

SYSTEM OUTLINE

This system controls the respective brake fluid pressures acting on the brake cylinders of the right front wheel, the left front wheel, the right rear wheel and the left rear wheel when the brakes are applied in a panic stop so that the wheels do not lock. This results in improved directional stability and steerability during panic braking.

1. INPUT SIGNALS

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS ECU.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the ABS ECU when the brake pedal depressed.

2. SYSTEM OPERATION

During sudden braking the ABS ECU which has signals input from each of the sensor, controls current to the solenoid inside the actuator and causes the hydraulic pressure acting on each of the wheel cylinder escape to the reservoir. The pump inside the actuator is also operating at this time and it returns the brake fluid from the reservoir to the master cylinder, preventing locking of the vehicle wheels.

If the ECU judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current acting on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the ECU, by the same method as above. By repeated pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

SERVICE HINTS

A19 (A), A20 (B) ABS ECU

(Connect the ECU connector)

(B)21-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 **TS-E1** not connected

(B) 8-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 **TC-E1** not connected

(A) 5-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(A) 6-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(A)11-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(A)12-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(B) 2-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(B) 1-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(B)15-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(B)14-GROUND : Approx. **12** volts with the ignition SW at **ON** position and the ABS warning light goes off

(B)13-GROUND : Approx. **12** volts with the ignition SW at **ON** position

(B) 5-GROUND : Approx. **12** volts with the brake pedal depressed

(B) 12, (B) 25-GROUND : Always continuity

○ : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
A5	A	88 (LHD 1ZZ–FE)	A8		96 (RHD 2ZZ–GE)	C12	B	90 (LHD)
		94 (RHD 1ZZ–FE)	A19	A	90 (LHD)			98 (RHD)
		96 (RHD 2ZZ–GE)			98 (RHD)	D1		91 (LHD)
A6	B	88 (LHD 1ZZ–FE)	A20	B	90 (LHD)	J3	98 (RHD)	98 (RHD)
		94 (RHD 1ZZ–FE)			98 (RHD)			99 (RHD)
		96 (RHD 2ZZ–GE)	A26		100 (RHD)	J11	91 (LHD)	
A7		88 (LHD 1ZZ–FE)	A27		92 (LHD)	P2		91 (LHD)
		94 (RHD 1ZZ–FE)			100 (RHD)			99 (RHD)
		96 (RHD 2ZZ–GE)			92 (LHD)	S9		91 (LHD)
A8	88 (LHD 1ZZ–FE)	C11	A	90 (LHD)				
	94 (RHD 1ZZ–FE)			98 (RHD)				

○ : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
1	82	Engine Room R/B No.1 (Engine Compartment Left)

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
IF	81	Instrument Panel Wire and Instrument Panel J/B (Instrument Panel Brace RH)
IG		
II		
IK		
IM		
2D	79	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2G		

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE5	104 (LHD)	Engine Room Main Wire and Instrument Panel Wire (Instrument Panel Brace LH)
	114 (RHD)	
IF2	106 (LHD)	Floor Wire and Instrument Panel Wire (Instrument Panel Brace LH)
	116 (RHD)	
IG2	106 (LHD)	Engine Room No.2 Wire and Instrument Panel Wire (Right Kick Panel)
	116 (RHD)	Engine Room No.2 Wire and Instrument Panel Wire (Instrument Panel Brace LH)

 : GROUND POINTS

Code	See Page	Ground Points Location
EB	102 (LHD 1ZZ-FE)	Front Left Fender
	110 (RHD 1ZZ-FE)	
	112 (RHD 2ZZ-GE)	
IE	114 (RHD)	Cowl Side Panel LH
IF	104 (LHD)	Instrument Panel Brace RH
	114 (RHD)	
IH	104 (LHD)	Cowl Side Panel RH