Transmission

AUTOMATIC TRANSMISSION

WARNING

Park (P) should be engaged when the vehicle is stationary. The vehicle can move unexpectedly with any other gear position selected, which may result in death or serious injuries to people or animals outside of the vehicle.

CAUTIONS

Never select the Park (P) position whilst the vehicle is in motion. Doing so may cause serious damage to the transmission.

Never select the Reverse (R) position whilst the vehicle is in forward motion. Doing so may cause serious damage to the transmission.

Never select a forward gear whilst the vehicle is in rearward motion. Doing so may cause serious damage to the transmission.

The transmission system is designed to operate in two distinct modes, conventional automatic and Jaguar Sequential Shift.

The automatic modes are accessed by the gear selector:

- D - Drive - automatic shifting.
- S - Sport - sport automatic shifting.

The Jaguar Sequential Shift mode enables sequential manual gear selection in D and S modes via the steering wheel mounted paddles.

Note: In addition to the standard shift patterns available in D and S, the transmission will adapt to differing driving conditions by modifying shift points based upon vehicle sensor information for road gradient, cornering, braking pressure and driving style.

Gearshift interlock

WARNING

The brake pedal must be applied before selecting forward or reverse drive from a stationary position.

As a safety feature, a gearshift interlock system is incorporated in the automatic gear selector mechanism. This prevents the selection of a drive gear (forward or reverse) without first applying the foot brake.

To move the gear selector from Park:

1. Start the engine.
2. Press the brake pedal.
3. Move the gear selector to the chosen drive gear position.

WARNING

Park (P) should be engaged when the vehicle is stationary. The vehicle can move unexpectedly with any other gear position selected, which may result in death or serious injuries to people or animals outside of the vehicle.

CAUTIONS

Never select the Park (P) position whilst the vehicle is in motion. Doing so may cause serious damage to the transmission.

Never select the Reverse (R) position whilst the vehicle is in forward motion. Doing so may cause serious damage to the transmission.

Never select a forward gear whilst the vehicle is in rearward motion. Doing so may cause serious damage to the transmission.

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Message centre gear display

1. Display during automatic mode.
2. Display with Sport (S) mode selected.
3. Display during manual (Sequential Shift) operation.

The message centre indicates the position of the gear selector at the top of the message centre screen. When automatic selection is made the screen indicates either P, R, N or D. When Sport mode (S) is selected the indication changes to DS and if manual selection is made, the indication is from 1 to 6.

P = Park - Use when parked. In this position the transmission is locked. Do not select if the vehicle is moving.
R = Reverse - Do not select if the vehicle is moving forward.
N = Neutral - Disconnects drive to the wheels. Use the parking brake when stopping temporarily.
D = Drive - All six forward gears are changed automatically.
S = Sport - All six forward gears are changed automatically with modified gear shift points.

Stationary vehicle

When the vehicle is stationary the gear selector may be left in D, or S, unless the vehicle is to be parked. When stopping for extended periods, either select P or apply the parking brake and select N.

Shift inhibit

Reverse is inhibited when the vehicle is moving forward.

Note: Reverse inhibit will not function in limp-home mode.

Note: The engine is limited to a maximum speed of 4 500 rev/min., when N or P is selected.

Note: After selecting forward or reverse drive ranges from N or P, wait briefly for the transmission to engage before accelerating.
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Automatic operating modes
There are two available automatic modes:

D - Drive: All six gears are changed automatically. The shift points are determined by accelerator pedal position and road speed to provide the best balance of performance, refinement and fuel economy for the large majority of driving conditions.

S - Sport: The transmission operates automatically, but the gearshift points are modified to maximise the vehicle response in demanding driving conditions. This mode is not suitable for town or highway cruising.

The automatic modes also offer additional features:

Kick-down: Is operated when the accelerator pedal is fully depressed beyond the normal operating spring pressure, to provide maximum engine performance. Kick-down is used in circumstances where rapid acceleration is required, such as when overtaking.

Kick-down causes the transmission to change down to the lowest gear possible to achieve maximum acceleration. The gear engaged depends on the road speed at the time of kick-down.

Driver type recognition: The transmission monitors driving style and, in combination with sensors in the vehicle, varies the shift schedule, fast-off, corner recognition and shift adapt under braking functions proportionally with driving style.

Note: This feature is only active in S - Sport mode.

Fast-off: Activated when rapidly lifting-off the accelerator pedal and takes account of road gradient. This feature inhibits up-shifts, enhancing performance.

Note: This feature will vary its activation, dependent upon the driver type, if S - Sport is selected.

Shift adapt under braking: Under braking, the transmission will vary the down-shift point in proportion to braking effort and road gradient. This feature is realised in conjunction with positive torque, resulting in a smoother down-shift.

Note: This feature will vary its activation, dependent upon the driver type, if S - Sport is selected.

