3. Function of Cruise Control System

The cruise control has the following functions.

: Changed item

Function	Outline
Constant Speed Control	The engine ECU compares the actual vehicle speed and the set speed and if the vehicle speed is higher than the set speed, it activates the throttle control motor in the throttle closing direction. If the vehicle speed is lower than the set speed, it activates the throttle motor in the throttle opening direction.
Set Control	When this system fulfils the following conditions, and the cruise control switch is pressed to the SET/– side and released with the MAIN switch turned on, the engine ECU stores the vehicle speed and controls it constantly at that speed. ● The vehicle is running within a cruising speed control range [from approx. 40 km/h (25 mph) to 200 km/h (124 mph)].
Coast Control	When the cruise control switch is kept pushed to the SET/– side while running in the cruise control mode, the throttle control motor is energized in the throttle closing direction. The vehicle keeps decelerating the engine ECU stores the vehicle speed when the hand is released from the cruise control switch. From then on, the engine ECU controls the vehicle speed at that speed constantly.
Tap-Down Control	When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be lowered approx. 1.6 km/h (1 mph) each time by operating the SET/– switch quickly within approx. 0.6 seconds.
Accelerator Control	When the cruise control switch is kept pushed to the RES/+ side while running in the cruise control mode, the throttle control motor is energized in the throttle opening direction. The vehicle keeps accelerating and the engine ECU stores the vehicle speed when the hand is released from the cruise control switch. From then on, the engine ECU controls the vehicle speed at that speed constantly.
Tap-Up Control	When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased approx. 1.6 km/h (1 mph) each time by operating the RES/+ switch quickly within approx. 0.6 seconds.
Low Speed Limit Control	The low speed limit is the lowest speed that cruise control can be set and is designed at approx. 40 km/h (25 mph). The cruise control cannot be set below that speed. If the vehicle speed drops below that speed while running in the cruise control mode, the cruise control is cancelled automatically and the set speed in the memory is cleared.
High Speed Limit Control	The high speed limit, which is the highest speed to which the cruise control can be set, is designed to be approximately 200 km/h (124 mph). Thus, the cruise control cannot be set if the speed at which the vehicle is being driven is higher than the high speed limit. Also, it is not possible to accelerate the vehicle higher than the high speed limit by operating the RES/+ switch.
Manual Cancel Control	If any of the following signals is sent to the engine ECU while the vehicle is running in the cruise control, the cruise control is cancelled accordingly. ● Stop light switch ON signal (Depress the brake pedal) ● D position circuit in Park/Neutral position switch OFF signal (Shift the transmission shift lever from D to N, 3, 2, or L) ● CANCEL switch ON signal ● MAIN switch OFF signal ● During VSC operation

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Function	Outline
Resume Control	After the cruise control mode is cancelled by any of the cancel switches, the mode can be resumed and controlled at the set speed by operating the cruise control switch in the RES/+ direction providing that the vehicle speed has not dropped below the low speed limit [approx. 40 km/h (25 mph)]. The mode cannot be resumed if the vehicle speed once drops below the low speed limit, because the speed in the memory is cleared.
Automatic Cancel Control	When any of the following conditions occur during cruise control driving, the speed that is set in the memory is cleared to cancel the cruise control mode. Furthermore, the cruise main indicator light blinks until the MAIN switch is turned OFF, and the operation of the cruise control is disabled until the MAIN switch is turned ON again. ● Stop light switch open or short circuit ● The vehicle speed signal is not set for a predetermined period of time (approx. 140 msec) ● ETC-i malfunction
	When any of the following conditions occur during the cruise control driving, the speed that is set in the memory is cleared to cancel the cruise control mode. Furthermore, the cruise main indicator light blinks until the MAIN switch is turned OFF, and the operation of the cruise control is disabled until the ignition switch is turned OFF again. ● Stop light switch input signal abnormal ● Cancel circuit malfunction
	When any of the following conditions occurs during the cruise control driving, the set speed in the memory is cleared to cancel the cruise control mode. Cruise control can be resumed at the set speed by operating the SET or RESUME switch providing that the vehicle speed is above the lower speed limit [approx. 40 km/h (25 mph)]. ● The vehicle speed falls below the low speed limit [approx. 40 km/h (25 mph)] ● The vehicle speed drops more than 16 km/h (10 mph) below the set speed.
Automatic Transmission Control	When the vehicle is cruising uphill, there is a case where the overdrive turns off depending on the ECT control. After that, when the Engine control ECU judges the end of cruising up from the throttle valve opening angle, the overdrive will turn on again. Also, in case that the overdrive turns off during accelerator or resume control, it will turns on after finishing accelerator or resume control.