

Driving dynamics

GENERAL INFORMATION

WARNING



It remains the driver's responsibility to drive safely, according to the prevailing conditions and within the law.

JaguarDrive Control

JaguarDrive Control is a selectable vehicle optimisation system, designed to fine-tune the driving characteristics of the vehicle by accommodating different driving conditions or driving styles.

The system allows the performance envelope of the vehicle to be stretched and prevents the necessity for a single, compromised configuration for all conditions, thereby increasing the vehicle's abilities.

The vehicle systems optimised by JaguarDrive Control are:

- Engine management.
- Transmission management.
- Dynamic Stability Control and traction control.
- Adaptive dynamics.
- Active Differential Control (E-diff) - Supercharged vehicles only.

Note: Changing from one special mode to another, will introduce noticeably different vehicle responses. For example, the engine revs produced by the accelerator position when a special mode is not selected, may increase or decrease when a mode is selected.

Note: For naturally aspirated engines, maximum engine speed is limited to 5 000 rev/min when oil temperature is below 20°C (68°F).

To familiarise yourself with, and get the best from, the JaguarDrive Control modes, you should try out the modes in circumstances which are safe for you and other road users.

WINTER MODE

The Winter mode switch is located to the rear of the JaguarDrive transmission selector, on the center console.



Press to operate. Designed for use in slippery conditions, when active, Winter mode selects 2nd gear for driving away on level ground (no incline), softens the responsiveness of the engine and modifies the gear change strategy. This ensures that optimum traction is maintained.

Winter mode optimises stability of the vehicle to suit slippery conditions, when grip is reduced. The vehicle performs in a more gentle and controlled manner, to avoid skidding, allowing more confident progress under adverse conditions.

If conditions result in reduced traction being perceived, use of TRAC DSC may improve progress, provided that the correct tires for the conditions are fitted. See **STABILITY CONTROL** (page 160). See **USING SNOW CHAINS** (page 205). See **USING WINTER TIRES** (page 204).

Note: Winter mode cannot be active at the same time as Dynamic mode. Winter mode will remain selected indefinitely after the ignition is switched off, until deselected by the driver.

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DYNAMIC MODE

The Dynamic mode switch is located to the rear of the JaguarDrive transmission selector, on the center console.



Press to operate. Dynamic mode co-ordinates the vehicle's control systems to deliver a high performance driving experience. This setting enhances key vehicle systems so that the vehicle's full potential can be exploited. The vehicle's responses are aimed at involving the driver more in focused and purposeful driving, helping swift progress.

Note: When the transmission is set to permanent manual mode (i.e. using the paddles to change gear while in Sport mode) and Dynamic mode is selected, transmission upshifts are fully controlled by the driver. This means that the transmission will not change up a gear automatically, even when the vehicle's rev limit is reached. When the rev limit is reached, the gear position indicator in the message center will glow amber, to indicate that the next gear should be selected.

Note: Dynamic mode cannot be active at the same time as Winter mode. Dynamic mode will remain selected for approximately six hours after the ignition is switched off, after which point it will need to be reselected if required.

STABILITY CONTROL

Dynamic Stability Control (DSC)

WARNING



The fact that the vehicle is fitted with DSC, must never allow the driver to be tempted into taking risks which could affect his or her safety or that of other road users. In all cases, it remains the driver's responsibility to drive safely according to the prevailing conditions.

Dynamic Stability Control (DSC) is operational whenever the engine is running, unless it has been manually switched off. When the system is operating, the warning indicator in the instrument panel will flash.

The DSC system controls the Anti-lock Braking System (ABS), traction control and yaw control of the vehicle.

The DSC system assists the driver in retaining directional control of the vehicle in situations where the vehicle is sliding (understeer or oversteer). It must not encourage the driver to drive beyond the limit of adhesion or at speeds higher than those suitable for the prevailing road and traffic conditions.

DSC applies braking pressure to individual wheels if excessive variation is detected. This ensures that the vehicle follows the driver's intended direction of travel as closely as possible.

Traction control will intervene to control wheel spin by automatically reducing the power output from the engine and applying braking to individual wheels. This improves acceleration, particularly on surfaces with uneven friction (e.g. one wheel on ice with another on tarmac).

Note: For recommended DSC mode selection, refer to the JaguarDrive Control scenarios section, in this handbook.

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TracDSC

WARNING



Vehicle safety may be reduced by inappropriate use of TracDSC.

