DYNAMIC RADAR CRUISE CONTROL SYSTEM

DESCRIPTION

The dynamic radar cruise control system has 2 cruise control modes: Constant Speed Control Mode, and Vehicle-to-Vehicle Distance Control Mode.

- The cruise control switch is used for switching between the 2 modes. The mode in which the cruise control system starts is the vehicle-to-vehicle distance control mode.
- The distance control ECU assembly, millimeter wave radar sensor and ECM control this system.
- The combination meter assembly informs the driver of the control conditions.
- This system is a set option with the pre-crash safety system.

| Mode | Outline |
|--|---|
| Constant Speed Control Mode | The constant speed control mode is the same as in the cruise control system. However, differences are as follows: Set speed: 40 km/h (25 mph) → 43 km/h (27 mph) |
| Vehicle-to-Vehicle Distance Control Mode | In the vehicle-to-vehicle distance control mode, the system recognizes and determines the lane in which the driver's own vehicle and the vehicle ahead are traveling. Thus, the system is able to maintain the proper vehicle-to-vehicle distance in accordance with the vehicle speed, and allows the vehicle to be driven under follow-up control. The driver can operate the distance control switch on the steering wheel to select the vehicle-to-vehicle distance in three stages: long, middle, and short. This mode consists mainly of 4 controls: constant speed control, decelerator control, follow-up control, and accelerator control. The illustrations below show control examples while the driver's own vehicle is operating at 100 km/h (62 mph), and the vehicle ahead is operating at 80 km/h (50 mph). Throttle control and brake control achieve smooth deceleration. |

Constant Speed Control

Decelerator Control

Follow-up Control

Accelerator Control





100 km/h (62 mph)

100 km/h (62 mph) \rightarrow 80 km/h (50 mph) 80 km/h (50 mph)



80 km/h (50 mph) \rightarrow 100 km/h (62 mph)

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- Service Tip

An SST is used if radar axis adjustment is needed. For details, see the LEXUS IS F Repair Manual (Pub. No. RM08E0E).

• As in the cruise control system, the constant speed control mode is controlled by the ECM, which outputs signals to the throttle control motor and the TCM.



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• The vehicle-to-vehicle distance control mode is controlled by the millimeter wave radar sensor and distance control ECU assembly. Thus, the signals are output to the actuators and the ECU while exchanging data as indicated below.

