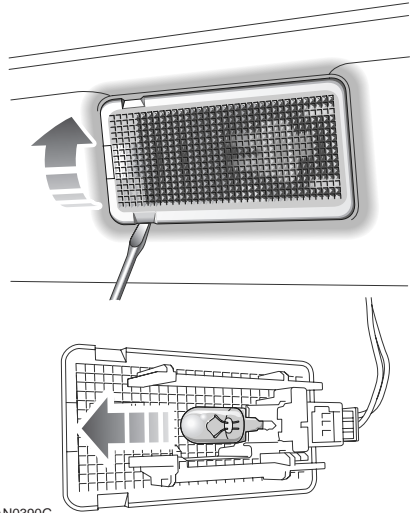


LAN0382G

1. Insert a small flat-bladed screwdriver into the indent on the side of the lens and carefully prise the lens from the lamp unit.
  2. Pull the bulb out of the electrical connector.
  3. Insert a new bulb and refit the components.
- See **Replacement bulbs, 271**.

## TAILGATE LAMP

To change a tailgate lamp bulb



LAN0390G

1. Insert a small flat-bladed screwdriver under the lens and carefully prise the lens from the lamp unit.
  2. Pull the bulb out of the electrical connector.
  3. Insert a new bulb and refit the components.
- See **Replacement bulbs, 271**.

# Bulb Replacement

## MAP LAMP

To change a map lamp bulb



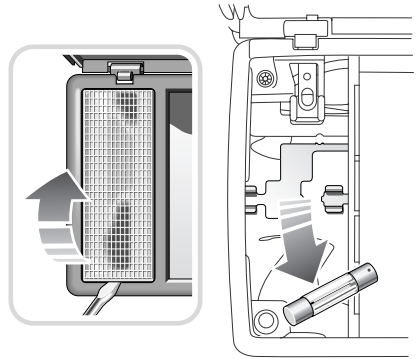
LAN0383G

1. Insert a small flat-bladed screwdriver into the indent on the side of the lens and carefully prise the lens from the lamp unit.
2. Pull the bulb out of the electrical connector.
3. Insert a new bulb and refit the components.

See **Replacement bulbs, 271.**

## VANITY MIRROR LAMP

To change a vanity mirror lamp bulb



LAN0384G

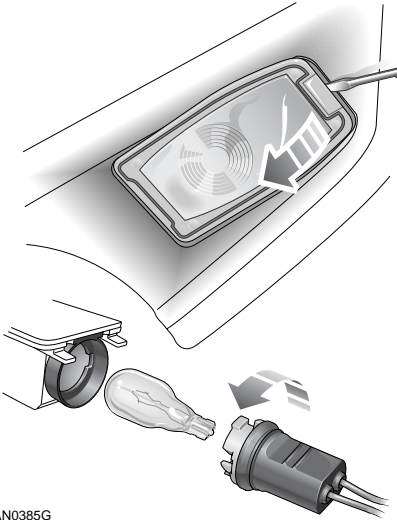
1. With the vanity mirror cover open, use a small flat-bladed screwdriver to carefully lever the relevant lens from the mirror/lamp unit.
  2. Pull the bulb out of the electrical connector.
  3. Insert a new bulb and refit the components.
- See **Replacement bulbs, 271.**

# Bulb Replacement

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## MIRROR DOWNLIGHTER

To change a mirror downlighter bulb



LAN0385G

1. Use a small flat-bladed screwdriver to carefully lever the lens from the mirror/lamp unit.
  2. Twist the bulb holder to reveal the bulb. Pull the bulb out of the electrical connector.
  3. Insert a new bulb and refit the components.
- See **Replacement bulbs, 271**.



# Lubricants and Fluids

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## LUBRICANTS AND FLUIDS

Recommendations for all climates and conditions.

**Note:** *Recommended oils are complete in themselves and additives should not be used.*

**Note:** *It is essential to change oil much more frequently if the vehicle is operated under severe conditions, especially if deep wading is carried out.*

### Engine oil - Petrol vehicles

Use a 5W/30 oil meeting specification ACEA A3.

Land Rover oil to specification WSS M2C913B is recommended.

### Engine oil - Diesel vehicles

Use 5W/30 oil meeting ACEA B1 or B3.

### Power steering

Texaco Cold Climate PAS fluid.

### Dynamic Response

Texaco Cold Climate PAS fluid.

### Brake reservoir

Use Shell DOT4 ESL or a low viscosity DOT4 brake fluid that meets ISO 4925 class 6.

**Brake pedal free travel:** No adjustable free travel.

### Windscreen washers

Screen washer fluid.

### Engine cooling system

**Caution:** Be aware that different types of antifreeze are VERY different from each other; even different types from the same manufacturer.

**The use of non-approved antifreeze will have an adverse effect on the engine cooling system and therefore engine durability.**

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

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## CAPACITIES

The following capacities are approximate and provided as a guide only. All oil levels must be checked using the dipstick or level plugs as applicable.

Fuel tank: - Diesel vehicles - Petrol vehicles	84 litres 88 litres	18.4 gall 19.3 gall
Engine oil refill and filter change: - Diesel vehicles - Petrol vehicles	5.45 litres 7.7 litres	9.6 pints 13.6 pints
Washer reservoir	5.0 litres	8.8 pints
Cooling system (refill): - V6 Diesel vehicles - V8 Diesel vehicles - V8 NA Petrol vehicles - V8 SC Petrol vehicles	8 litres 12 litres 9.5 litres 12 litres	14 pints 21.1 pints 16.7 pints 21.1 pints

# Engines

## ENGINES

### V6 Diesel

Recommended fuel	Diesel or Automotive Gas Oil (AGO) to EN 590 specification. Maximum allowable Bio-diesel mix is 5%.
Capacity	2720 cm <sup>3</sup>
Firing order	1-4-2-5-3-6
Bore	81.0 mm
Stroke	88.0 mm
Number of cylinders	6
Compression ratio	18.0:1

### V8 Diesel

Recommended fuel	Diesel or Automotive Gas Oil (AGO) to EN 590 specification. Maximum allowable Bio-diesel mix is 5%.
Capacity	3626 cm <sup>3</sup>
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 Naturally aspirated (NA)

Recommended fuel	UNLEADED 95 RON to EN 228 specification. Unleaded with a RON no lower than 90 may be used.
Capacity	4394 cm <sup>3</sup>
Firing order	1-5-4-2-6-3-7-8
Bore	88.0 mm
Stroke	90.3 mm
Number of cylinders	8
Compression ratio	10.5:1
Spark plugs	NGK IFR5N10
Spark plug gap	Non-adjustable

# Engines

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## V8 Petrol Supercharged (SC)

Recommended fuel	UNLEADED 95 RON to EN 228 specification Unleaded with a RON no lower than 90 may be used.
Capacity	4197 cm <sup>3</sup>
Firing order	1-5-4-2-6-3-7-8
Bore	86.0 mm
Stroke	90.3 mm
Number of cylinders	8
Compression ratio	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	Load index
7J x 17 (alloy wheel)	235/65 R17 - All terrain tyre	108H
8J x 18 (alloy wheel)	255/55 R18 - All terrain tyre	109V
8J x 19 (alloy wheel)	255/50 R19 - All terrain tyre	107Y
9J x 19 (alloy wheel)	255/50 R19 - All terrain tyre	107Y
9.5J x 20 (alloy wheel)	275/40 R20 - All terrain tyre	106Y
5.5J x 19 (steel wheel)	T175/80 R19 - Temporary spare tyre	122M

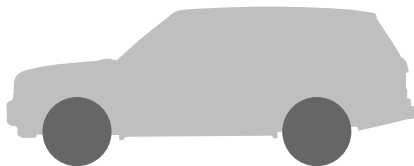
**Caution:** If a 9J x 19 alloy wheel requires balancing, the inner surface of the wheel must only be fitted with adhesive balance weights. Other types of weights will cause damage to the vehicle.

### 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 pressure and loading label, 239**.

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

### 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).

**Note:** Consult your Land Rover Dealer/Authorised Repairer before you fit any accessory wheel or tyre.

# Vehicle Weights

## VEHICLE WEIGHTS

<b>Approximate unladen vehicle weight (full fuel tank, excluding options)</b>		
Petrol engine vehicles (NA)	2 480 - 2 485 kg	5 467 - 5 478 lb
Petrol engine vehicles (SC)	2 572 - 2 614 kg	5 671 - 5764 lb
Diesel engine vehicles	2 455 - 2 479 kg	5 412 - 5 465 lb
<b>Maximum gross vehicle weight (GVW)</b>		
Petrol engine vehicles (NA)	3 070 kg	6 768 lb
Petrol engine vehicles (SC)	3 125 kg	6 889 lb
V6 Diesel engine vehicles	3 070 kg	6 768 lb
V8 Diesel engine vehicles	3 175 kg	7 000 lb
<b>Maximum front axle load</b>		
All vehicles	1 470 kg	3 241 lb
<b>Maximum rear axle load</b>		
All vehicles	1 710 kg	3 770 lb
<b>Gross Train Weight</b> (Weight of vehicle plus trailer with overrun brakes)		
Petrol engine vehicles (NA)	6570 kg	14484 lb
Petrol engine vehicles (SC)	6625 kg	14605 lb
Diesel engine vehicles	6570 kg	14484 lb
<b>Roof rack load (including the mass of roof rack)</b>		
All vehicles	75 kg	165 lb

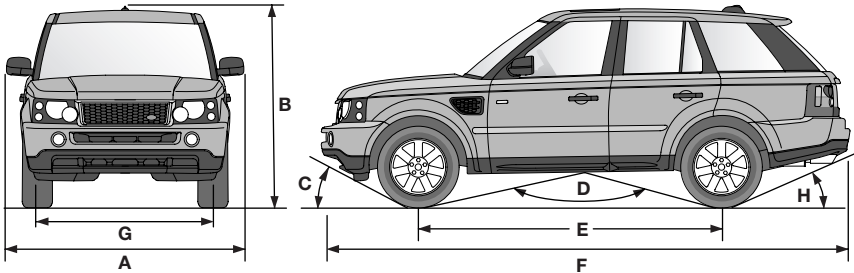
**Note:** Axle weights are non-additive. The individual maximum axle weights and gross vehicle weight must not be exceeded.