Positive torque: Provides throttle blips on down-shifts under braking, improving shift feel.

Note: This feature is only active in S - Sport mode.

Corner recognition: Inhibits up-shifts during cornering to provide improved vehicle balance.

Note: This feature will vary its activation, dependent upon the driver type, if S - Sport is selected.

Road gradient adaption: When the vehicle is being driven on roads with uphill gradients, the transmission adapts the shift pattern to make better use of engine power.

When driving on roads with long downhill gradients, the transmission may automatically select a lower gear to increase engine braking. Selecting S will increase the tendency of the transmission to select a lower gear in these conditions, further increasing engine braking.

Note: It is also possible to manually select a lower gear to increase engine braking, via use of the shift paddles.

Cruise control: When cruise control is active, the transmission selects a shift pattern to suit cruise control operation. See USING CRUISE CONTROL (page 145).
Dynamic Stability Control (DSC): When DSC is switched on and the system is activated, the transmission selects a shift pattern to suit traction control conditions.

Manual operating modes - Jaguar Sequential Shift
Shifts in the Jaguar Sequential Shift manual mode, are optimised to provide a rapid response to gear shift requests. Up-shift requests are optimised for performance via the short shift function, this will result in a firmer shift feel than in automatic modes. Down-shift requests activate a throttle blip during the shift, resulting in improved shift feel.

The Jaguar Sequential Shift modes can be accessed either temporarily or permanently.

Temporary manual gear selection: When the gear selector is in the D position, manual mode may be selected by operating one of the steering wheel mounted shift paddles. This convenience feature allows immediate but temporary use of the shift paddles whilst the gear selector is in D.

If continued use of manual mode is required, the gear selector may be subsequently moved to the S position, to enter permanent manual mode in the currently selected gear.

If the gear selector remains in the D position, temporary manual mode will be held whilst the driver is accelerating, decelerating, cornering or continuing to request shifts via the paddles.

The transmission will revert to automatic operation after a short period of driving at steady speed; alternatively the shift-up (+) paddle may be held for a short period (approximately one second) to return directly to automatic operation in D.

Permanent manual gear selection: Select the S position, then access permanent manual mode by operating one of the steering wheel mounted shift paddles.

The message centre will highlight the currently selected gear.

To exit from permanent manual mode, move the gear selector to the D position. The transmission will revert to automatic shift mode.
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Manual operation

To shift-up, briefly pull the shift-up (+) paddle on the right-hand side of the steering wheel towards you.

To shift-down, briefly pull the shift-down paddle (-) on the left-hand side of the steering wheel towards you.

The message centre display will highlight the requested gear.

Note: The transmission will inhibit up-shifts and down-shifts, if the requested shift would result in an engine speed outside the normal operating range of the engine. If this occurs, the message centre will briefly display the requested gear selection, but will then return to displaying the current gear.

The Jaguar Sequential Shift mode also has the following features:

Kick-down: Operation of kick-down in Jaguar Sequential Shift mode will override the currently selected gear. The lowest available gear will be selected for maximum acceleration and will be highlighted in the message centre display. Subsequent manual shifts may then be selected as usual.

Positive torque: Provides throttle blips on down-shifts, improving shift feel and response.

Shift assist: The transmission will automatically up-shift at the engine speed redline in Jaguar Sequential Shift mode, as if commanded manually.

The transmission will automatically down-shift when the engine rpm drops too low for the currently selected gear.

When the vehicle approaches, or comes to rest, second gear is automatically selected.

Subsequent pullaways will occur in second gear, unless the accelerator pedal demand is high or a down-shift is manually selected, in which case, first gear will be selected.

In all cases the message centre will display the current gear.

Note: If a down-shift is requested which would normally result in an engine speed outside the normal operating range during sustained braking, the transmission will indicate and hold the requested gear in the message centre display. The transmission then commences the down-shift when the engine speed is within the normal operating speed.
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Limp-home mode

**WARNING**

The driver should be aware that the vehicle’s performance will be reduced and must take this into account when driving. Also the use of the manual gear selection paddles will be disabled. In this event, seek qualified assistance as soon as possible.

In the unlikely event of an electrical or mechanical failure, transmission operation will be limited. The vehicle gear selector ranges P, R, N, D can still be used to enable the vehicle to be driven to a safe area.

**Message centre display**

The message centre may display the following messages with associated warning indicators:

- **ENGINE SYSTEMS FAULT (Red)**
- **RESTRICTED PERFORMANCE (Red or Amber)**
- **GEARBOX FAULT (Amber)**

If any of these messages are displayed, it is likely that loss of power or driveability will be experienced. Seek qualified assistance as soon as possible.

**Final drive unit**

**CAUTION**

Although the final drive unit is a fill for life unit, if your vehicle is used for a race event or track day, then the final drive unit lubricant should be changed following the event. You should contact your Jaguar Dealer/Authorised Repairer.