

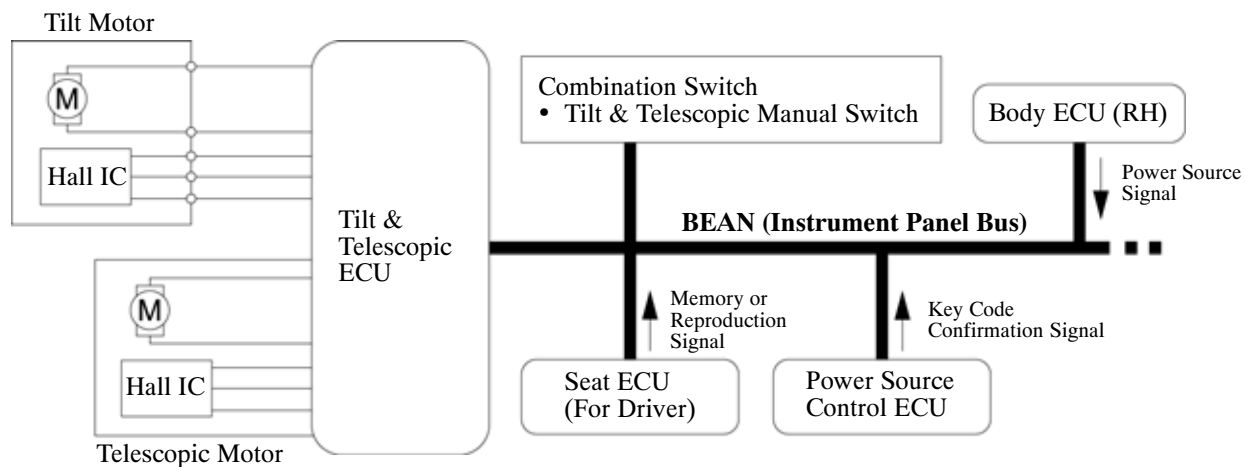
■ POWER TILT AND POWER TELESCOPIC SYSTEM

1. General

The power tilt and power telescopic system consists of the Tilt & Telescopic ECU, tilt and telescopic manual switch, tilt motor, and telescopic motor.

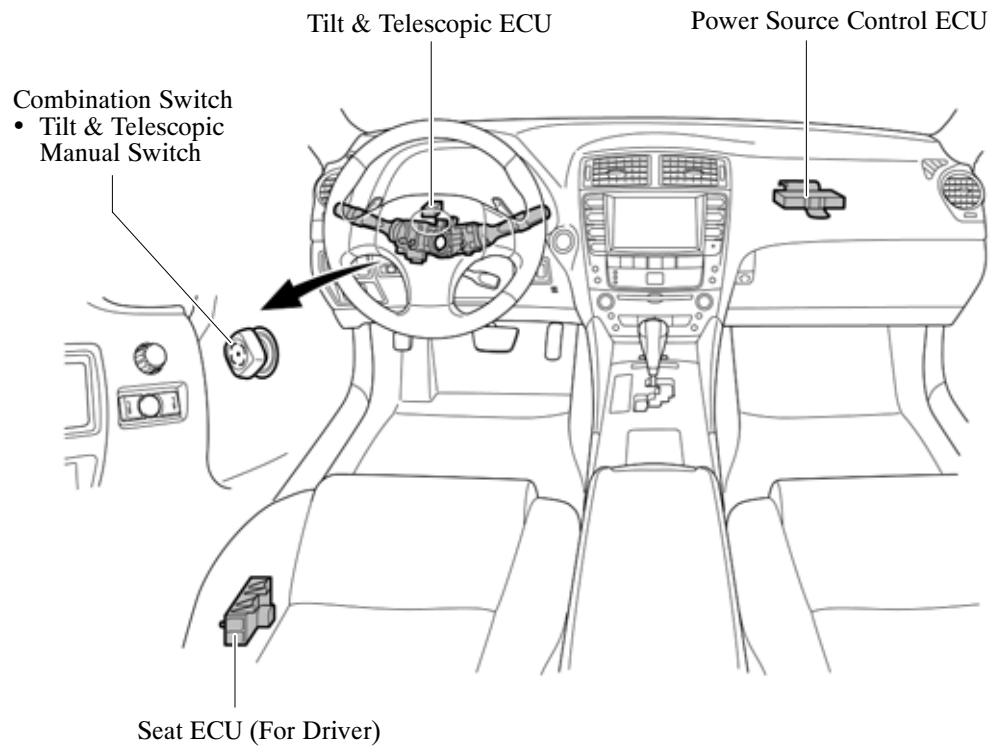
- The Tilt & Telescopic ECU controls this system