## TOWING WEIGHTS

<b>Maximum permissible towing weights</b>	<b>On-road</b>	<b>Off-road</b>
Unbraked trailers	750 kg (1 654 lb)	750 kg (1 654 lb)
Trailers with overrun brakes	3 500 kg (7 716 lb)	1 000 kg (2 205 lb)
Nose weight	250 kg (550 lb)	250 kg (550 lb)

# Dimensions

## DIMENSIONS



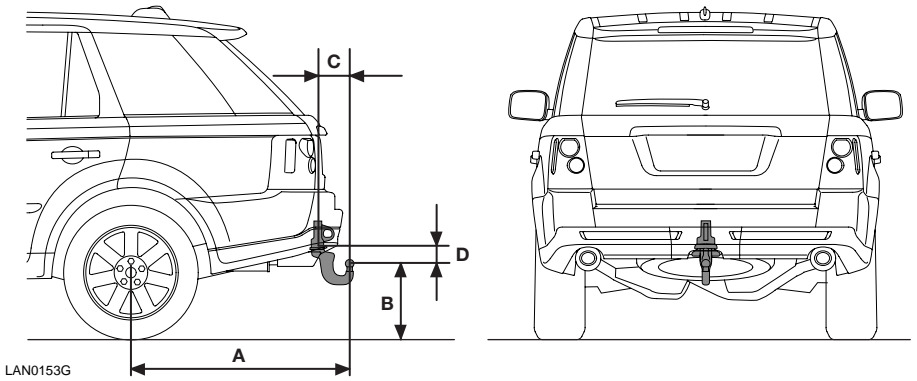
LAN0391G

## Dimensions

A	Overall width	2 170 mm	85.4 in.
	Overall width (mirrors folded)	1 928 mm	75.9 in.
B	Overall height (including roof rails)		
	- Access height	1 734 mm	68.3 in.
	- Standard height	1 784 mm	70.2 in.
	- Off-road height	1 839 mm	72.4 in.
	- Including roof antenna at Standard height	1 812 mm	71.3 in.
C	Approach angle (at EEC kerb weight and Off-road height)	34°	
D	Ramp breakover angle (at EEC kerb weight and Off-road height)	130°	
E	Wheelbase	2 745 mm	108 in.
F	Overall length	4 788 mm	188.5 in.
	Overall length (including number plate plinth)	4 798 mm	188.9 in.
G	Track:		
	- Front	1 605 mm	63.2 in.
	- Rear	1 612.5 mm	63.5 in.
H	Departure angle without tow hitch (at EEC kerb weight):		
	- On-road	26.0°	
	- Off-road	29.0°	
H	Departure angle with tow hitch (at EEC kerb weight):		
	- On-road	15.1°	
	- Off-road	17.8°	
	Maximum gradient (at EEC kerb weight)		
	- Continuous operation	35°	
	- Drive through operation	45°	
	Turning circle	10.96 m	35.96 ft.
	Wheel alignment:		
	- Front	-0.16° ±0.20°	-10' ±12'
	- Rear	0.16° ±0.20°	10' ±12'

# Towing

## TOW BAR DIMENSIONS

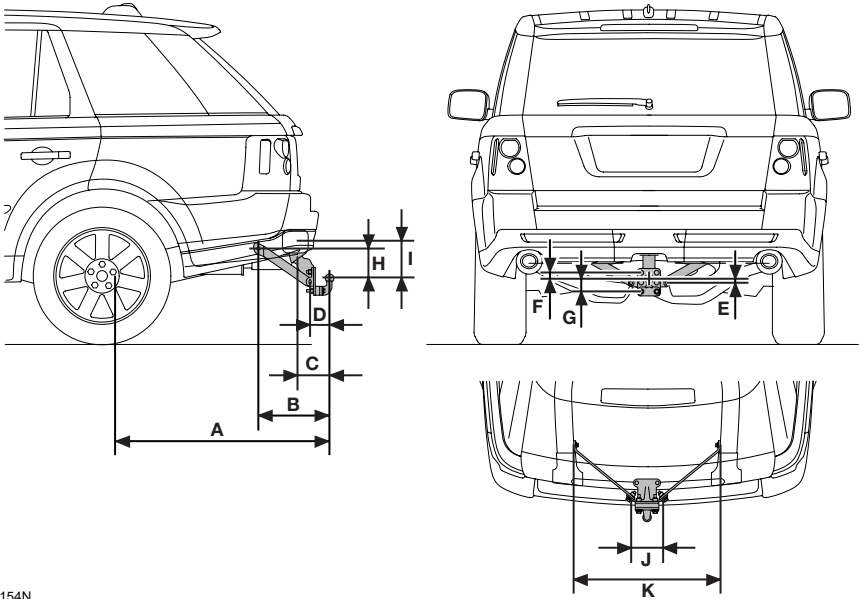


A	Wheel centre to centre of towball	1,191 mm	46.9 in.
B	Ground to centre of towball	395 mm	15.55 in.
C	Centre of towball to tow bar attachment	170 mm	6.7 in.
D	Centre of towball to tow bar attachment	124 mm	4.9 in.



# Towing

## MULTI-HEIGHT DROP PLATE TOW BAR DIMENSIONS



LAN0154N

A	Wheel centre to centre of towball (horiz)	1,210 mm	47.64 in.
B	Centre of outer attachment points to centre of towball (horiz)	403.6 mm	15.89 in.
C	Centreline of housing bayonet slot tip radius to centre of towball (horiz)	192.4 mm	7.57 in.
D	Centre of inner attachment points to centre of towball (horiz)	108 mm	4.25 in.
E	Centre of inner attachment points to centre of towball (vert)	20 mm	0.79 in.
F	Centre of upper towball plate bolt to centre of towball (vert)	36 mm	1.42 in.
G	Centre of lower towball plate bolt to centre of towball (vert)	70 mm	2.76 in.
H	Centre of outer attachment points to centre of towball (horiz)	167.3 mm	6.59 in.
I	Centreline of housing bayonet slot tip radius to centre of towball (vert)	174.3 mm	6.86 in.
J	Distance between inner attachment point centres	180.5 mm	7.10 in.
K	Distance between outer attachment point centres	822.5 mm	32.38 in.
<i>Dimensions refer to towing equipment officially released by Land Rover</i>			

# 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
<b>Petrol S/Charged</b>	22.8	12.4	11.9	23.8	15.9	17.8
<b>Petrol</b>	21.1	13.4	11.4	24.8	14.9	18.9
<b>Diesel</b>	13.2	21.4	8.5	33.2	10.2	27.6

### 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

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## 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

<b>Declaration of Conformity appropriate to the Directive 1999/5/EC (R&amp;TTE) Annex IV</b>	
<b>Visteon Deutschland GmbH</b>	
..... Manufacturer,	
Notified Body consulted:	<b>Phoenix Test-Lab, Königswinkel 10, D-32825 Blomberg</b>
ID-Number of Notified Body:	<b>0700</b>
declare under our responsibility that the product:	<b>RKE Transmitter</b>
Type:	<b>TXRETS</b>
<input type="checkbox"/> Telecommunications Terminal Equipment	<input checked="" type="checkbox"/> Radio Equipment
<b>Remote Keyless Entry System Transmitter</b>	<b>2</b>
..... 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 V.1.4.1: 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	
<input checked="" type="checkbox"/> 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: <a href="http://www.visteon.com">www.visteon.com</a>	
 Dr. Wilfried Janke Managing Director Visteon Deutschland GmbH	

**CE 0700**

LAN0505G

# 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  
  
Aimee Ireland

# 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  
Danmore 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)

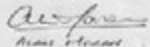
*Safety* : \_\_\_\_\_ EN 60950 \_\_\_\_\_  
(Identification of regulations / standards)

(Place, date)

Tuam, Ireland

16/03/2004

(Signature)

  
James McQuinn

# Conformity



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. Raymond 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. Krubasik · Vorstand: Wolfgang Dahen, Vorsitzender · Mitglieder: Dr. Klaus Egger, Günter Hauptmann, Johann Löffner · Sitz der Gesellschaft: München · Registergericht: München, HRB 132637

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# 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.	ECDOC_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:

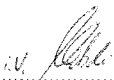
**1999/5/EC:** Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity, dated 9th March 1999.

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:	Office Address:
Siemens Automotive AG	Wernerwerkstraße 2
AT BE AS SI 3	93049 Regensburg
P.O. Box 10 09 55	Phone
93009 Regensburg	+49(0)941/202-0
Federal Republic of Germany	



# Conformity

**SIEMENS VDO**

A u t o m o t i v e

Siemens VDO Automotive AG - Postfach 10 09 43 - 93009 Regensburg

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Department	SV C BC P2 RF TG
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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:**

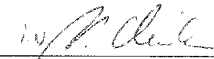
**5WK4 5684 for customer Land Rover and Jaguar.**

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 Matschi  
Klaus Möller

Postal Address:  
Siemens VDO Automotive AG

Postfach 10 09 43  
93009 Regensburg

Office Address:  
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93055 Regensburg  
Tel. +49(0)941/790-02

Siemens VDO Automotive AG - Chairman of the Supervisory Board: Professor Dr. Edward G. Kruczak - Managing Board: Wolfgang Dehen, Chairman - Members: Dr. Klaus Egger, Günter Hauptmann, Reinhard Pinzer - Registered Office: München - Commercial Registry: München, HRB 132637

I:\POSTZULAI\TpmS\_TG\TG19\_OC\_LR\Landrover\_Jaguar\DoC\_5WK45685\_4.doc

# 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

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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 Tarabbia  
Executive Vice President  
Body and Chassis Electronics Operations

Norbert Müller  
Vice President  
Wireless Products and Modules

<b>SiemensVDO Automotive AG</b>	Body & Chassis Electronics	Postal Address: SiemensVDO Automotive AG	Office Address: Siemensstraße 12 D-93055 Regensburg Tel. +49(0)941/790-0
	Helmut Matschi Klaus Müller	P.O. Box 10 09 43 D-93009 Regensburg	

SiemensVDO Automotive AG - Chairman of the Supervisory Board: Edward G. Krubasik - Managing Board: Franz Wressnig, Chairman - Members: Klaus Egger, Günter Hauptmann, Johann Löbner - 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

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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

i. V.

Jean-Francois Tarabbia  
Executive Vice President  
Body and Chassis Electronics Operations

i. V.

Norbert Müller  
Vice President  
Wireless Products and Modules

**SiemensVDO Automotive AG** Body & Chassis Electronics

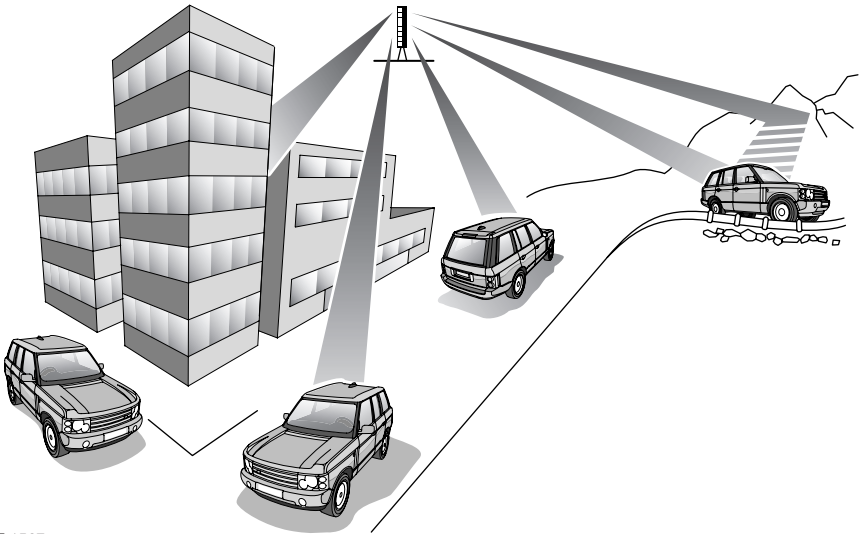
Helmut Matschil  
Klaus Müller

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. Kruback - Managing Board: Franz Wessling, Chairman - Members: Klaus Egger, Günter Hauptmann, Johann Leitner - Registered Office: München - Commercial Registry: München, HRB 132627

# Radio Reception



ICE 1527

## RADIO RECEPTION

Your 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.

