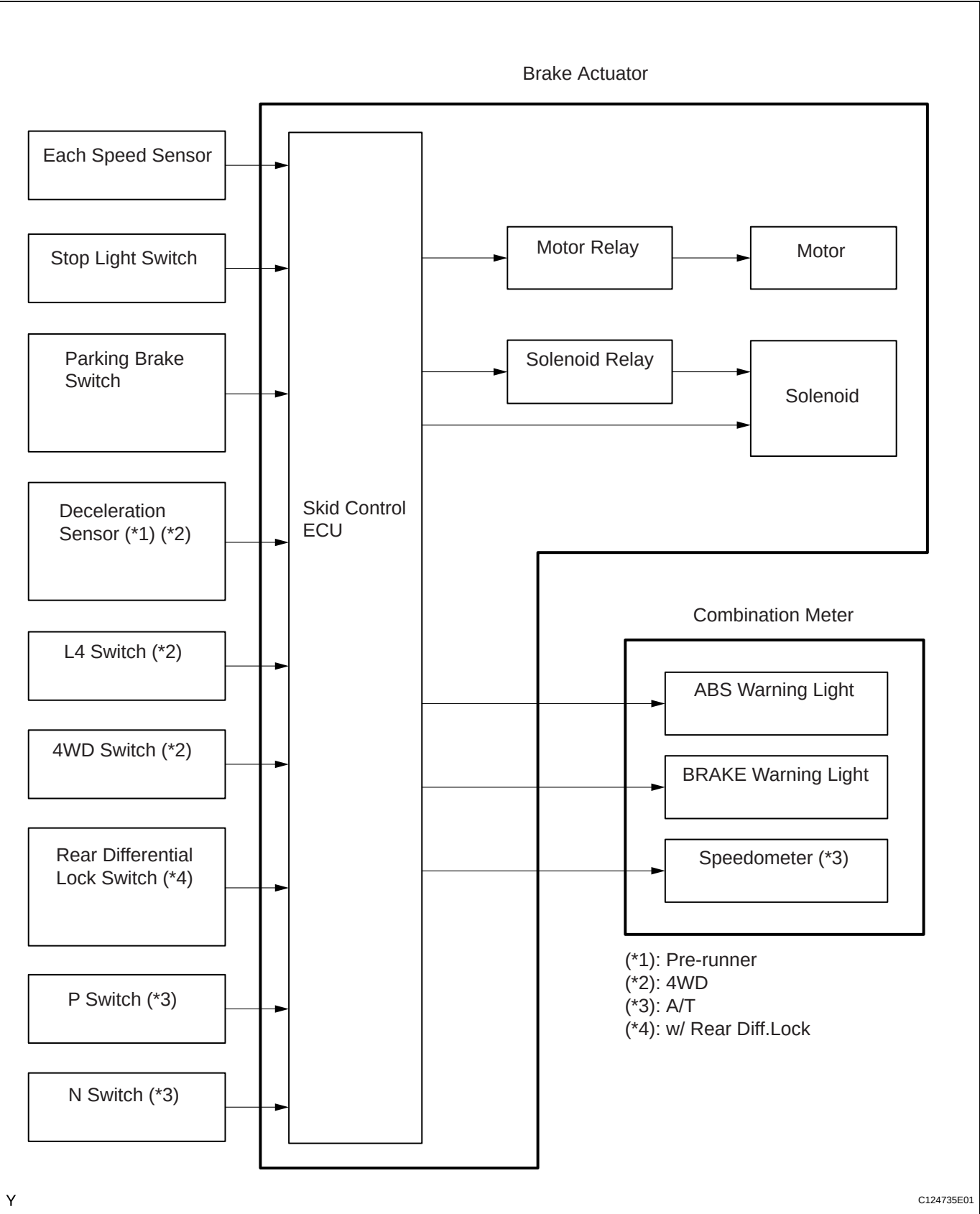


SYSTEM DIAGRAM



cardiagn.com

## SYSTEM DESCRIPTION

### 1. SYSTEM DESCRIPTION

#### HINT:

The skid control ECU is a single unit with brake actuator.

#### (a) ABS (Anti-lock Brake System)

The ABS helps prevent the wheels from locking when the brakes are applied firmly or when braking on a slippery surface.

#### (b) EBD (Electronic Brake force Distribution)

The EBD control utilizes ABS, realizing proper brake force distribution between the front and rear wheels in accordance with the driving conditions. In addition, when braking while cornering, it also controls the brake forces of the right and left wheels, helping to maintain the vehicle behavior.

### 2. ABS with EBD OPERATION

- (a) Based on the signals received from the 4 wheel speed sensors, the skid control ECU calculates the speed and deceleration of each wheel, and checks the wheel slipping conditions. The ECU controls the pressure holding valve and pressure reduction valve in order to adjust the fluid pressure of each wheel cylinder according to the slipping conditions.

### 3. FAIL SAFE FUNCTION

- (a) When a failure occurs in the ABS system, the ABS warning light comes on and its operation is prohibited.  
In addition to this, when a failure which disables the EBD operation occurs, the brake warning light comes on as well and operation is prohibited (See page [BC-19](#)).

## HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

The intelligent tester can be used at step 3, 6, 9, 12.

**1** VEHICLE BROUGHT TO WORKSHOP

NEXT

**2** CUSTOMER PROBLEM ANALYSIS

NEXT

**3** DTCS AND FREEZE FRAME DATA CHECK AND CLEARANCE

HINT:

See page [BC-18](#) and [BC-16](#)

NEXT

**4** PROBLEM SYMPTOM CONFIRMATION

| Result                 | Proceed to |
|------------------------|------------|
| Symptom occurs         | A          |
| Symptom does not occur | B          |

B

SYMPTOM SIMULATION

A

**5** DTC CHECK

HINT:

See page [BC-16](#)

| Result         | Proceed to |
|----------------|------------|
| DTC output     | A          |
| DTC not output | B          |

B

PROBLEM SYMPTOMS TABLE

A

**6** DTC CHART

HINT:

See page [BC-22](#)

NEXT

7

CIRCUIT INSPECTION

HINT:  
When 2 or more DTCs are recorded, and the problem cannot be identified, perform circuit inspection of the other DTCs.

NEXT

8

PROBLEM IDENTIFICATION

NEXT

9

REPAIR OR REPLACEMENT

NEXT

10

CONFIRMATION TEST

NEXT

END

BC