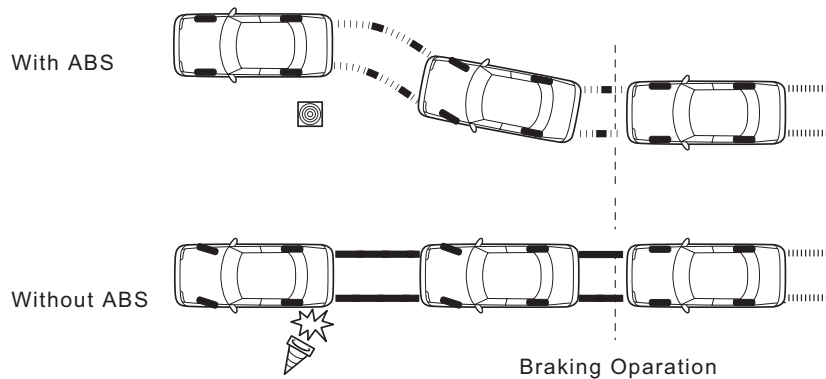


ABS with EBD Function

Description

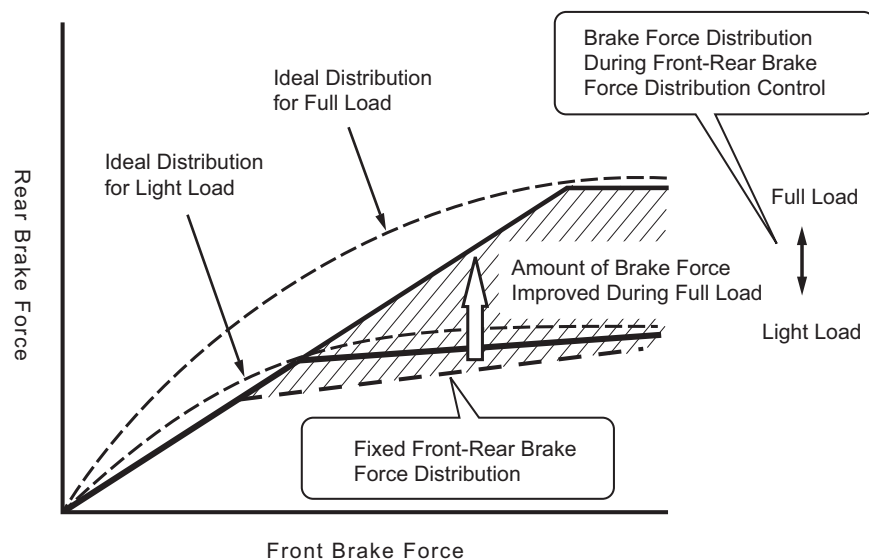
- To enable a vehicle to run, turn, and stop, it is imperative that the tires perform their function of gripping the road. However, during sudden braking or braking on slippery surfaces, such as on a road that has puddles or is covered with snow, the wheels could lock up while the vehicle is still moving. This results in a slippage between the tires and the surface. During braking in these situations, the ABS (Antilock Brake System) detects the wheel speeds and uses a computer to control the brake fluid pressure to all four wheels. This control prevents the wheels from locking and provides the proper brake performance, thus ensuring steering maneuverability and vehicle stability.
- In addition to the conventional ABS functions, the ABS with EBD appropriately distributes the braking force between the front and rear wheels and the right and left wheels. Thus, the ABS with EBD ensures superior brake performance that is unaffected by changes in load, such as when the vehicle is empty or fully loaded.



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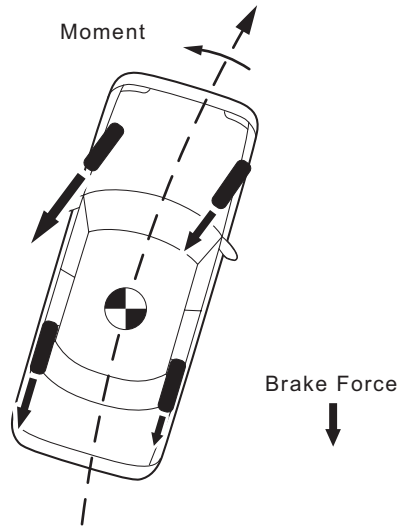
Brake Force Distribution Control

- The front-rear brake force distribution control aims at maximizing "stopping" performance, which is the basic function of the brakes. Thus, it distributes the brake force appropriately to the front and rear wheels in accordance with the driving conditions of the vehicle.
- In addition to the conventional ABS functions, the ABS with EBD appropriately distributes the braking force between the front and rear wheels and the right and left wheels. Thus, the ABS with EBD ensures superior brake performance that is unaffected by changes in load, such as when the vehicle is empty or fully loaded.



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- The right-left brake force distribution control ensures vehicle stability during braking along turns by regulating the brake force of the right and left wheels. Thus, it ensures an excellent braking effect.



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Precautions on ABS with EBD

- The ABS is not intended to extend the actual braking performance of the tires. Therefore, drive safely by paying attention to your speed, as well as the distance between your vehicle and others.
- The use of non-standard parts such as tires of a non-standard size will negatively affect the ABS control.
- Under the conditions listed below, the braking distance with the ABS operating may be longer than on vehicles without ABS.

Conditions

Driving on a gravel road or fresh snow
Using tire chains
Driving over an offset such as a seam on the road
Driving on a rough road with an irregular surface or stone pavement

Brake Assist Function

- The system determines emergency braking based on the amount and speed of the brake pedal effort and generates a strong brake force accordingly.

Concept of Brake Assist

- In emergency braking, the driver in a panic state might press the brake pedal quickly but not firmly, generating only a small amount of braking force (see "a" in the figure).
- In that state, the driver might not be able to keep the brake pedal depressed during the latter half of braking, and cause the brake force to drop (see "b" in the figure).
- The brake assist system estimates the intention of the driver to apply emergency braking upon detecting a quick application of the brake pedal. Thus, even if the driver is unable to press the brake pedal firmly, this system increases the brake force (see "c" in the figure).
- If the driver intentionally eases the brakes after the brake assist operates, the system reduces the amount of brake force assist to reduce the sense of intrusiveness (see "d" in the figure).