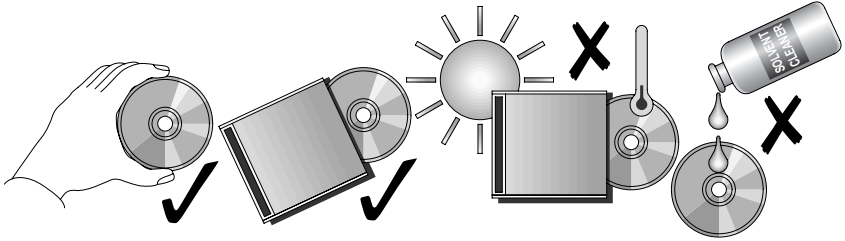
## RADIO AERIAL

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

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

# Care of Compact Discs

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ICE 0022

## CARE OF COMPACT DISCS

Dirt, dust, condensation and heat can damage discs. Always observe the following precautions:

**NEVER** touch the playing surface (the unlabelled side) of a disc. Handle discs by holding the outer edges, or the edge of the central hole and the outer edge, between finger and thumb.

**ALWAYS** return discs to their case after use to prevent contamination reducing playback quality.

**NEVER** leave the disc or case exposed to excessive heat or direct sunlight.

**NEVER** use a solvent or abrasive cleaner. Dust or dirt should be removed from the playing surface by wiping with a clean, dry, lint-free cloth. Always wipe in a straight line from the centre to the edge of the disc.

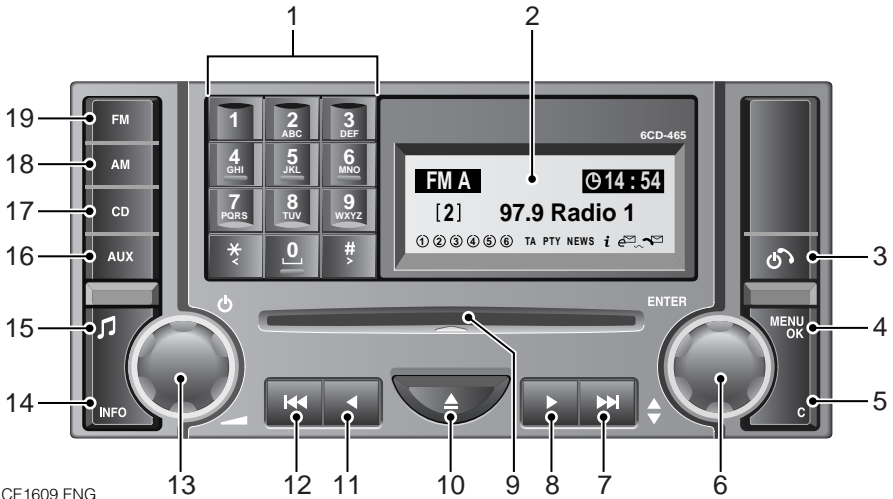
If left, minor scratches on the surface of a compact disc can cause skipping or mis-tracking. It may be possible to use CD restorer polish to remove the scratches and improve the performance of the disc. When using CD restorer polish, always follow the manufacturer's instructions.

***Note:** Some music CD manufacturers are using data encryption to copy-protect their recordings and prevent the production of counterfeit copies. These CDs differ from the internationally agreed CD audio standard, RedBook, a standard that serves as the operating basis for all CD players and changers. Copy-protected CDs may fail to play in your CD changer or may be played subject to various limitations, e.g. sound quality may be impaired. If you do experience a problem, try the CD in other players before contacting the CD vendor.*

# Control and Settings

## AUDIO CONTROLS

### Main controls



1. Input keypad. Function depends on options fitted (frequency, track number, telephone numbers, text etc.).
2. Information display screen.
3. Telephone.
4. Access menu.
5. Back or exit in menu, clear input.
6. Press to accept a selection. Rotate to move up or down a menu.
7. Skip, forward (CD). Automatic seek/search up.
8. Manual fast forward, search/scan up.
9. CD slot.
10. Disc eject.
11. Manual search/scan down.
12. Return to start previous (CD). Automatic seek/search down.
13. Press On/Off. Rotate to increase/decrease volume.
14. Short press for Traffic announcement, long press for News announcement.
15. Short press to access tone settings menu, long press to access Volume settings menu.
16. Select Auxiliary input.
17. Select CD player.
18. Short press to select AM waveband, long press for AM autostore.
19. Short press to select FM waveband, long press for FM autostore.

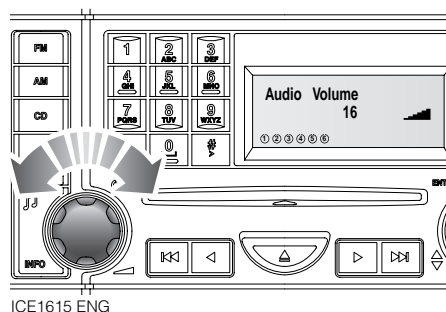
**Note:** For information on radio reception quality, see **RADIO RECEPTION, 305**.

**Note:** On Premium audio units, there are six circles at the bottom left-hand side of the display, which represent the six available CD slots. As soon as one has a CD in it, its number will appear in the circle.

# Control and Settings

## VOLUME SETTINGS

### Volume control

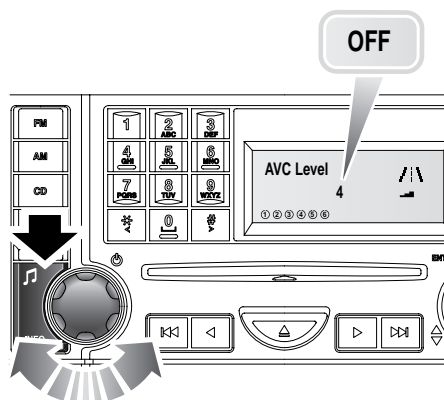


To increase or decrease the volume level, rotate the control.

With the engine running, the volume level can be adjusted between 0 and 35. If the audio unit is turned off, it will re-start at the previously selected volume level, provided that this is not too loud or too quiet.

The audio unit can be used with the engine off, but the volume available will be restricted. If the volume control is not adjusted during use with the starter switch off, the volume will resume at the last selected level when the starter switch is turned on.

## Automatic Volume Control (AVC)



ICE1633 ENG

AVC adjusts the volume level to allow for the changes in road noise as the vehicle speed increases or decreases.

**Note:** The AVC value (0-9) represents the volume increase, and not the volume level.

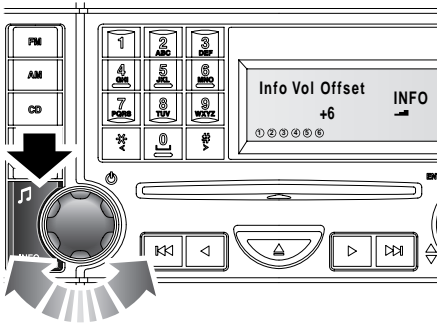
The volume increase is proportional to speed increase. If the AVC level is set to zero, there will be no volume increase. An AVC setting of **1** will increase the volume by a small amount as the vehicle speed increases. An AVC setting of **9** will increase the volume by a large amount as the vehicle speed increases.

The AVC setting required will depend upon the expected speed (high or low) and the expected road conditions (rough or smooth).

To access the AVC Level settings, press the **Tone** button for approximately five seconds until the current **AVC Level** setting is displayed. Use the rotary control to increase or decrease the value.

# Control and Settings

## Information volume offset



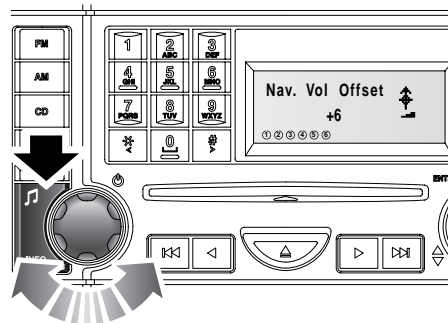
ICE1635 ENG

The Information Volume Offset allows an increased volume level to be set for announcements (Alerts). The figure set determines the number of steps above the current output. So, if for example the Info Volume Offset is currently 6, and the audio output is 14, the announcement will be made at a volume level equal to 20.

To access the Info Volume Offset settings, press the **Tone** button for approximately five seconds until the **AVC Level** setting is displayed. Use short presses of the **Tone** button to scroll through the menu until **Info Vol Offset** is displayed.

The current Info Volume Offset value will be displayed. Use the rotary control to increase or decrease the value.

## Navigation volume offset



ICE1895 ENG

The Navigation Volume Offset allows you to set an independent level for the volume of Navigation announcements.

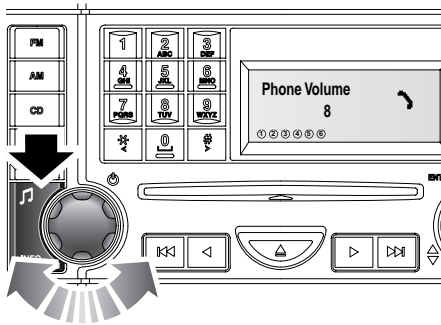
To access the Navigation Volume Offset settings, press the **Tone** button for approximately five seconds until the **AVC Level** setting is displayed. Use short presses of the **Tone** button to scroll through the menu until **Nav Vol Offset** is displayed.

The current Navigation Volume Offset value will be displayed. Use the rotary control to increase or decrease the value.



# Control and Settings

## Phone volume



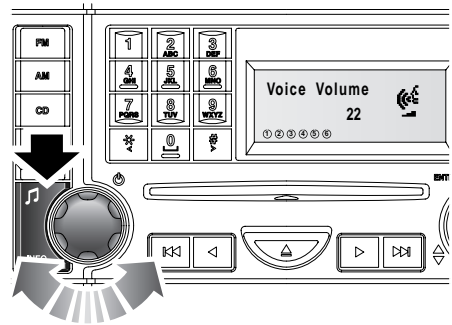
ICE1636 ENG

The Phone Volume allows you to set an independent level for the volume of the telephone output.

To access the Phone Volume settings, press the **Tone** button for approximately five seconds until the **AVC Level** setting is displayed. Use short presses of the **Tone** button to scroll through the menu until **Phone Volume** is displayed.

The current Phone Volume value will be displayed. Use the rotary control to increase or decrease the value.

## Voice volume



ICE1897 ENG

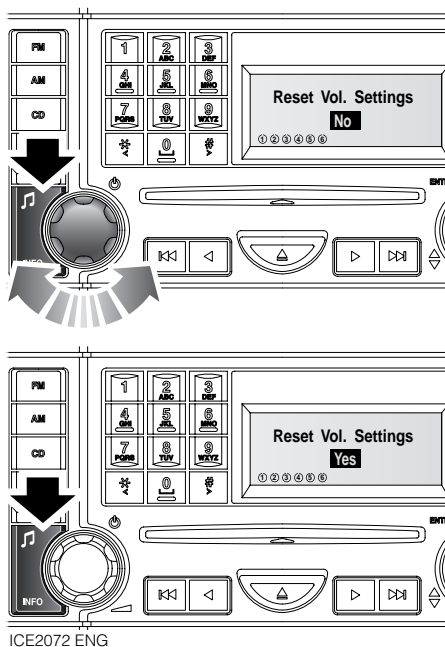
The Voice Volume allows you to set an independent level for the volume of the unit's voice output.

To access the Voice Volume settings, press the **Tone** button for approximately five seconds until the **AVC Level** setting is displayed. Use short presses of the **Tone** button to scroll through the menu until **Voice Volume** is displayed.

The current Voice Volume value will be displayed. Use the rotary control to increase or decrease the value.

# Control and Settings

## Reset volume settings



It is possible to reset all of the volume settings to the original factory values.

