



## Electronic Control System

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The electronic control system consists of the Transmission Control module (TCM), sensors, a linear solenoid and 4 solenoid valves. Shifting and lock-up are electronically controlled for comfortable driving under and conditions. The TCM is located on the insulator center bulkhead, behind the driver's seat.

#### Shift control

Shifting is related to engine torque through the linear solenoid used to operate throttle valve B which is controlled by the TCM.

Getting a signal from each sensor, the TCM detects the appropriate gear shifting and activates shift control solenoid valves A and/or B.

The combination of driving signals to shift control solenoid valves A and B is shown in the table below.

Shift control solenoid valve Range (gear)	A	B
<b>D</b> (1st)	OFF	ON
<b>D</b> (2nd)	ON	ON
<b>D</b> <b>3</b> (3rd), <b>1</b> (1st)	ON	OFF
<b>D</b> (4th), <b>2</b> (2nd)	OFF	OFF
<b>R</b> (Reverse)	ON	OFF

#### Lock-up control

From sensor input signals, the TCM detects whether to turn the lock-up ON or OFF and activates lock-up control solenoid valve A and/or B accordingly.

The combination of driving signals to lock-up control solenoid valves A and B is shown in the table below.

Solenoid valve Lock-up condition	A	B
Lock-up OFF	OFF	OFF
Lock-up, slight	ON	OFF
Lock-up, half	ON	ON
Lock-up, full	ON	ON
Lock-up during deceleration	ON	Duty operation OFF ↔ ON

(cont'd)

# Description

## Electronic Control System (cont'd)

TRANSMISSION CONTROL MODULE (TCM)