► System Diagram ◀



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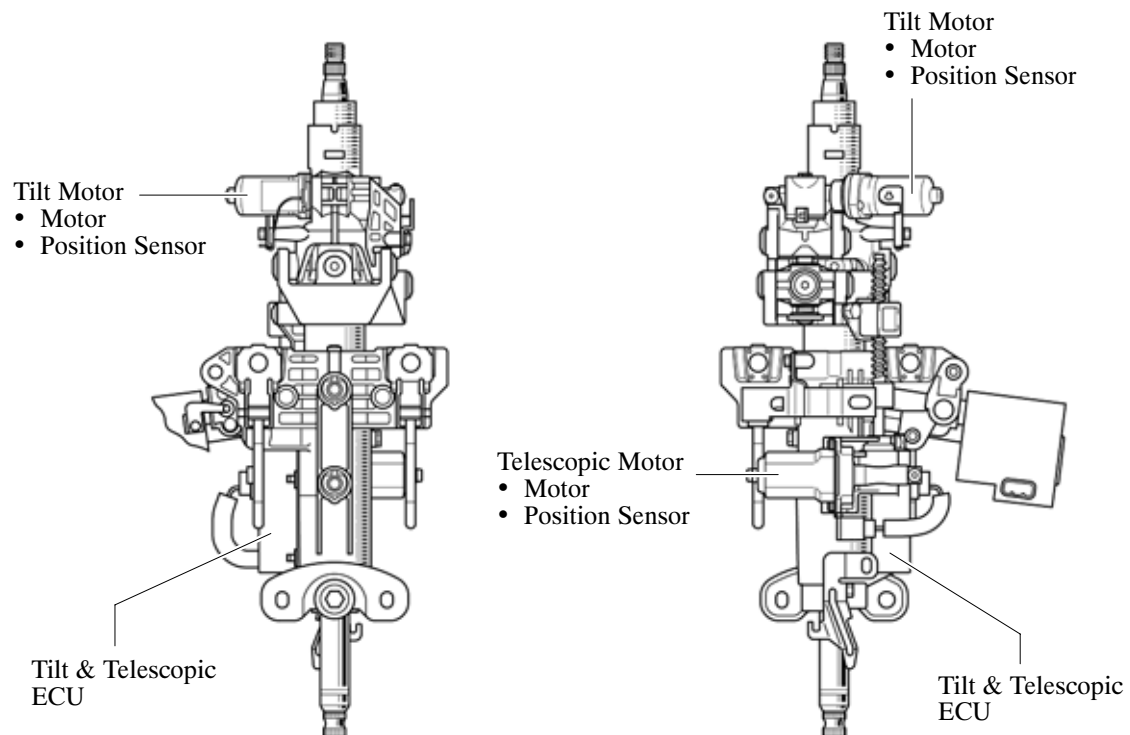
2. Layout of Main Component



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► Steering Column Assembly ◀



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3. System Control

General

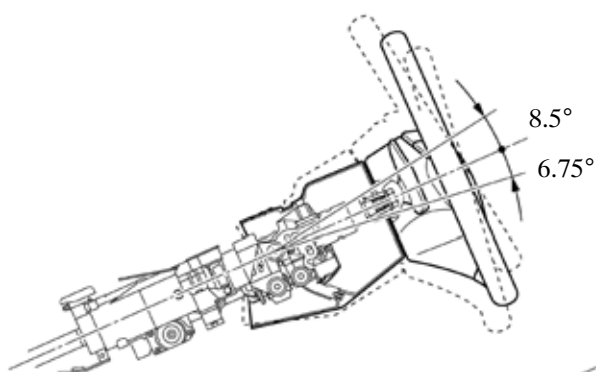
This system has the following control functions, thus providing excellent ease of operation and entry/exit.