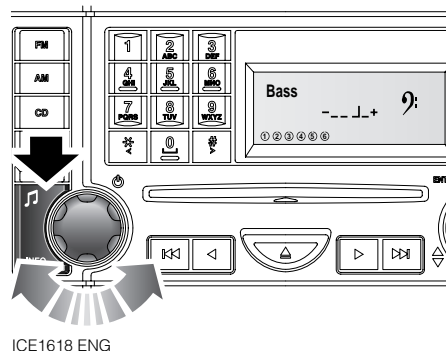
To access the Reset Volume Settings, press the **Tone** button for approximately five seconds until the **AVC Level** setting is displayed. Use short presses of the **Tone** button to scroll through the menu until **Reset Vol Settings** is displayed. Use the rotary control to highlight **Yes** or **No** as required. Press the **Tone** button to confirm your choice and exit the menu.

**Note:** If an Alert announcement is received during a phone call, the phone call will be terminated.

## tone and balance adjustment

**Note:** A new setting will be stored automatically when the Tone button is pressed again, or after 5 seconds with no User input (the screen returns to the previously displayed source screen).

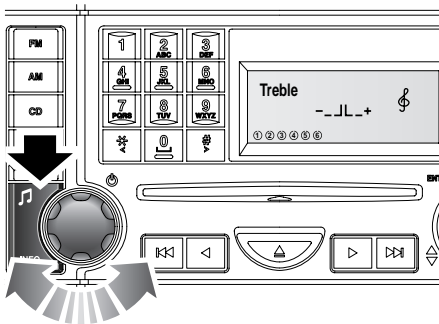
### Bass response adjustment



To access the Bass setting, press the **Tone** button briefly. When the current **Bass** setting is displayed, use the rotary control to increase or decrease the level.

# Control and Settings

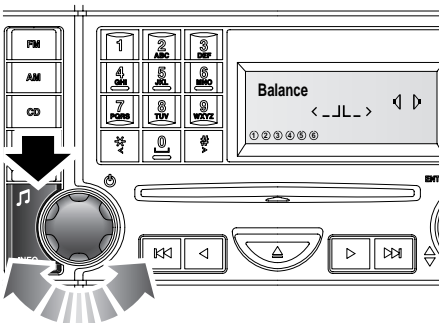
## Treble response adjustment



ICE1617 ENG

To access the Treble setting, press the **Tone** button repeatedly until the current **Treble** setting is displayed. Use the rotary control to increase or decrease the level.

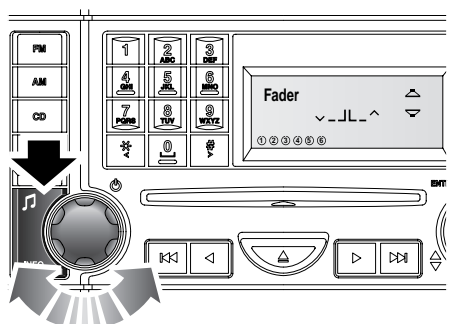
## Balance adjustment



ICE1619 ENG

To access the Balance setting, press the **Tone** button repeatedly until the current **Balance** setting is displayed. Use the rotary control to increase or decrease the left or right sound level.

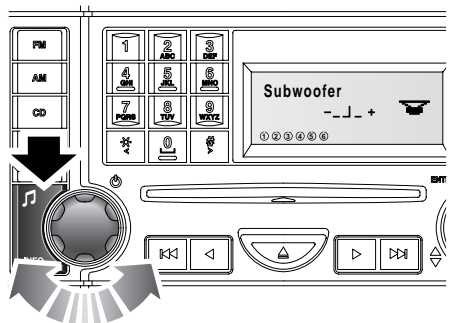
## Fader adjustment



ICE1620 ENG

To access the Fader setting, press the **Tone** button repeatedly until the current **Fader** setting is displayed. Use the rotary control to increase or decrease the front or rear sound level.

## Subwoofer settings

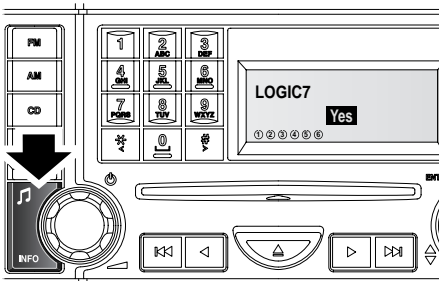
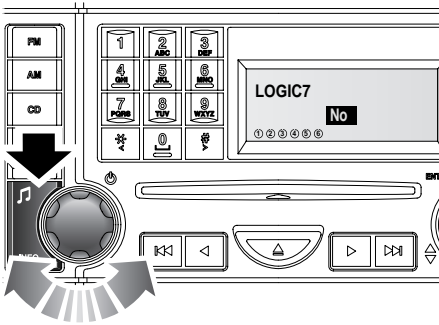


ICE1894 ENG

To access the Subwoofer setting, press the **Tone** button repeatedly until the current **Subwoofer** setting is displayed. Use the rotary control to increase or decrease the setting.

# Control and Settings

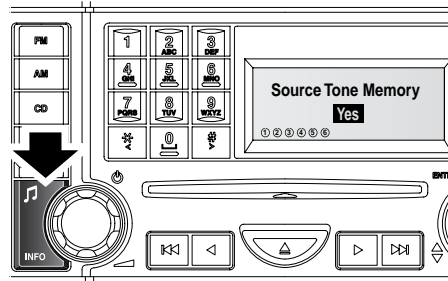
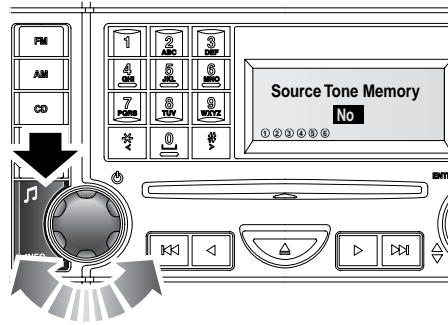
## Logic 7 settings



ICE2140 ENG

To access the LOGIC7 setting, press the **Tone** button repeatedly until the current **LOGIC7** setting is displayed. Use the rotary control to highlight **Yes** or **No** as required. Press the **Tone** button to confirm your choice.

## Source tone memory

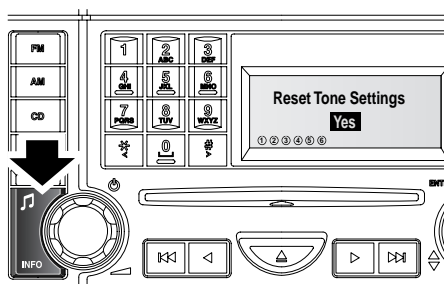
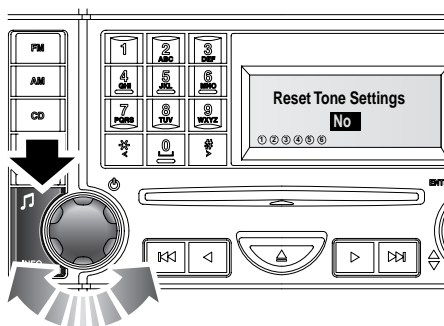


ICE1898 ENG

To access the Source Tone Memory setting, press the **Tone** button repeatedly until the current **Source Tone Memory** setting is displayed. Use the rotary control to highlight **Yes** or **No** as required. Press the **Tone** button to confirm your choice.

# Control and Settings

## Resetting tone values



ICE1621 ENG

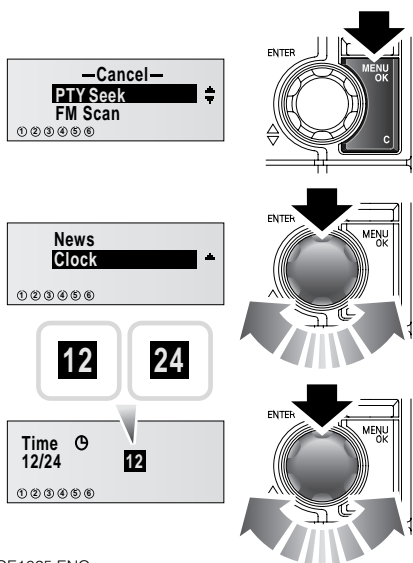
To return the tone settings to the factory defaults, press the **Tone** button repeatedly until **Reset Tone Settings** is displayed. Use the rotary control to scroll between **Yes** and **No**, then press the **Tone** button when your choice is highlighted.

All settings will be reset to the neutral (central) value.

# Control and Settings

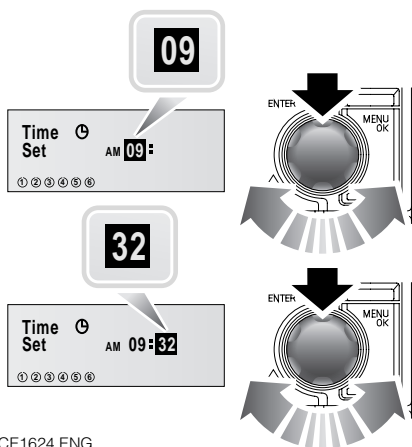
## CLOCK

### Adjusting the clock



ICE1625 ENG

Access the clock set menu by pressing the **Menu/OK** button. Use the rotary control to scroll to **Clock**, then press the control to select. Rotate the control to scroll between **12** and **24**, then press the control to select the required format.



ICE1624 ENG

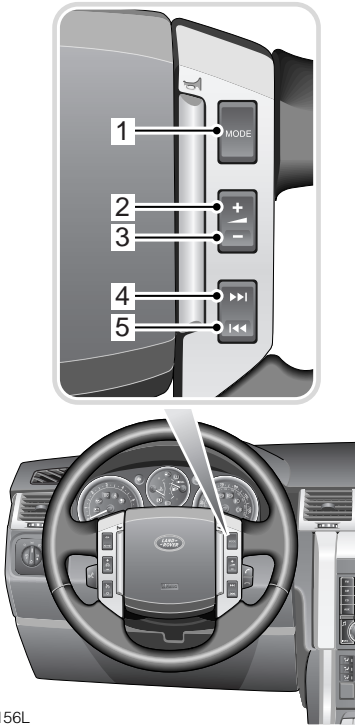
To adjust the hours, rotate the control clockwise to increase, or anti-clockwise to decrease. Press the rotary control to accept the value shown.

Once the hours have been set and accepted, the minutes will be highlighted and are set in the same way. Having set both hours and minutes, the display will return to the main menu.

**Note:** The clock will remain illuminated for ten minutes after the starter key is turned to position **0**.

# Control and Settings

## AUDIO REMOTE CONTROLS



H6156L

### 1. Audio mode switch

Press to change audio modes (radio to CD for example).

### 2. Volume increase control

Press to increase volume.

### 3. Volume decrease control

Press to decrease volume.

### 4. Search forward/track select control

Press to change to the next radio station on the selected waveband.

During CD play, press the control to move forward to the beginning of the next track. Operate the control repeatedly to move forwards through several tracks at a time.

### 5. Search backward/track select control

Press to change to the previous radio station on the selected waveband.

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

# Control and Settings

## REAR AUDIO CONTROLS

With the starter key in position **I** or **II**, the rear audio controls can operate, regardless of whether the audio system is switched on or not. However, the output can only be heard through the headphones.

If you are listening to the same source as the main audio unit, only the volume can be adjusted via the rear audio controls.

For example, if a music CD is selected on the main audio unit, you can also listen to that music and adjust the volume to suit your requirement. No other CD functions will be available. If however, the main audio unit is switched to another source, all CD adjustments achievable with the rear audio controls become available. If the main audio source is subsequently switched back to CD operation, the rear audio controls will again be limited to volume control only.

The same logic applies to radio functions.

