

## EBD CONTROL

id041500103400

### Outline

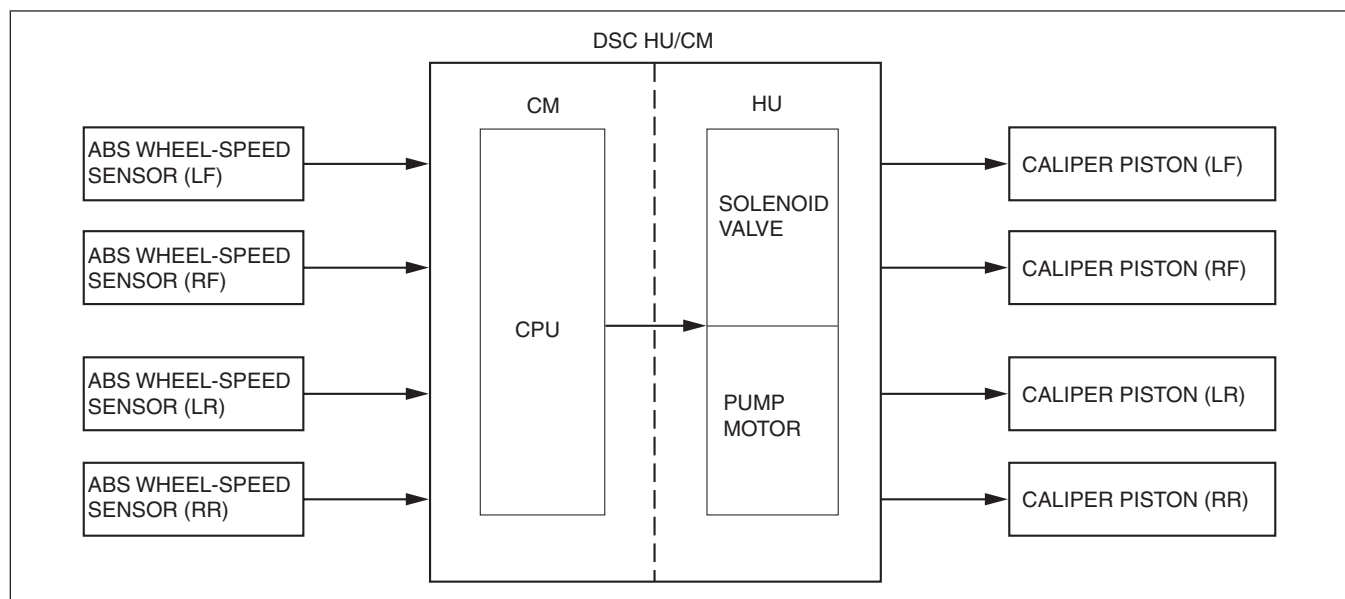
- EBD control uses the ABS system to control brake fluid pressure distribution to the rear wheels so that they do not lock-up prior to the front wheels during braking, thereby preventing the loss of handling stability.

### Feature

- EBD control has independent control systems for both the front and rear wheels.
- EBD control constantly and properly distributes brake fluid pressure regardless of vehicle weight.

