

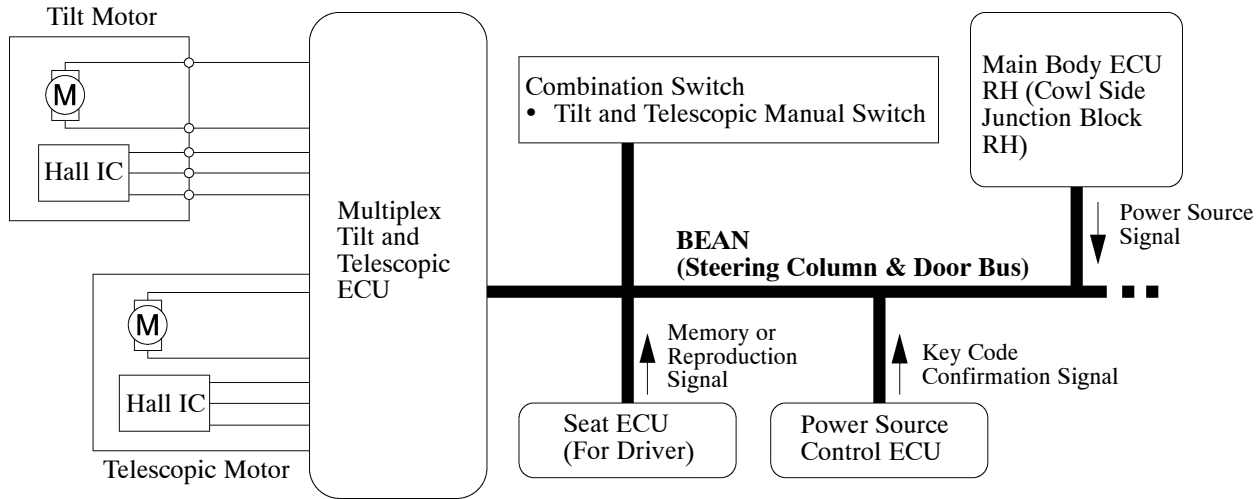
■ POWER TILT AND POWER TELESCOPIC SYSTEM

1. General

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

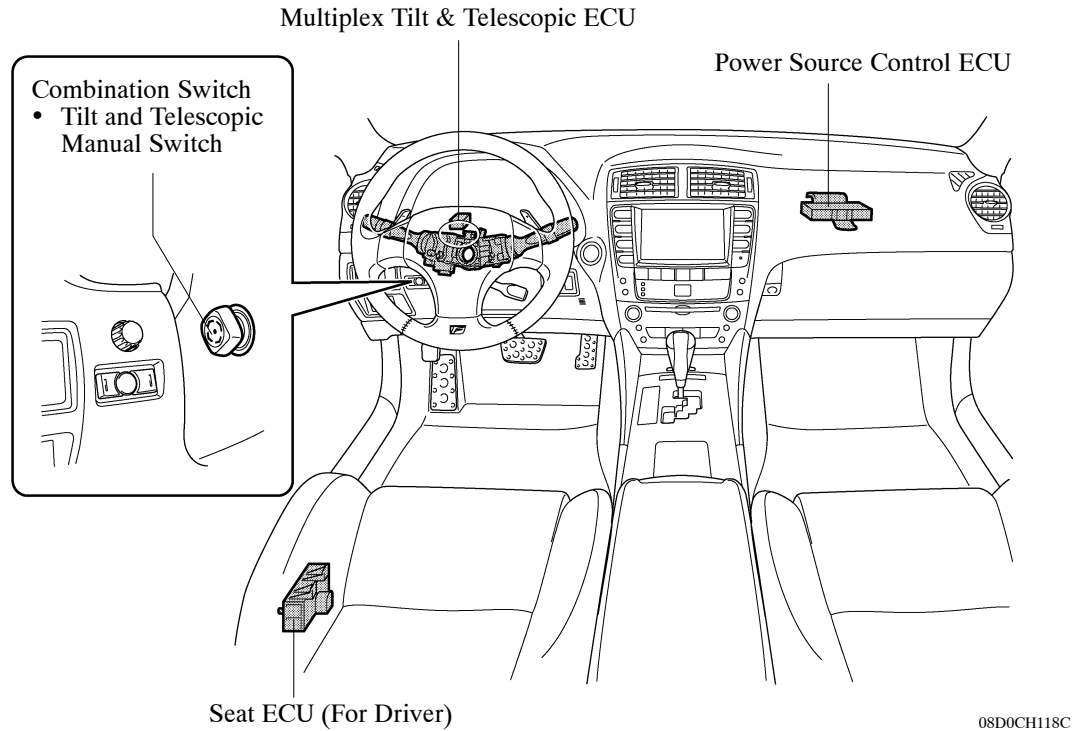
- The multiplex tilt & telescopic ECU controls this system.

