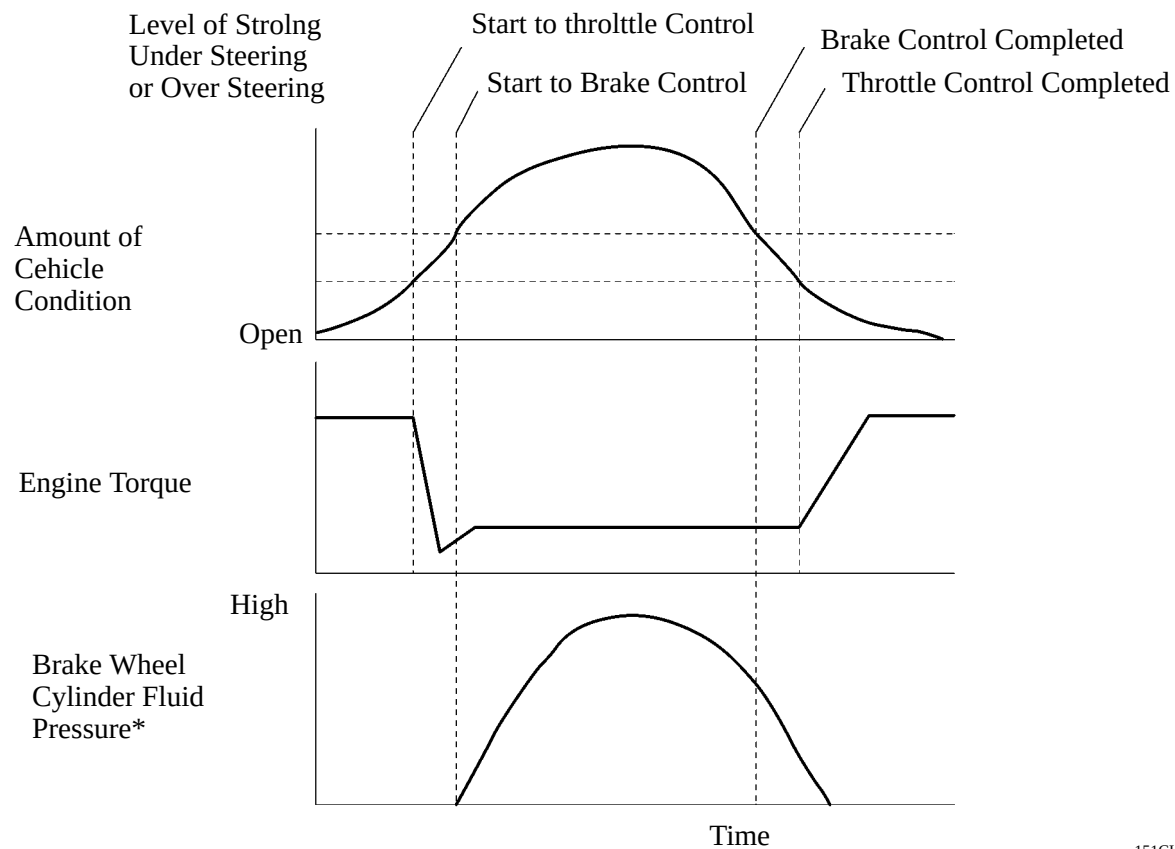


9. Skid Control ECU

VSC

Based on the 4 type of sensor signals received from the speed sensors, yaw rate sensor, deceleration sensor and steering sensor, the skid control ECU calculates the amount of vehicle condition.

If a strong understeer or oversteer tendency is created during an emergency avoidance maneuver or cornering, and the skid control ECU determines that the amount of vehicle condition exceeds a prescribed value, it controls the engine torque through throttle and the brake fluid pressure according to the amount of the vehicle condition.



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*: The wheel cylinder that activates varies depending on the condition of the vehicle.

Initial Check

After the ignition is turned ON, and the vehicle attains an approximate speed of 6 km/h (4 mph) or more only at first time, the skid control ECU performs the initial check.

The functions of each solenoid valve and pump motor in the brake actuator are checked in order.

Self-Diagnosis

- If the skid control ECU detects a malfunction in the ABS with EBD, Brake Assist, TRAC, and VSC systems, the ABS, brake system, VSC warning lights and TRAC OFF indicator light that corresponds to the function in which the malfunction has been detected indicates or lights up, as indicated in the table below, to alert the driver of the malfunction.

○: Light ON —: Light OFF

Item	ABS	EBD	Brake Assist	TRAC	VSC	Skid Control ECU
ABS Warning Light	○	○	○	—	—	○
Brake System Warning Light	—	○	—	—	—	○
TRAC OFF Indicator Light	○	○	○	○	○	○
VSC Warning Light	○	○	○	○	○	○

- At the same time, the DTCs (Diagnosis Trouble Codes) are stored in memory. The DTCs can be read by connecting the SST (09843-18040) between the Tc and CG terminals DLC3 and observing the blinking of the ABS warning light and VSC warning light, or by connecting a hand-held tester.
- This system has a sensor signal check function. The DTCs can be read by connecting the SST (09843-18040) between the Tc and CG terminals of DLC3 and observing the blinking of the ABS warning light and VSC warning light after check function, or by connecting a hand-held tester.
- The DLC1 has been discontinued.
- The following DTCs have been added to the ABS & Brake Assist & VSC system of the '01 ES300 model:

► Output by blinking ABS warning light ◀

DTC No.	Detection Item
C1235/35	Foreign matter is attached on the tip of the right front sensor
C1236/36	Foreign matter is attached on the tip of the left front sensor
C1238/38	Foreign matter is attached on the tip of the right rear sensor
C1239/39	Foreign matter is attached on the tip of the left rear sensor

► Output by blinking VSC warning light ◀

DTC No.	Detection Item
C1335/35	Malfunction in steering angle sensor input circuit
C1336/39	Zero point calibration of deceleration sensor undone
C1261/61	Malfunction in master cylinder pressure sensor

- The C1207/37, C1208/72, and C1228/28 DTCs have been discontinued to the TRAC system of the previous model.

For details on the DTCs that are stored in skid control ECU memory and the DTCs that are output through the sensor check function, see the 2002 LEXUS ES300 Repair Manual (Pub. No. RM911U).

Fail-Safe

- In the event of a malfunction in the TRAC and/or VSC, the skid control ECU prohibits the TRAC and VSC operations.
- In the event of a malfunction in the ABS and/or Brake Assist, the skid control ECU prohibits the ABS with EBD, Brake Assist, TRAC, and VSC operations.
- In the event of the malfunction in the EBD control, skid control ECU prohibits the EBD control. Thus, the brake and throttle valve opening angle control will be opened in the same condition as in the condition without the ABS with EBD, Brake Assist, TRAC, VSC.