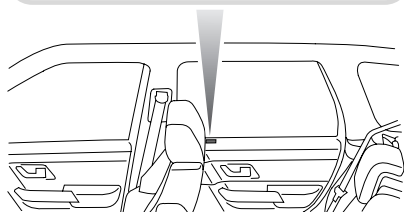
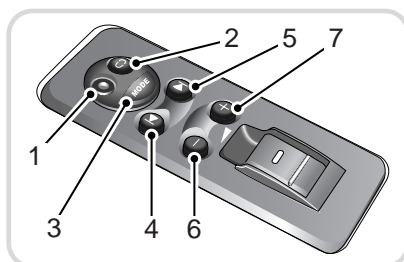
Adjustments can be made to other parts of the audio system.

For example, if a music CD is selected on the main audio unit, radio can be selected and controlled by a passenger using the rear audio controls. All radio adjustments achievable with the rear audio controls become available.

### Headphones with volume control

The maximum volume available to this type of headphones is limited to the volume set at the rear audio controls.

**Note:** Only headphones compatible with a 3.5 mm jack plug socket can be used. To obtain optimum sound quality, use headphones with an impedance of 32 ohms.



H6158G

1. 3.5 mm headphone jack.
2. Pre-set/Disc select.  
During radio play, a short press will select the next pre-set radio station. A long press will change the frequency band (MW, FM, etc.).  
During CD play, a short press will select the next disc.
3. Mode control.  
A long press will select AUX.  
When in AUX mode, a short or long press will return to the previously selected mode. Press to toggle between radio, CD and Rear Seat Entertainment.

**Note:** When Rear Seat Entertainment is selected, all adjustments are made through the remote control.



# Control and Settings

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4. Seek down.  
During radio play, press to seek down through the frequency band to the next available station with good signal strength. During CD play, a short press will skip back to the beginning of the track being played. Press again to skip back to the previous track. A long press will search back through the track being played, until the button is released.
5. Seek up.  
During radio play, press to seek up through the frequency band to the next available station with good signal strength. During CD play, press to skip forward to the beginning of the next track. A long press will search forward through the track being played, until the button is released.
6. Volume decrease.  
Press to lower the headphone volume level.
7. Volume increase.  
Press to increase the headphone volume level.

**Note:** When the headphones are not connected, the buttons remain operational. This means that it is still possible to select CD, for example, whilst the radio is playing through the cabin speakers. The CD unit will remain operational until the mode control is pressed to select another mode.

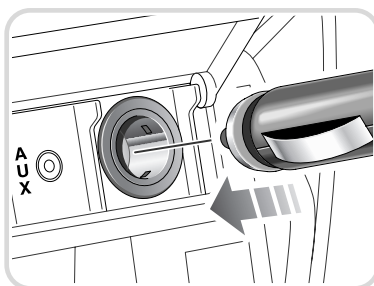
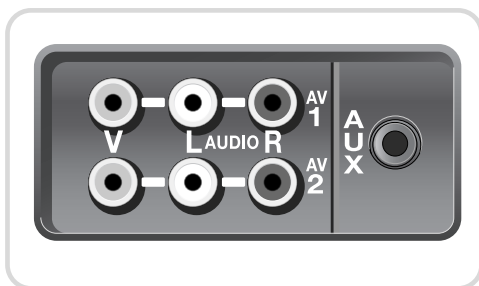
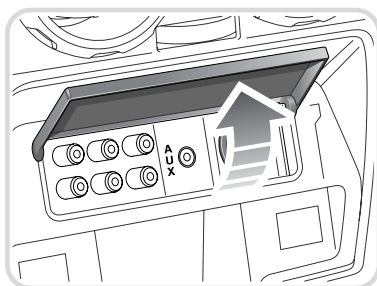
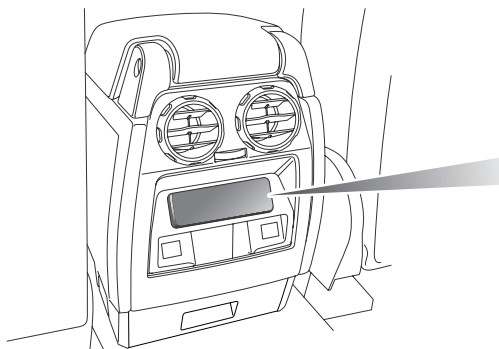
The mode in use when the starter key is removed will resume if the starter switch is turned on again (position I or II) within two minutes. If the starter switch is turned off for longer than two minutes **AUX** mode will be selected when the starter switch is next turned on.

**Note:** Adjusting the volume on the main audio unit, does not alter the headphone volume. The volume level of each controller can be adjusted independently.

**Note:** Only headphones compatible with a 3.5 mm jack plug socket can be used. To obtain optimum sound quality, use headphones with an impedance of 32 ohms.

# Auxiliary Connections

## AUXILIARY EQUIPMENT CONNECTIONS



ICE2254 ENG

AUX (Auxiliary Input) mode allows additional equipment to be connected to the vehicle's audio system. Items such as a personal stereo, MP3 player, hand-held navigation unit etc. can be plugged in to the vehicle's audio system.

The auxiliary connector is situated at the rear of the centre console. To gain access, lift the lower edge of the cover.

Auxiliary audio devices are connected via the 3.5 mm stereo jack plug marked **AUX**.

The auxiliary power socket, situated next to the auxiliary input connector, can be used to power or charge any suitable device.

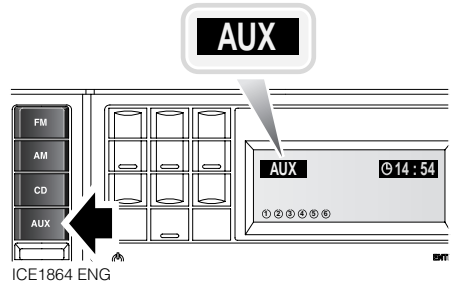
# Auxiliary Connections

## Auxiliary mode

### WARNING

- Ensure that any auxiliary devices are stored securely whilst the vehicle is in motion. Any loose objects can present a serious hazard during sudden manoeuvres, emergency braking, or an accident.
- Do not place any item connected to the auxiliary input socket, or the auxiliary power socket, on the vehicle's seats, carpets, or other upholstery. The heat generated by these devices may cause damage to the upholstery, or in extreme cases, a vehicle fire.
- Do not leave any auxiliary input devices connected whilst the vehicle is left unattended. There is a risk of heat damage or fire, in addition to the risk of theft.

**Caution:** Read the manufacturer's instructions for any device BEFORE it is connected to the vehicle's audio system. Ensure that the device is suitable, and comply with any instructions regarding connection and operation. Failure to do so may result in damage to the vehicle's audio/electrical system, and/or the auxiliary device.



To listen to an auxiliary input source, connect the device and briefly press the **AUX** button. The unit will playback audio via the 3.5 mm stereo jack plug.

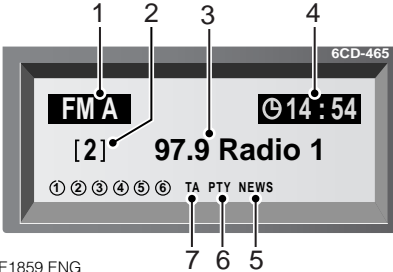
Alternatively, press and hold the **MODE** button on the steering wheel or the rear audio controls. Volume is controlled using the left rotary control, and tone settings are as described previously.

**Note:** The volume levels and sound quality available from devices connected to the auxiliary inputs may vary widely.

# Radio

## RADIO SETTINGS

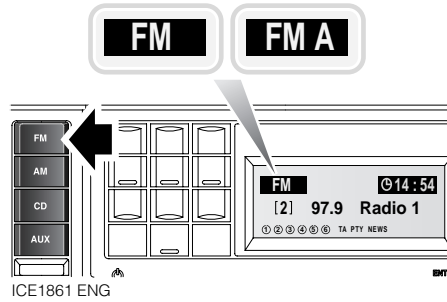
### Information display screen



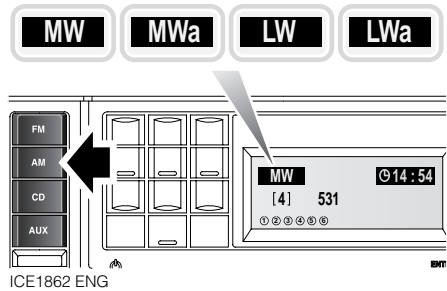
ICE1859 ENG

1. Current wave band selected.
2. Position that the current station is stored under, within pre-sets.
3. Station name (only available when RDS is on) and frequency.
4. Clock display.
5. When shown, news programmes will be selected when available.
6. Displayed when searching for a PTY station.
7. When displayed, indicates that Traffic Announcements will be selected when they are available.

### Waveband selection



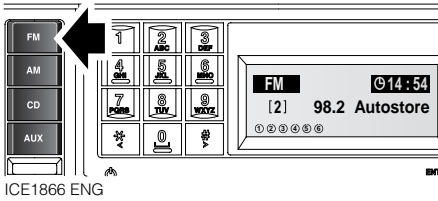
To select the FM waveband, press the **FM** button briefly. Repeated presses will toggle between **FM**, and **FMA**. The selection will be shown in the top left corner of the information display.



To select the AM waveband (includes MW and LW) press the **AM** button briefly. Repeated presses will scroll through **MW**, **MWa**, **LW** and **LWa**. The selections will be shown in the top left corner of the information display.

# Radio

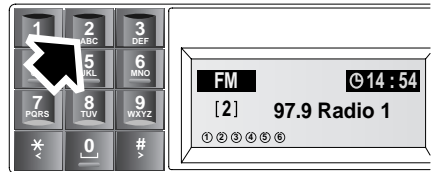
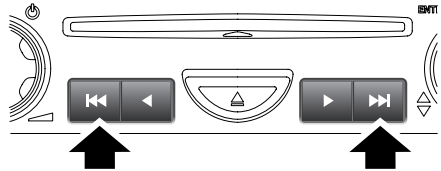
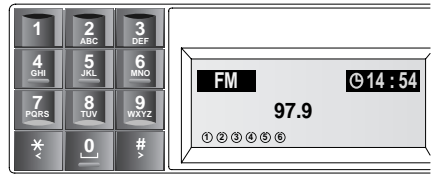
## Autostore



To autostore stations, press and hold the chosen waveband button. **Autostore** will be shown in the information display and the stations will be stored under the pre-set numbers in the order in which they are found.

To access the stored stations, press the required pre-set number briefly.

## Storing stations manually



ICE1865 ENG

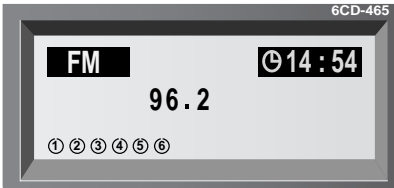
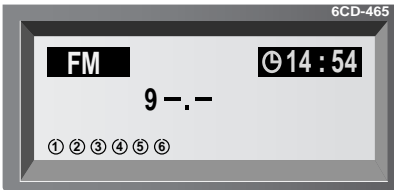
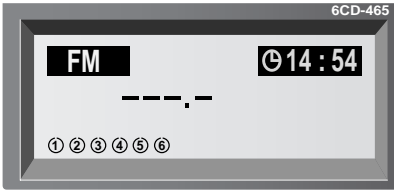
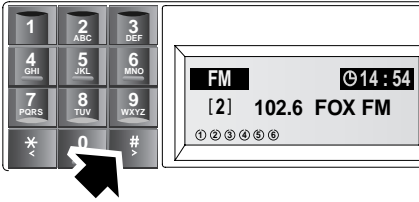
To select a station, press either of the **search up** or **search down** buttons to scan up or down to the next available station. Having tuned to the desired station, press and hold the pre-set number that you would like the station to be stored under.

