

SYSTEM DESCRIPTION

1. CRUISE CONTROL SYSTEM

The cruise control system makes it possible to drive at a desired speed without using the accelerator pedal. ECM controls the throttle opening angle based on signals from switches and sensors.

The microcomputer which controls the cruise control system is built into the ECM, and the actuator is the throttle position sensor and motor.

Constant speed control gets ready when the cruise control main switch ON-OFF button is pushed (the CRUISE MAIN indicator light comes on).

Operating the cruise control main switch, the driver can control the following functions.

HINT:

- The cruise control main switch is an automatic return type switch which operates only while it is pushed in one direction and turns off after it is released.
 - "SET" and "-", "RES" and "+", "ON" and "OFF" operations are all controlled by using the same switch.
- (a) 'SET' function
- When the cruise control main switch is pushed down to "-/SET", the ECM stores the set speed and compares it with the actual vehicle speed. If the actual driving speed is greater than the set speed, the ECM sends a signal to the throttle position sensor and motor to close the throttle valve. If lower, it opens the throttle valve. The cruise control operative speed range is between the low and high speed limits.
- (b) '+' function
- The cruise set speed increases while the cruise control main switch lever is pushed up to "+/RES". The vehicle begins to cruise at the newly set speed when the cruise control main switch lever is released.
- (c) Tap-up function
- When the cruise control main switch lever is tapped up to "+/RES" (approximately 0.6 seconds), the ECM increases the stored set speed by 1 mph (1.6 km/h) at a time. However, when the difference between the driving and the stored vehicle speeds is more than 3.1 mph (approximately 5 km/h), the stored vehicle speed will not change.
- (d) '-' function
- The cruise set speed decreases while the cruise control main switch lever is pushed down to "-/SET". The vehicle begins to cruise at the newly set speed when the cruise control main switch lever is released.

- (e) Tap-down function
When the cruise control main switch lever is tapped down to "-/SET" (approximately 0.6 seconds), the ECM decreases the stored set speed by 1 mph (1.6 km/h) at a time. However, when the difference between the driving and the stored vehicle speeds is more than 3.1 mph (approximately 5 km/h), the vehicle speed, when the cruise control main switch lever is released from "-/SET", will be stored and constant speed control is maintained.
- (f) Low speed limit
The lowest possible limit of the speed setting range is approximately 25 mph (40 km/h). The cruise control system cannot be set when the vehicle speed is below the speed limit. Cruise control operation is automatically canceled when the vehicle speed decreases to below the low speed limit while the cruise control is in operation.
- (g) High speed limit
The highest possible limit of the speed setting range is approximately 125 mph (200 km/h). The cruise control system cannot be set when the vehicle speed is over the high speed limit. The speed cannot be increased using "+/RES" with the cruise control main switch assembly to beyond the high speed limit.
- (h) 'RES' function
If the cruise control operation was canceled under the manual cancel condition (other than by turning cruise control main switch ON-OFF button off), and if the driving speed is within the limit range, pushing the cruise control main switch to "+/RES" restores the vehicle speed stored at the time of cancellation, and maintains constant speed control. Even when cruise control is canceled automatically due to the vehicle speed decreasing below the low speed limit, cruise control can be resumed when the vehicle speed returns to over the low speed limit, since the stored vehicle speed remains in the memory.
- (i) MANUAL CANCEL function
The ECM cancels the cruise control while driving under the following conditions:
- The cruise control main switch is pulled to "CANCEL".
 - The brake pedal is depressed.
 - The clutch pedal is depressed (M/T ONLY).
 - The cruise control main switch ON-OFF button is pushed off.

- The D position circuit in the neutral start switch is turned from ON to OFF. Models with the 1GR-FE engine (5AT): Shift the gear from the D or 4th position to any of the N, 3rd, 2nd and 1st positions. Models with the 2TR-FE engine (4AT): Shift the gear from the D or 3rd position to any of the N, 2nd and 1st positions.
- (j) AUTO CANCEL function
- (1) When any of the following malfunctions occurs, the ECM clears the set vehicle speed and deactivates the cruise control.
In this case, the power indicator continues blinking until the cruise control main switch is turned OFF and the ECM allows the cruise control to be reactivated when the main switch is next turned ON again.
- Open or short malfunctions in the stop light switch.
 - Abnormalities in the vehicle speed signal.
 - Malfunctions in the throttle body.
- (2) When any of the following malfunctions occurs, the ECM clears the set vehicle speed and deactivates the cruise control.
In this case, the power indicator continues blinking until the cruise control main switch is turned OFF and the ECM allows the cruise control to be reactivated when the ignition switch is next turned ON again.
- Malfunctions in the stop light switch input circuit.
 - Malfunctions in the cancel circuit.
- (3) When the vehicle is in one of the following conditions, the ECM deactivates the cruise control (the cruise control can be reset).
- Actual vehicle speed is below the lower vehicle speed limit (the set vehicle speed is retained).
 - Actual vehicle speed decreases by 10 mph (16 km/h) from the set vehicle speed (the set vehicle speed is cleared).