
DESCRIPTION AND OPERATION

Shift Patterns

Upshifts

Transmission upshifting is controlled by the powertrain control module (PCM). The PCM receives inputs from various engine or vehicle sensors and driver demands to control shift scheduling, shift feel and torque converter clutch (TCC) operation.

The PCM has an adaptive learn strategy to electronically control the transmission which will automatically adjust the shift feel. When the battery has been disconnected or a new battery installed, certain transmission operating parameters may be lost. The PCM must relearn these parameters. During this learning process you may experience slightly firm shifts, delayed or early shifts. This operation is considered normal and will not affect the function of the transmission. Normal operation will return once these parameters are stored by the PCM.

Downshifts

Under certain conditions the transmission will downshift automatically to a lower gear range (without moving the range selector lever). There are 3 categories of automatic downshifts: coastdown, torque demand and forced (or kickdown) shifts.

Coastdown

The coastdown downshift occurs when the vehicle is coasting down to a stop.

Torque Demand

The torque demand downshift occurs (automatically) during part throttle acceleration when the demand for torque is greater than the engine can provide at that gear ratio. If applied, the transmission will disengage the TCC to provide added acceleration.

Kickdown

For maximum acceleration, the driver can force a downshift by pressing the accelerator pedal to the floor. A forced downshift into a lower gear is possible below calibrated speeds. Specifications for downshift speeds are subject to variations due to tire size and engine and transmission calibration requirements.