The audio output will be muted when the button is pressed. When the audio output can be heard again, the station has been stored.

To access the stored stations, press the required pre-set number briefly.

# Radio

## Direct frequency input



ICE2142 ENG

A frequency in either FM or AM can be directly input from the preset keypad.

Select a radio station in the desired waveband and give a short press on the # button. This will clear the frequency display.

Dial in the frequency required using the numbered keys (during this exercise, the unit will remain tuned to the current station).

Ignore the fact that the previous frequency might have had more, or fewer, digits than the new one as the system will cater for this.

Any inputs that are outside the frequency range will be ignored. If there is no user action for 5 seconds during the process, the display will return to the previous station display.

When the frequency has been fully input, the tuner will change to the newly selected frequency. Once the change has been made, the new frequency can be stored manually.

# Radio

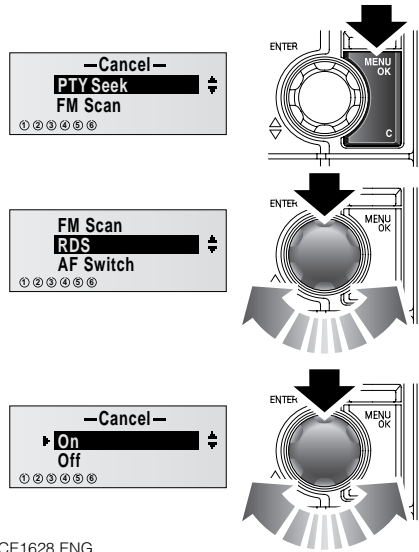
## RDS (RADIO DATA SYSTEM)

Your radio is equipped with RDS (Radio Data System), which enables the audio unit to receive additional information with the normal radio signals.

On the FM waveband, RDS enables the radio to receive information broadcasts. RDS also allows the radio to automatically re-tune to stations that are linked to the same network if that network allows this.

**Note:** Not all FM radio stations broadcast RDS. If a non-RDS station is selected, RDS features will not be available.

## Selecting RDS



ICE1628 ENG

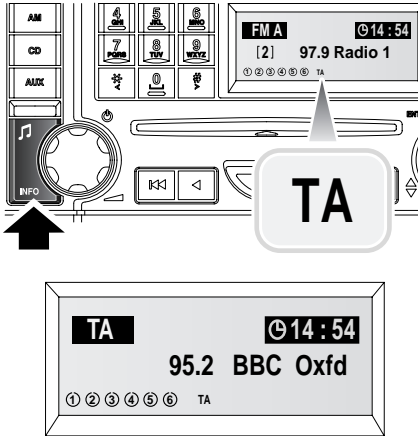
To turn RDS on or off, press the **MENU/OK** button to display the menu. With the settings menu displayed, rotate the control until **RDS** is displayed. Press the rotary control to display the **On** or **Off** options. Use the control to make your selection, and press the control to set the RDS status.

**Note:** If RDS is turned off, the name of the selected radio station will not be displayed.

# Radio

## INFORMATION BROADCASTS

### Selecting traffic information



ICE1632 ENG

To toggle TA (Traffic Announcement) on or off, briefly press the **INFO** button.

As soon as a traffic announcement is received, normal radio reception (or CD play) is interrupted and **TA** appears in the main display area, along with the name of the station providing the information. At the end of the traffic announcement, radio, or CD play, will resume.

### Tuning difficulties

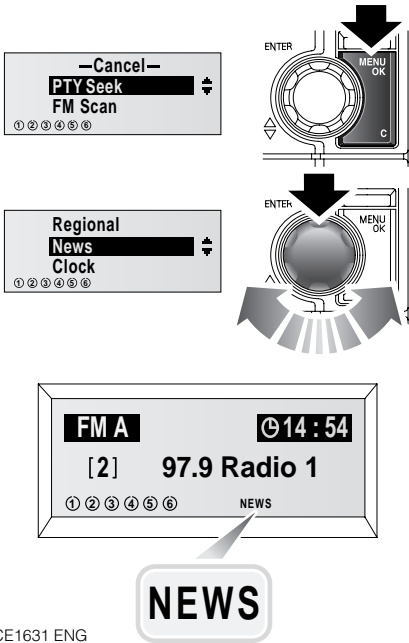
- If the radio is tuned to a weak FM signal (in remote areas, for example) or a radio station that cannot provide traffic information, when the **INFO** button is pressed, the display will show **No TA/TP**.
- If a traffic information station cannot be found, the words **No Station** will be displayed. 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 TA is turned off and on again.*



# Radio

## NEWS INFORMATION



ICE1631 ENG

### Selecting news information

Press the **MENU/OK** button to display the menu. Use the rotary control to scroll up or down through the menu to **NEWS**. Press the **MENU/OK** button to change the status to **ON** or **OFF**.

Alternatively, press and hold the **INFO** button to toggle news broadcasts on or off.

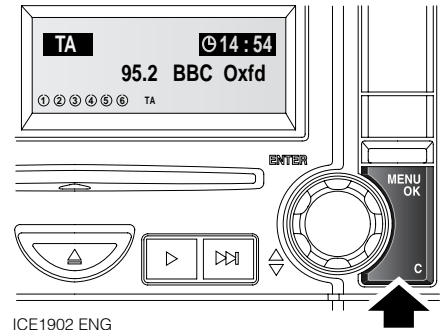
During news broadcasts the display shows **NEWS** with the name of the radio station providing the news information.

When the news information mode is active, and a news information broadcast is received, normal radio reception (or CD play) is interrupted and the display flashes **NEWS** alternately with the name of the radio station providing the news information.

The display will alternatively flash the station name and **NEWS**. 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.

### Cancelling an announcement



ICE1902 ENG

To cancel an announcement during its broadcast, briefly press the **C** button.

**Note:** Cancelling the announcement in this way will not prevent further announcements from being played when they become available.

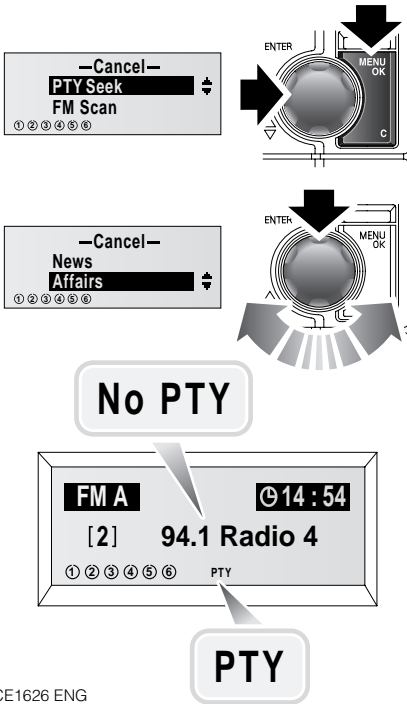
# Radio

## PTY (PROGRAMME TYPE)

The RDS (Radio Data System) allows programmes to be categorised by the broadcast type (rock music, current affairs, news etc.).

This in turn, allows you to search for a station by choosing the type of broadcast that you wish to listen to.

### PTY search



ICE1626 ENG

To search for a station by programme type RDS must be set to ON. Press the **MENU/OK** button to enter the menu. Use the rotary control to scroll through the menu until **PTY Seek** is highlighted, then press the rotary control.

Having entered the PTY menu, use the rotary control to scroll through the programme types until your choice is highlighted. Press either the rotary control, or the **MENU/OK** button to select the programme type and start the search.

Once a matching station is found, it will continue to play. If you wish to continue searching, press the seek up or seek down button within thirty seconds. To continue listening to the station, no action is required as it will remain tuned, and can be stored as a pre-set if required.

If the system is unable to tune to a PTY station, **No PTY** will be displayed.

To abort a PTY search, press the **C** button.

# Radio

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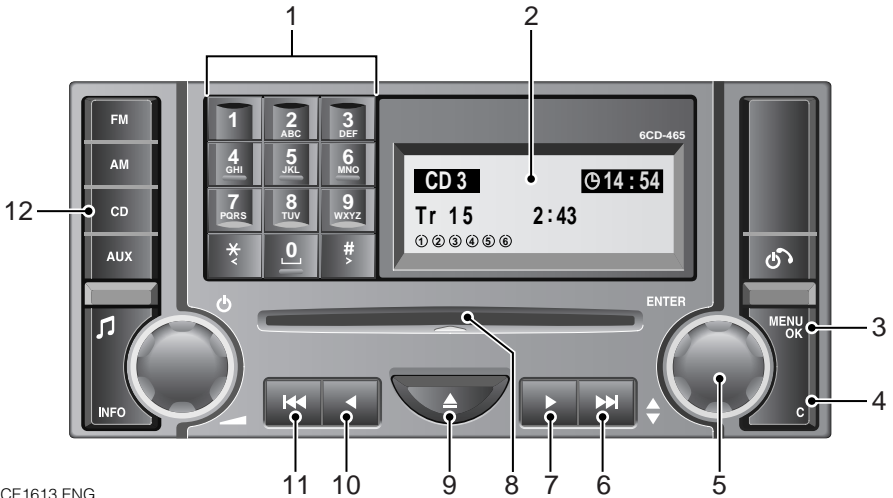
## PTY Programme Types

NEWS	News services
AFFAIRS	Current affairs
INFO	Information
SPORT	Sport
EDUCATE	Educational
DRAMA	Drama
CULTURE	Cultural
SCIENCE	Scientific
VARIED	Varied programming
POP M	Pop music
ROCK M	Rock music
EASY M	Easy listening music
LIGHT M	Light music
CLASSICS	Classical music
OTHER M	Other music
WEATHER	Weather information
FINANCE	Financial information
CHILDREN	Children's programming
SOCIAL	Religious music
RELIGION	Religious talk/music
PHONE IN	Phone-in
TRAVEL	Travel
LEISURE	Leisure
JAZZ	Jazz music
COUNTRY	Country music
NATION M	National music
OLDIES	Older music
FOLK M	Folk music
DOCUMENT	Documentaries

# CD Operation

## CD CONTROLS

### Main controls



ICE1613 ENG

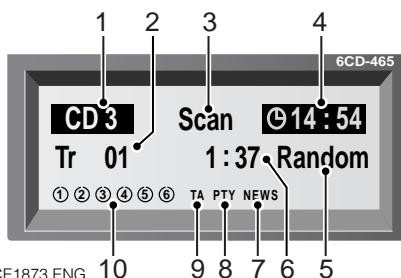
- |   |                               |
|---|-------------------------------|
| 1. Disc select (1 - 6) - Premium audio only.                      | 7. Manual fast forward.       |
| 2. Information display screen.                                    | 8. CD slot.                   |
| 3. Access menu.   | 9. Disc eject.                |
| 4. Back or exit in menu, clear input.                             | 10. Manual search/rewind.     |
| 5. Press to accept a selection. Rotate to move up or down a menu. | 11. Return to start/previous. |
| 6. Skip forward/next track.                                       | 12. Main source select.       |

**Note:** On Standard (single CD play) audio units, the numerical keypad (1) has no CD functionality.

**Note:** For information on CD care and handling, see **CARE OF COMPACT DISCS, 306**.

# CD Operation

## Information display screen



ICE1873 ENG

1. Disc number (Premium audio).
2. Track number.
3. Play function.
4. Clock display.
5. Play order, random, repeat.
6. Time elapsed on current track.
7. News broadcast on.
8. PTY (Programme Type Information) on.
9. TA (Traffic Announcement) broadcast on.
10. Number of discs in unit (Premium audio).

