

## ■ FUNCTION OF MAIN COMPONENTS

Item		Function
Combination Meter Assembly	PCS Warning Light	Illuminates or flashes to warn the driver in accordance with signals from the seat belt control ECU.
	Multi-information Display	Displays a warning message to inform or warn the driver of the system condition in accordance with signals from the seat belt control ECU.
	Master Warning Light	Illuminates to warn the driver in accordance with signals from the seat belt control ECU.
	Buzzer	Sounds to warn the driver in accordance with signals from the seat belt control ECU.
Satellite Switch (See page BE-64)		Operating this switch can enable or disables the operation of the PCS BRAKE.
Millimeter Wave Radar Sensor (See page BE-249)		Radiates millimeter radio wave radar forward, uses the reflected millimeter radio waves for detecting the presence of a vehicle being driven ahead, the vehicle-to-vehicle distance, and the relative speed, and transmits these pieces of information to the distance control ECU assembly.
Front Seat Outer Belt	Seat Belt Motor	Retracts the seat belt in accordance with signals received from the seat belt control ECU.
Front Seat Inner Belt (D)	Seat Belt Buckle Switch	Detects the condition (verifies use of belt) of the driver seat belt and transmits a signal to the center airbag sensor assembly.
Front Seat Inner Belt (P)	Seat Belt Buckle Switch	Detects the condition (verifies use of belt) of the front passenger seat belt and transmits a signal to the seat belt control ECU.
Center Airbag Sensor Assembly		Transmits the condition (fastened or unfastened) of the driver seat belt to the seat belt control ECU.
Distance Control ECU Assembly		Makes a judgment that a collision is unavoidable based on the information received from the millimeter wave radar sensor. It then outputs a seat belt operation signal and brake assist standby request signal.
Seat Belt Control ECU		<ul style="list-style-type: none"> <li>• Receives a seat belt operation request signal from the Distance Control ECU or skid control ECU assembly and operates the seat belts.</li> <li>• If the seat belt control ECU detects a malfunction in the pre-crash safety system, it will store DTCs (Diagnostic Trouble Codes).</li> </ul>
Skid Control ECU Assembly		<ul style="list-style-type: none"> <li>• Receives a brake assist standby request signal from the distance control ECU assembly and switches the brake assist to standby mode. When a stop light switch signal is input, it operates the brake assist.</li> <li>• Even if the driver does not apply the brakes, if the skid control ECU assembly receives a pre-crash brake request signal from the distance control ECU assembly, it applies the brakes while ensuring vehicle stability.</li> <li>• Determines that the brakes have been applied suddenly based on a signal received from the master pressure sensor, and outputs a seat belt operation signal to the seat belt control ECU.</li> <li>• Determines the presence of a front wheel skid tendency or rear wheel skid tendency, and outputs a seat belt operation signal to the seat belt control ECU.</li> <li>• Transmits a vehicle speed signal to the distance control ECU assembly.</li> </ul>
Brake Actuator	Master Cylinder Pressure Sensor	Detects the master cylinder pressure and transmits a signal to the skid control ECU assembly.
	Pump Motor	Receives an actuate signal from the skid control ECU assembly and generates hydraulic pressure for brake control.

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Item	Function
Stop Light Switch	Detects if the brake pedal is pressed and transmits a signal to the skid control ECU assembly.
Speed Sensor (4)	Detects the wheel speed signal and transmits the signal to the skid control ECU assembly.
Yawrate Sensor	Detects the yaw rate and lateral/longitude deceleration of the vehicle and transmits the signal to the skid control ECU assembly and the distance control ECU assembly.
Steering Sensor	Detects the angle and direction of steering and transmits a signal to the skid control ECU assembly and the distance control ECU assembly.
Skid Control Buzzer Assembly	Sounds to warn the driver in accordance with signals from the skid control ECU assembly.
Main Body ECU RH (Cowl Side Junction Block RH)	Transmits the vehicle configuration (LHD/RHD) information to the seat belt control ECU.

**Service Tip**

**► Precautions for Seat Belt Control ECU Replacement ◀**

The seat belt control ECU operates the pre-crash safety system based on the stored information that the vehicle is a LHD or RHD model. (LHD = Left Hand Drive, RHD = Right Hand Drive) LHD or RHD refers to the seating position of the driver, not which side of the road the vehicle is driven on. Therefore, when replacing the seat belt control ECU, it is necessary to store the information about whether the vehicle is a LHD or RHD model. This can be performed by following these steps:

- (1) Engine switch is on (IG).
- (2) Monitor the PCS warning light for at least 30 seconds after turning the engine switch on (IG). Make sure that the warning light does not remain on.
- (3) At this time, the seat belt control ECU receives vehicle configuration (LHD/RHD) information from the main body ECU RH (cowl side junction block RH) and stores it in memory.
- (4) Perform an active test to confirm that the vehicle configuration (LHD/RHD) information is correctly stored in the seat belt control ECU.
- (5) Connect the intelligent tester to DLC3 and select Active Test.
- (6) Perform an Active Test of the seat belt motor for the driver to store the vehicle configuration (LHD/RHD) information in the seat belt control ECU again.

For details, see the LEXUS IS F Repair Manual (Pub. No. RM08E0E).