► System Diagram ◀



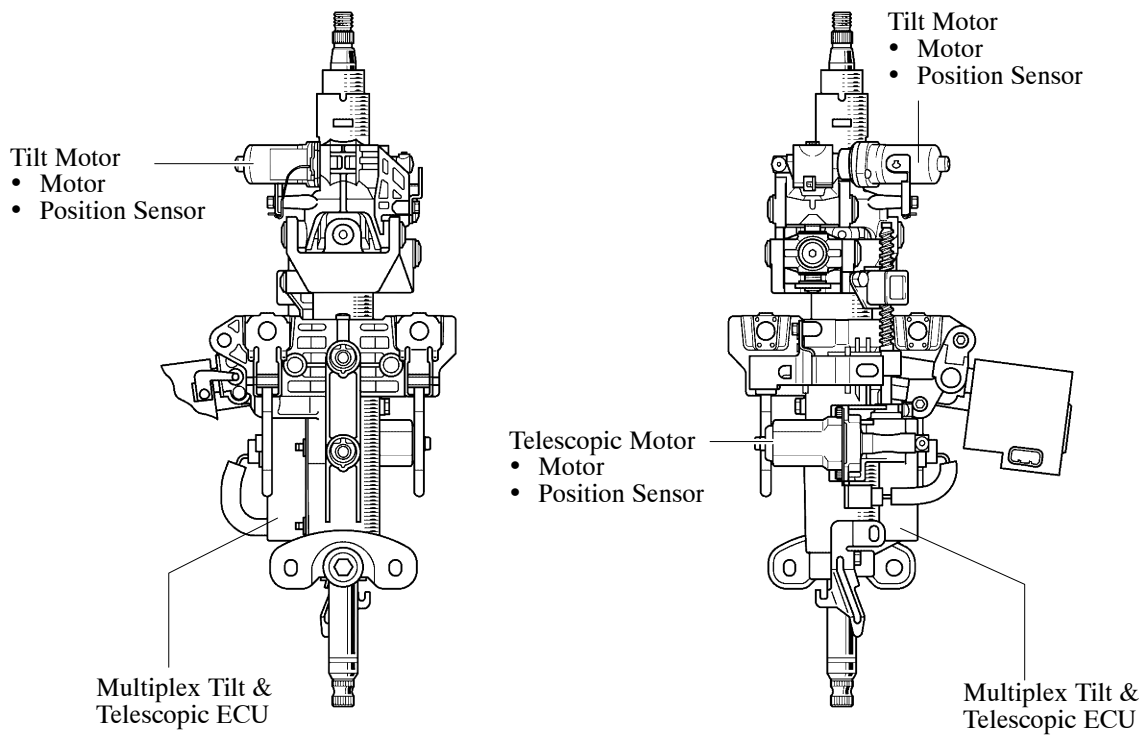
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2. Layout of Main Components



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► Steering Column Assembly ◀



3. System Control

General

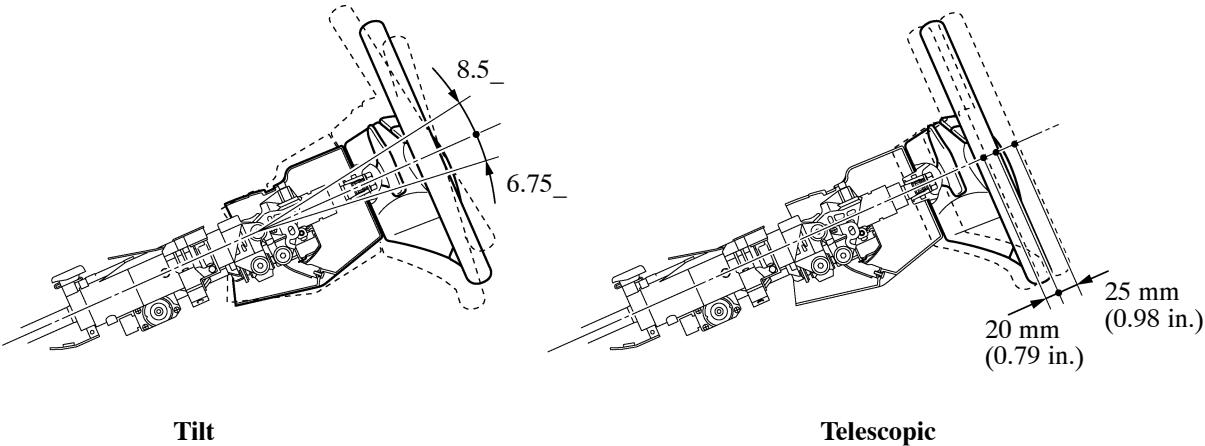
This system has the following control functions, thus providing excellent ease of operation and entry/exit.

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 engine switch is changed from on (ACC) or on (IG) to off.
	Auto Return	When the engine switch is changed from off to on (ACC) or on (IG), the steering wheel automatically returns to the previous position which was set before the engine switch was turned off.
Memory (See page BE-268)		Three steering wheel positions can be memorized, allowing different positions to be restored by the memory system.
Fail-safe		When the multiplex tilt & telescopic ECU detects a malfunction in the power tilt and telescopic system, the ECU switches to a fail-safe mode.
Diagnosis		When the multiplex 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

Stepless adjustment using the manual switch enables the tilt mechanism to be tilted 15.25_ vertically, and the telescopic mechanism to be moved 45 mm (1.77 in.) longitudinally.



Fail-safe

When the multiplex 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 Confirmation 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 multiplex tilt & telescopic ECU and the power tilt and telescopic system, the power tilt and telescopic system allows the following controls to continue:

○: Operates, ×: Does not operate

Control	ECU for which communication is lost				
	Power Source Control ECU	Main Body ECU RH (Cowl Side Junction Block RH)	Combination Switch	Seat ECU (for Driver)	All Related ECUs
Manual	○	×*	×	○	×*
Auto Away	×	×	○	○	×
Auto Return	×	×	○	○	×
Memory	○	×	○	×	×

- *: ● Operation is permitted if the engine switch is on (ACC) or on (IG) while the signal from the main body ECU RH (cowl side junction block RH) is interrupted.
- Operation is prohibited if the engine switch is off while the signal from the main body ECU RH (cowl side junction block RH) is interrupted.

Diagnosis

If the multiplex 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 to the DLC3 terminal, the DTCs (Diagnostic Trouble Codes) can be accessed and active tests can be performed to test the operation of the tilt motor and the telescopic motor.

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