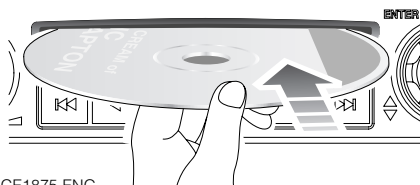
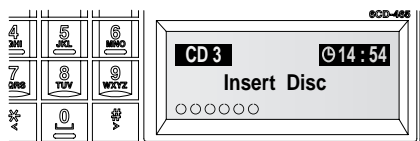
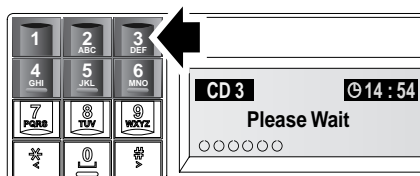
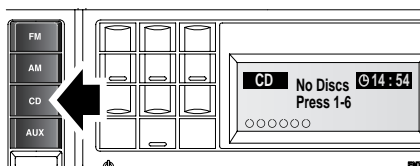
**Note:** On Premium audio units, the six circles at the bottom left-hand side of the screen represent the six available CD slots. As soon as one has a CD in it, its number will appear in the circle.

## INSERTING AND EJECTING DISCS

### Dual and 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 possible that the disc will not eject and will therefore block up the player. Such damage to a CD player will not be covered under warranty.

## Inserting a single disc



ICE1875 ENG

To insert a single disc into the CD player, first press the **CD** mode button.

**Note:** On Premium audio units, it is then necessary to use the numerical keypad to select the disc position number in which the CD is to be stored.

A message will appear in the display screen asking you to wait, followed by the instruction to **Insert Disc**.

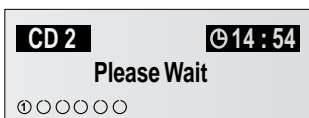
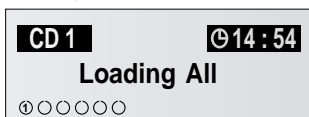
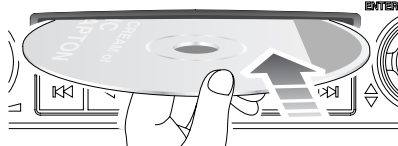
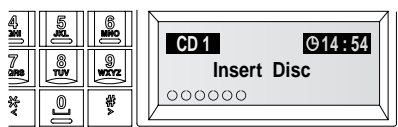
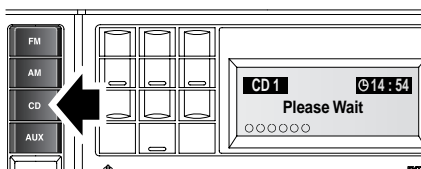
Ensure that the label side of the disc is facing upwards then partially insert it without pushing it into the slot; the player mechanism will draw the disc in automatically.

**Caution: DO NOT force the disc into the slot.**

# CD Operation

There will be a short pause whilst the player reads the information from the disc. Play will commence at the first track on the newly inserted disc.

## Inserting multiple discs (Premium audio)



ICE1891 ENG

To insert more than one disc, briefly press the **CD** mode button. Then press and hold the **CD** mode button. The information display will show **Loading All**, followed by **Please Wait**.

When the message **Insert Disc** is displayed, the first disc can be presented to the player. The disc's position number will be highlighted on the Information display screen both during and after loading.

**Note:** If a CD fails to be drawn in and the message **CD Error** is displayed, press the eject button to clear the error.

If the error fails to clear, contact your Land Rover Dealer/Authorised Repairer.

This process is repeated until all six CD positions are occupied. If one or more of the disc positions is already occupied, that position will be skipped in the loading process.

**Caution: DO NOT force the disc into the slot.**

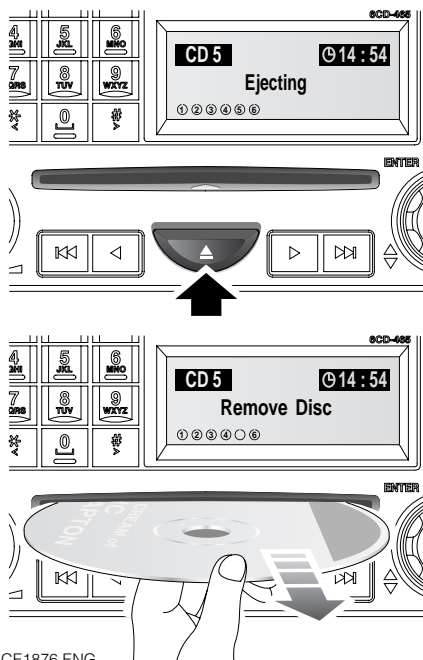
**Note:** To stop the loading process for multiple discs, either press and hold the **CD** mode button or press the **C** button.

**Note:** If there is a problem with a disc that has been loaded (inserted upside down, wrong format etc.) **Disc Error** will appear in the message display, and the disc in question will be ejected. If the problem is obvious, and can be corrected (disc upside down for example), then re-insert the disc in the correct manner. If it cannot be rectified, or the problem is not apparent, do not re-insert the disc.

# CD Operation

## Ejecting a single disc

**Caution:** Do not pull the disc from the player before it has stopped moving, as this may cause damage to the player mechanism.



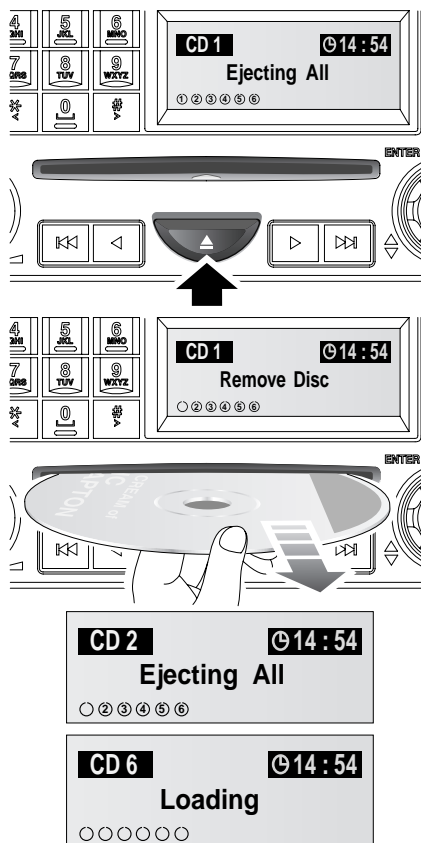
ICE1876 ENG

It is only possible to eject a single disc, if it is currently selected or playing.

To eject a disc, press the eject button briefly. **Ejecting** will be shown on the display screen, and, after a short pause, the disc will be presented. When the disc has stopped moving **Remove Disc** is displayed. The disc should now be removed.

**Note:** If the disc is not removed from the slot within fifteen seconds, it will be drawn back into the player.

## Ejecting multiple discs (Premium audio)



ICE1893 ENG

All of the discs contained in the player can be ejected in sequence. To eject all of the discs, press and hold the eject button.

The discs will be ejected one at a time with a short pause in between each. Following the removal of the last disc, **Loading** will be shown in the display screen.

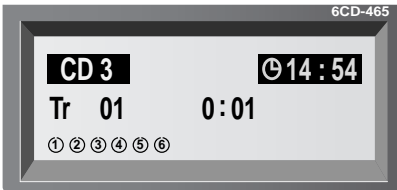
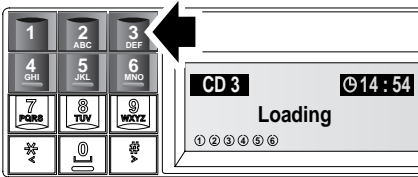
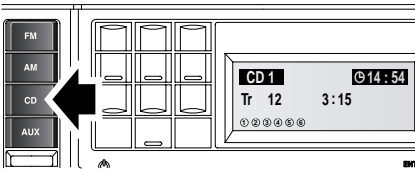
To stop the process, press any number key.

**Note:** If a disc is not removed from the slot within fifteen seconds, it will be drawn back into the player.

# CD Operation

## CD PLAYBACK

### Play

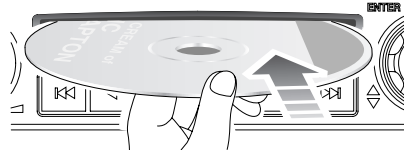
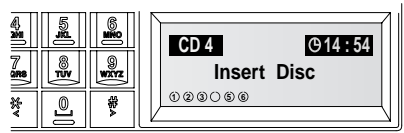
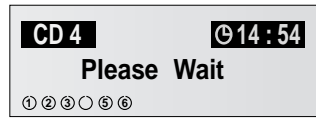
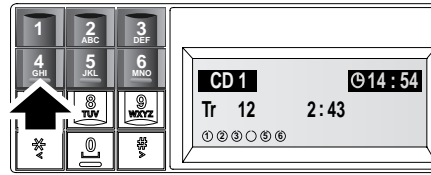


ICE1887 ENG

**Standard audio:** With a CD loaded, start CD playback by briefly pressing the **CD** mode button. Playback will begin from the point at which it was stopped previously or, if the CD is newly inserted, from the beginning of the CD.

**Premium audio:** To start CD playback, briefly press the **CD** mode button, then select the required disc number. If no disc number is selected, playback will begin at one of two places:

- If the discs contained in the player have not been removed since their last use, playback will begin from the point at which it was stopped previously.
- If the discs contained in the player have not been used since they were inserted, playback will begin at the start of disc one.



ICE1888 ENG

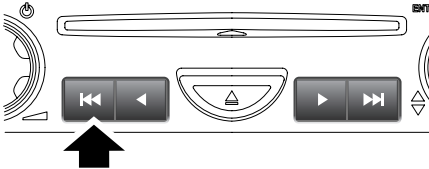
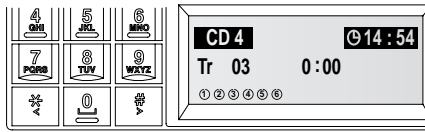
If the slot position selected does not contain a disc, there will be a pause followed by a message on the display screen **Insert Disc**.

Once a disc has been inserted, there will be a pause whilst the unit reads the disc information. Playback will then begin at the start of track one.



# CD Operation

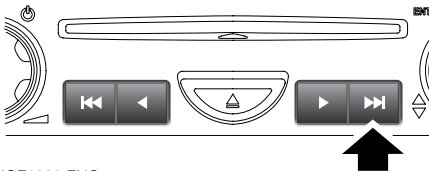
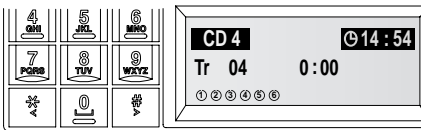
## Start of track



ICE1882 ENG

To return to the start of a track during playback, briefly press the **Return to Start/Previous** button.

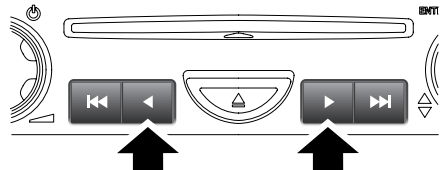
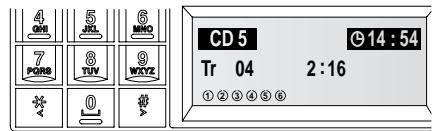
## Next track



ICE1883 ENG

To skip forward to the beginning of the next track on the disc, briefly press the **Skip Forward/Next track** button.

