Hill descent control (HDC)

PRINCIPLE OF OPERATION

HDC operates in conjunction with ABS to provide greater control when off-road, particularly when descending steep slopes. HDC operation is fully automatic when engaged.

During a hill descent when driving off-road, engine braking is used to control the speed of descent. If engine braking alone is insufficient to control the vehicle's speed, HDC will slow the vehicle using the braking system. HDC will control the descent speed relative to the gear selected and accelerator position.

HDC should only be used in **D**, **R**, or CommandShift **1**. When in **D** the vehicle will select the most appropriate gear.

Note: *HDC is automatically selected by some of the Terrain response special programs.*

Before driving off-road

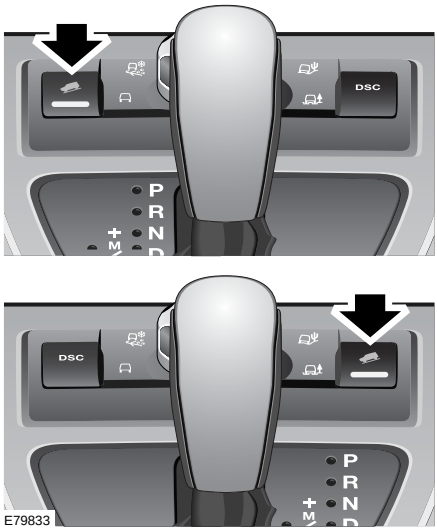
Before venturing off-road it is absolutely essential that inexperienced drivers become fully familiar with the vehicle's controls. In particular, CommandShift, Hill Descent Control (HDC), and the Terrain Response system.

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**

Off-road driver training should be 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**

USING HDC

Selecting HDC



HDC can be selected at speeds below 80 km/h (50 mph). To select HDC, press and release the HDC on/off switch.

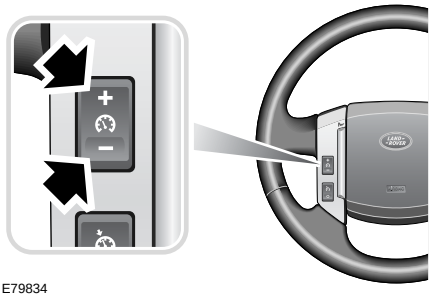
The green HDC indicator will illuminate continuously at speeds below 50 km/h (30 mph) to indicate that HDC is fully active.

If the vehicle speed exceeds 80 km/h (50 mph) HDC will disengage, and the HDC indicator will extinguish.

If HDC has been selected, and the vehicle speed rises above 50 km/h (30 mph) HDC is suspended, and the HDC indicator will flash. A message will appear in the message centre to confirm the suspension of HDC.

Hill descent control (HDC)

HDC operation



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With HDC engaged, the speed of descent can be altered using the cruise control steering wheel switches. **+** increases the speed, and **—** decreases the speed.

To increase speed press, and hold, the **+** switch until the desired speed is achieved. When the switch is released, the speed will be maintained.

To decrease speed press, and hold, the **—** switch until the desired speed is achieved. When the switch is released, the speed will be maintained.

To increase or decrease speed gradually, tap the **+** or **—** switch as required. Each tap of the switch will increase, or decrease the speed in increments of 0.5 km/h (0.3 mph). The accelerator pedal can also be used to increase speed, up to the threshold in each gear.

Note: *Each gear has a pre-determined minimum speed.*

*Descent speed will only increase on a slope steep enough to provide additional momentum. Therefore, use of the **+** switch on a gentle slope may not increase the speed.*

If the brake pedal is depressed, HDC will be overridden and the brakes will operate as normal. When the brake pedal is released, HDC will resume control of the descent.

If HDC is switched off during a descent, HDC assistance will fade out gradually. This is to prevent loss of control if HDC is switched off in error. HDC will resume control when switched back on if assistance is still required, but at the speed the vehicle is travelling when the pedal is released.

When driving off-road HDC can be permanently selected, but it will only provide assistance when the speed parameters are met.

Gradient release control (GRC)

With HDC activated, if the vehicle is stopped on a slope of 20% (1 in 5) or more using the footbrake, GRC will become active (except in Terrain Response sand program). When the footbrake is released during a hill ascent, GRC will automatically delay the brake release to allow the driver to take up drive, and build up engine torque. The brakes will then gradually release to allow the vehicle to move smoothly away.

When descending a hill a similar brake hold and gradual release is employed to provide a smooth transition into hill descent control.

GRC operates in forward and reverse, and requires no driver intervention.

Warning messages

WARNING

Do not attempt a steep descent if HDC is inoperative, or warning messages are displayed.

Brake temperature

In extreme circumstances, the HDC system may cause brake temperatures to exceed their pre-set limits. If this occurs the warning message **HDC TEMPORARILY NOT AVAILABLE SYSTEM COOLING** will be displayed in the message centre. HDC will then fade out and become temporarily inactive.

HDC will remain unavailable until the brakes reach an acceptable temperature. Once the brakes have reached an acceptable temperature, the message will disappear (or the warning indicator will extinguish) and HDC will, if required, resume operation.

System fault

If a fault is detected in the HDC system, **HDC FAULT SYSTEM NOT AVAILABLE** will appear in the message centre.

If the fault is detected whilst the system is operating HDC assistance will fade out.

If a fault is detected, contact your Land Rover Dealer as soon as possible.