Control		Outline
Manual		The tilt and telescopic positions can be adjusted using the tilt and telescopic manual switch.
Automatic*	Auto Away	The steering wheel automatically tilts up and retracts all the way when the power source is changed from ACC or IG-ON to OFF.
	Auto Return	When the power source is changed from OFF to ACC or IG-ON, the steering wheel automatically returns to the previous position which was set before the power source was turned off.
Memory (See page BE-262)		Three steering wheel positions can be memorized, allowing different positions to be restored by the memory system.
Fail-safe		When the Tilt & Telescopic ECU detects a malfunction in the power tilt and telescopic system, the ECU switches to a fail-safe mode.
Diagnosis		When the Tilt & Telescopic ECU detects a malfunction in the power tilt and telescopic system, the ECU stores the malfunction data in memory.

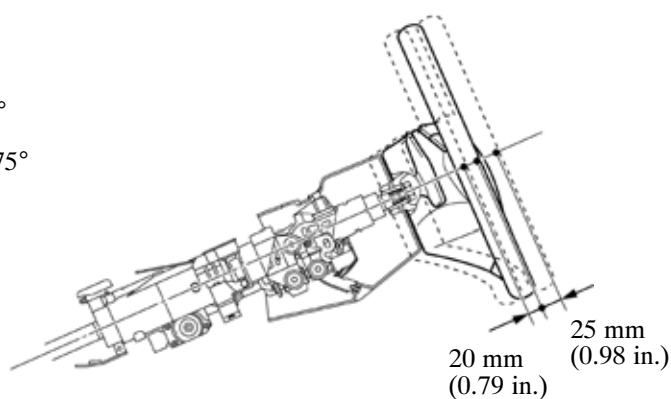
*: Customize settings can be changed.

Manual Control

A stepless adjustment enables the tilt mechanism to be tilted 15.25° vertically, and the telescopic mechanism to be moved 45 mm (1.77 in.) longitudinally.



Tilt



Telescopic

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Fail-safe

When the Tilt & Telescopic ECU detects a malfunction in the power tilt and telescopic system, the ECU changes the control mode to a fail-safe mode as follows:

Detection Item	Fail-safe
Key Code Confirm Signal Malfunction	Auto away or auto return stops
Tilt Position Sensor or Tilt Motor Circuit Malfunction	Tilt operation is suspended.
Telescopic Position Sensor or Telescopic Motor Circuit Malfunction	Telescopic operation is suspended.
ECU Power Source Circuit Malfunction	Tilt and Telescopic operations are suspended.

- If a communication problem has occurred in any ECUs related to the Tilt & Telescopic ECU and the power tilt and telescopic system, the power tilt and telescopic system allows the following controls to continue:

Control	ECU for which communication is lost				
	Power Source Control ECU	Main Body ECU RH	Combination Switch	Seat ECU (for Driver)	Related all ECUs
Manual	○	×*	×	○	×*
Automatic Away	×	×	○	○	×
Automatic Return	×	×	○	○	×
Memory	○	×	○	×	×

- *: ● The operation is permitted if the power source is ACC or ON while the signal from the Main Body ECU RH is interrupted
- The operation is prohibited if the power source is OFF while the signal from the Main Body ECU RH is interrupted.

Diagnosis

If the Tilt & Telescopic ECU detects a malfunction in the power tilt and telescopic system, the ECU stores the malfunction data in memory. Then, by connecting an intelligent tester II to the DLC3 terminal, the DTCs (Diagnostic Trouble Codes) can be accessed and an active test can be performed to test the operation of the tilt motor and the telescopic motor.

For details, see the LEXUS IS250 Repair Manual (RM0150E).