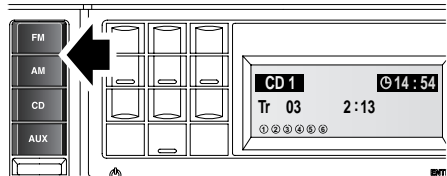
## Forward/Reverse (search track)



ICE1890 ENG

To search forwards or backwards through the current track, briefly press the relevant **Search** button.

## Pause/Stop

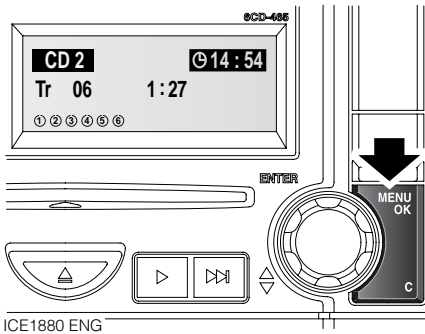


ICE2399 ENG

To end CD playback, briefly press one of the other mode buttons, **FM** for example.

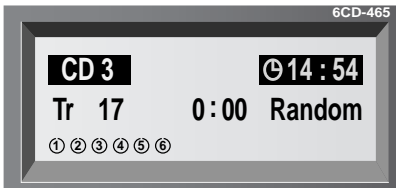
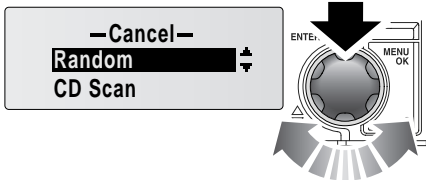
# CD Operation

## CD FUNCTIONS MENU



Some of the additional functions are available from the CD menu. To access the menu when in CD mode, briefly press the **MENU/OK** button, then use the right-hand rotary control to scroll to the required function. Press the control to enable or disable the function.

### Random



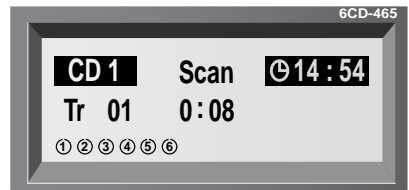
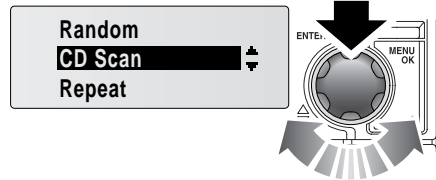
ICE1877 ENG

Random alters the playback sequence for the currently playing disc. Instead of working through the tracks in numerical order, the tracks are selected randomly by the player.

Use the right rotary control to scroll to **Random**. Press the control to enable or disable the random function as required.

Pressing the **C** button will also disable the function.

### CD scan



ICE1878 ENG

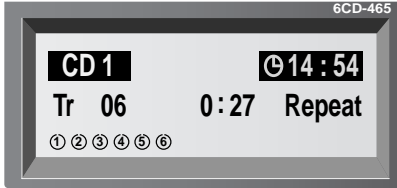
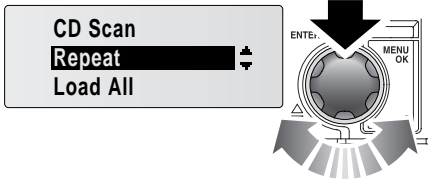
CD Scan will work through the tracks on the current CD in numerical order. Each track will be played for ten seconds, before moving on to the next track. Play will then begin at the start of track one. This feature is designed to allow you to sample the music available on a CD.

Use the right rotary control to scroll to **CD Scan**. Press the control to enable or disable the function as required.

Pressing the **C** button, or the **Skip Forward/Next Track** or **Return to Start/Previous** buttons, will also disable the function.

# CD Operation

## Repeat



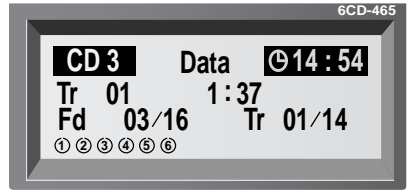
ICE1879 ENG

Repeat puts the current track into a loop. The track will play repeatedly until it is stopped or cancelled.

Use the right rotary control to scroll to **Repeat**. Press the control to enable or disable the function as required.

Pressing the **C** button, or the **Skip forward/Next track** or **Return to Start/Previous** buttons, will also disable the function.

## DATA CD (MP-3)



ICE2141 ENG

When a data disc (containing MP-3 encrypted music data) is inserted into the unit, the display will show additional folder and track information.

The first line of the display shows that a data CD is inserted. The second line shows which track is being played and the play time of that track.

The third line shows which folder out of the total number of folders (03/16) and which track out of the total number of tracks available (01/14) is currently playing.

A short press on the # or \* keys selects the next or previous folder respectively. The number of that folder will change accordingly.

When a new folder is selected, play will commence at the first track in that folder.

Within the current folder, track selection can be changed by use of the **Return to start/previous** and **Skip forward/next track** buttons. Track number in the display will change accordingly.

# 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.

### 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 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



ICE1900 ENG

To activate voice control:

- Briefly pull the control paddle (your Audio system will mute at this point). A brief acoustic signal 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 paddle 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 feedback of voice commands is available. To activate the feedback, pull the voice control paddle briefly and 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.

Please refer to the **Navigation, TV and Telephone Systems** Handbook.

- **Notepad Help** - To list Notepad commands.

See **Using Notepad, 143**.

## Interrupting voice control

A command can be interrupted by saying the word **Cancel** or by pressing the voice control paddle until the system responds by saying >Command cancelled<.

If you receive a telephone call (or Navigation route guidance instruction or 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<.

# Audio Voice Recognition

---

## GENERAL COMMANDS

### Activating the user help function

The command

**Radio help** - recites a list of radio commands.

The command

**CD help** - recites a list of CD player commands.

Activating the user help function		
You say	System response	Message centre display
<b>Radio help</b>	Quotes the list of radio commands.	RADIO HELP
<b>CD help</b>	Quotes the list of CD commands.	CD HELP

# Radio Commands

## STATION TUNING

### Starting a dialogue

Hold the voice control paddle on the multi-functional steering wheel until the acoustic signal is heard. Any audio sources in the vehicle are muted.

### Radio stations

Frequencies are said as in the following examples:

- **Radio Tune five thirty one AM, or Radio Tune five thirty one (531).**
- **Radio Tune nine hundred (900).**
- **Radio Tune fourteen forty (1440).**
- **Radio Tune fifteen oh three AM (1503).**
- **Radio Tune fifteen ten AM (1510).**
- **Radio Tune ten eighty (1080).**
- **Radio Tune eighty nine point nine FM or Radio Tune eighty nine point nine (89.9).**
- **Radio Tune eighty seven point nine FM or Radio Tune eighty seven point nine (87.9).**

- **Radio Tune ninety point zero or Radio Tune ninety (90.0).**
- **Radio Tune ninety point one (90.1).**
- **Radio Tune one hundred point five (100.5).**
- **Radio Tune one oh one point one FM (101.1).**
- **Radio Tune one oh eight point oh, Radio Tune one oh eight point zero, or Radio Tune one oh eight (108.0).**
- **Radio Tune one oh seven point nine (107.9).**

*Note: The word **Select** can be used in place of the word **Tune** if preferred.*

### Nametags

Nametags are a unique name or phrase of your choice which can be used to recall a radio station. The nametags used can be the station name, or a completely separate name of your choosing.

Tuning to a radio station		
You say	System response	Message centre display
Radio play	>Radio play<	RADIO PLAY
Radio tune ninety six point nine (96.9) FM (or AM or Medium Wave)	>Radio tune 96.9 FM (or AM or Medium Wave)<	96.9 FM
Radio tune <nametag>	>Radio tune <nametag><	Station frequency

# 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 pre-set. The following commands apply to the currently tuned station.

The command

**Radio store preset <say number (1-9)>**  
calls up the dialogue for storing a pre-set station.

The command

**Radio autostore**  
enters the autostore function for the selected frequency band (e.g. FM).

### Nametags

Nametags are a unique name or phrase of your choice which can be used to recall a radio station. The nametags 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 say the name that you have chosen (e.g. Radio 1).

The system will read out a list of current nametags when given the command **Radio directory**.

**Radio tune <nametag>** is used to select a station that has been previously stored.

Storing via voice command		
You say	System response	Message centre display
<b>Radio store preset &lt;preset number (1-9)&gt;</b>	>Radio store preset< <preset number (1-9)>	RADIO STORE PRESET (1-9).
<b>1. Radio store name</b> <b>2. Name</b>	>Radio store name, name please< >Name<	RADIO STORE NAME, NAME PLEASE STORED
<b>Radio autostore</b>	>Radio autostore<	RADIO AUTOSTORE
<b>Radio tune &lt;name&gt;</b>	>Radio tune <name><	RADIO TUNE



# Radio Commands

---

## RADIO PLAY DIRECTORY

### **Tune or Delete from the radio directory**

The commands **Radio play directory** or **Radio directory** prompt the system to read aloud the entire list of nametag entries in the radio directory.

The nametag list is read out in stored order, and commands can be entered during the system response.

### **Replay**

After a nametag has been read out by the system, give the command **Replay** and the nametag will be repeated.

### **Tune**

After a nametag has been read out by the system, give the command **Tune** and the radio tunes to the station saved under that nametag.

### **Delete**

After a nametag has been read out by the system, give the command **Delete** and the nametag will be removed from the directory.

### **Cancel**

After a nametag has been read out by the system, give the command **Cancel** and the current Voice session will end.

<b>Tuning from the radio directory</b>		
<b>You say</b>	<b>System response</b>	<b>Message centre display</b>
<b>Radio play directory</b> You can say <b>Replay</b> , <b>Tune</b> , <b>Delete</b> or <b>Cancel</b> after each name.	>Radio play directory< Reads out directory.	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
<b>1. Radio delete directory</b>	>Radio delete directory, confirm yes or no<	DELETE DIRECTORY SAY YES OR NO
<b>2. Yes</b>	>Are you sure that you want to delete the whole directory?<	SAY YES OR NO
<b>3. Yes</b>	>Directory deleted<	DIRECTORY DELETED

# CD Commands

---

## CD OPERATION

### 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.**

*Note: Commands relating to disc numbers and selection, refer only to Premium audio units.*

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<	NEXT DISC
CD play previous disc	>CD play previous disc<	PREVIOUS DISC
CD play track <say number (1-99)>	>CD play track <say number (1-99)><	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)>

# Rear Seat Entertainment Commands

---

## REAR SEAT ENTERTAINMENT

### Rear seat entertainment operation

When rear seat entertainment is fitted, it can be controlled by the following voice commands:

<b>Operating the rear seat entertainment via voice command</b>		
<b>You say</b>	<b>System response</b>	<b>Message centre display</b>
<b>Radio auxiliary on/play</b>	Selects auxiliary input to allow an external device, such as a portable CD/MD player plugged into the Aux socket, to be played through the cabin speakers	AUXILIARY PLAY
<b>Headphones on/play</b>	Switches on both headphone outputs	HEADPHONES PLAY
<b>Headphones off</b>	Switches off both headphone outputs	HEADPHONES OFF
<b>Rear entertainment on/play</b>	Switches on rear entertainment system	RSE PLAY
<b>Rear entertainment off</b>	Switches off rear entertainment system	RSE OFF



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