### Construction

#### Block Diagram



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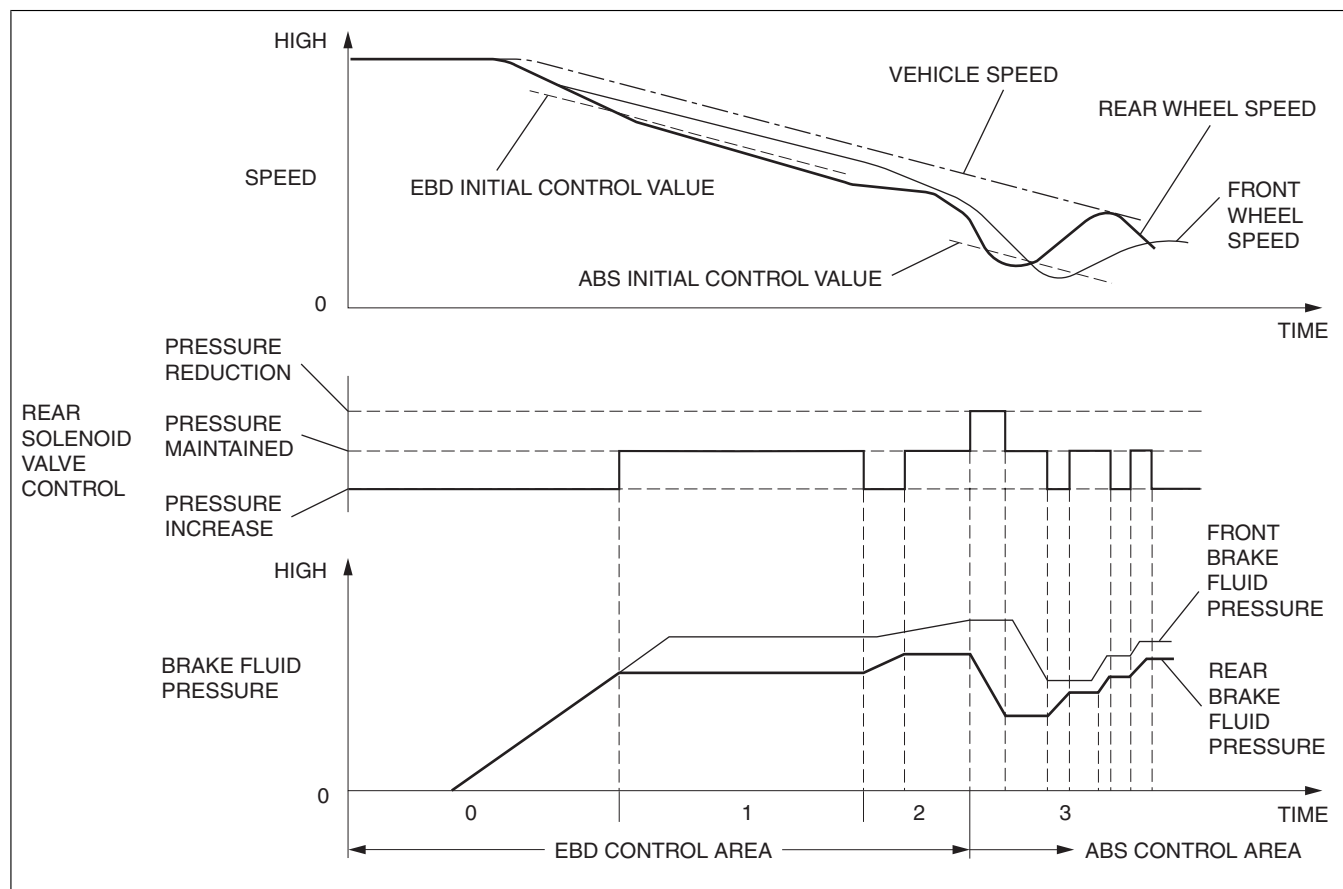
### Operation

- EBD control detects the slip ratio between the estimated vehicle speed and rear wheels from the ABS wheel-speed sensor signals. If the slip ratio of the rear wheels as compared to the front wheels is larger than the fixed limit, the DSC HU/CM reduces brake pressure being distributed to the rear wheels. Due to this, brake pressure distribution is constantly controlled in the proper proportion and in relation to vehicle load, road surface conditions, and vehicle speed.
- Determination of the rear wheel slip ratio, based on a comparison of the lowest front wheel speed and the estimated vehicle speed with the rear wheel speeds, is divided into conditions 0-3 shown in the table below.
- The DSC HU outlet and inlet solenoid valves are operated and the brake fluid pressure controlled according to these conditions.
- If ABS control conditions are met during EBD control, EBD control is stopped and ABS control is given priority.

Status	Rear wheel slip ratio determination	EBD control	Solenoid valve	Comment
0	No slip	No control	Pressure increase	—
1	$\alpha\%-\beta\%$	Control	Pressure maintained	—
2	After EBD control, slip ratio is $\gamma\%$	Control	Increase/maintain	—
3	Front wheel slip ratio is $\delta\%$ or more	Control	Pressure reduction/maintained/increase	ABS control operates

$\alpha-\delta$  : Specified value

## Operating Condition Transition Diagram



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