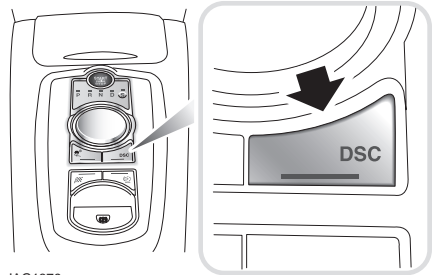
TracDSC should only be used when necessary for the prevailing conditions.

TracDSC optimises the DSC settings for maximum traction in difficult conditions, such as packed snow. This can make greater traction available, without losing all the benefits of DSC. However, vehicle stability may be reduced. The less restrictive settings of TracDSC also enable a more involving and focused driving experience, helping swift progress.

Conditions where the use of TracDSC would be advantageous or necessary:

- To help maintain the movement of the vehicle on soft or loose surfaces (e.g gravel or sand).
- To maximise driver involvement, where it is safe to do so and where conditions permit.

Switching between DSC and Trac DSC



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- Press and hold the DSC switch for less than 10 seconds.
- The message center will temporarily display either **Trac DSC** or **DSC ON**.
- The warning indicator in the instrument panel will illuminate while Trac DSC is selected.
- The warning indicator will flash when DSC or Trac DSC is active.

Note: If cruise control is engaged, it will automatically disengage if stability control activates.

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Switching between DSC OFF and ON

Switching DSC OFF

- Press and hold the DSC switch for more than 10 seconds.
- The message center will display **DSC OFF** and a short warning chime will sound.
- The warning indicator in the instrument panel will illuminate.

Switching DSC ON

If DSC is OFF:

- Press and release the DSC switch.
- The DSC system will switch on, the message center will temporarily display **DSC ON**.
- The warning indicator in the instrument panel will be extinguished.

Note: *Switching the engine off and then on again, will always revert DSC status to DSC ON, regardless of which JaguarDrive Control mode is selected.*

Note: *In rare circumstances, when TracDSC is selected or DSC is off, high acceleration on rough roads may cause the DSC to switch back on. This prevents high loads on the vehicle driveline. DSC will subsequently remain on, unless TracDSC is selected or DSC is switched off manually.*

Stability control indicator



If there is a fault, the warning indicator will illuminate in the instrument panel and the message center will display **DSC NOT AVAILABLE** with an amber backlight.

It is safe to drive the vehicle, but the DSC system will not activate under wheel spin or slide conditions. You should seek qualified assistance as soon as possible.

Adaptive dynamics

Jaguar Adaptive dynamics continuously monitors the road and driver inputs and optimises the vehicle suspension settings for ride comfort and control.

The adaptive dynamics system is linked to Dynamic mode, modifying the suspension settings for a more sporting character.

If the message center displays the message **ADAPTIVE DYNAMICS FAULT**, a fault has been detected in the adaptive dynamics system. Seek qualified assistance as soon as possible.

Active Differential Control (E-diff) (Supercharged vehicles only)

The E-diff improves traction when one driven wheel has more grip than the other. This improves progress out of corners and on patchy or uneven surfaces. The E-diff can also increase stability in oversteer situations, depending on road conditions and driver inputs.

Settings for the E-diff are made automatically, without the need for driver selection.

If there is a fault with the E-diff system, the message center will display **EDIFF SYSTEM FAULT**. If DSC is off, then TracDSC will be selected automatically. The driver can still switch between DSC modes as normal and the vehicle is safe to drive, but seek qualified assistance as soon as possible.

Note: *If the E-diff is active continuously for an extended period (e.g. on a patchy surface with DSC off), then the E-diff may be temporarily deactivated to prevent overheating. If DSC is off, then TracDSC will be selected automatically. The message center will display **EDIFF NOT AVAILABLE**. The driver can still switch between DSC modes as normal and the E-diff will become available again automatically when it has cooled sufficiently.*

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JaguarDrive Control scenarios

The table below gives examples of the drive control settings suggested for different driving scenarios.

Scenario	Suggested driver selection			
	Tire fitment	JaguarDrive Control	Dynamic Stability Control (DSC)	Transmission
Wet grass	Standard	Winter mode	DSC On (default)	Drive (D)
Very wet tarmac				
Ice/light snow	Standard or All Season tires			
Snow ploughed hard-topped roads (including black ice)	All Season tires			
Packed snow roads	Winter tires			
Deep fresh snow	Snow chains			
Normal driving conditions (e.g. dry tarmac, town driving, motorway cruising etc.)	Standard	No driver selection required. Special modes off.		Drive (D)
Overtaking on a dry road				Drive (D) or Sport (S)
Pulling out onto a busy road in dry conditions				
Favourite country lane (public road)	Dynamic mode			Sport (S) or Sport (S) + Manual
Private track/race day		TracDSC (where conditions permit)		