

GROUP 35A

BASIC BRAKE SYSTEM

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GENERAL

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Brake systems with higher reliability and durability have achieved distinguished braking performance.

FEATURES**IMPROVEMENT OF BRAKING PERFORMANCE**

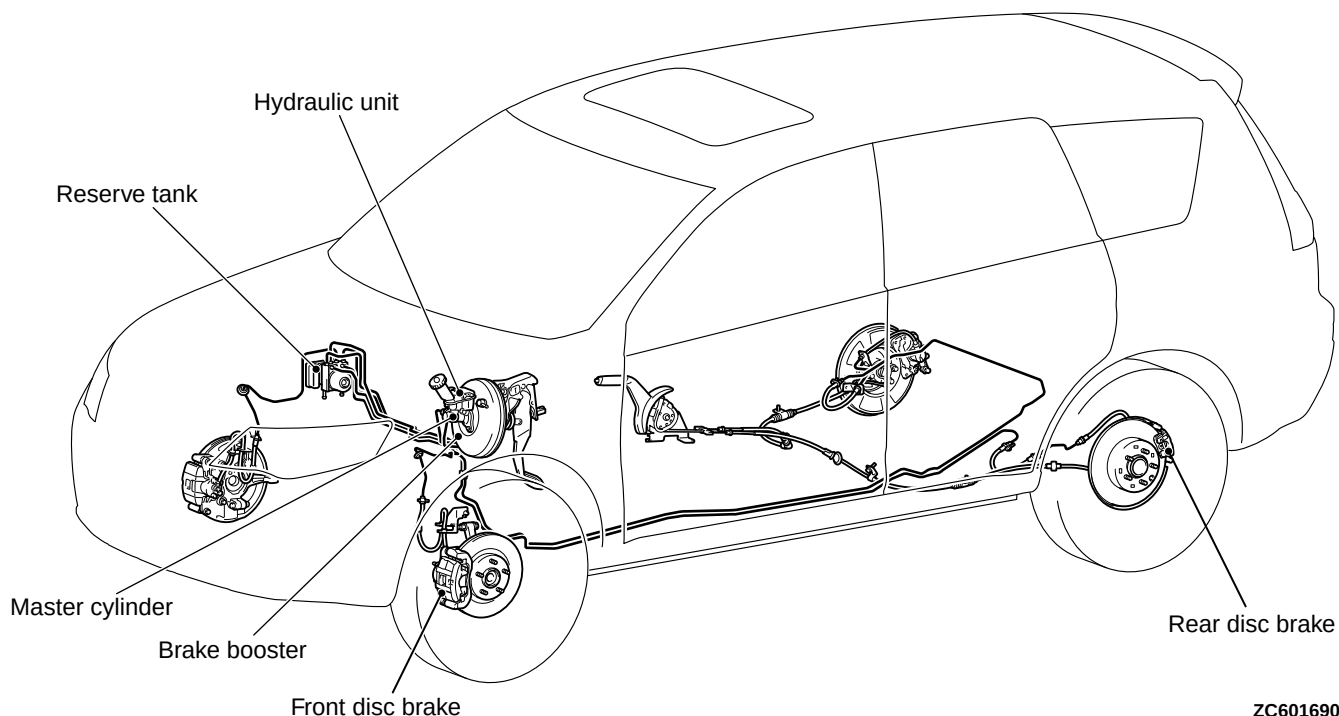
- The 10-inch single brake booster with the variable boost ratio mechanism has been installed to assure the maximum braking force with less pedal pressure in case of emergency.
- In addition to the 10-inch single brake booster, the small and long stroke-type master cylinder has been adopted to achieve the downsizing and secure the assist force.
- The installation of 16-inch ventilated disc brake on the front axle and 16-inch solid disc brake on the rear axle achieves the secure braking force and direct braking feeling.

IMPROVEMENT IN SAFETY

- The 4-wheel anti-skid brake system (4ABS) has been installed to prevent slippage resulting from the wheel lock and assure stable vehicle posture and driveability.
- Electronic control braking force distribution system (EBD) assures maximum braking force independent of the passenger's position in the vehicle.
- X-type piping of brake lines have been adopted for the front and rear wheels.
- Audible wear indicators are used on the front and rear brake pads to warn the driver of the wear limit.

SERVICE QUALITY IMPROVEMENTS

- Diagnostic function has been adopted to ABS for easier inspection.
- Brake fluid reservoir, master cylinder, and brake booster have been integrated for downsizing and better serviceability.



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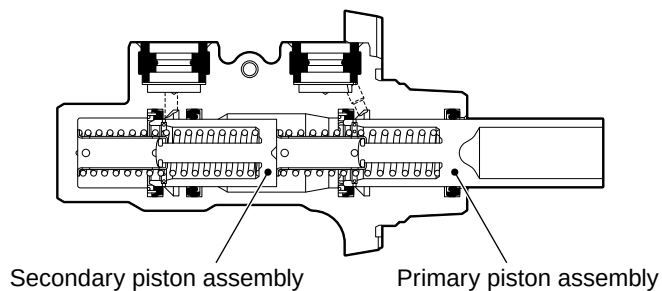
SPECIFICATIONS

Item		Specifications
Master cylinder	Type	Tandem type
	I.D. mm (in)	20.6 (0.81)
Brake booster	Type	Vacuum type, single
	Effective dia. of power cylinder mm (in)	254 (10.0)
	Boosting ratio	6.5 (Pedal pressure: 60N) 8.5 (Pedal pressure: 140N)
Rear wheel hydraulic control method		Electronic control braking force distribution system (EBD)
Front brake	Type	Floating caliper 1 piston ventilated disc (V6-S57)
	Disc effective dia × thickness mm (in)	294 × 26 (11.6 × 1.02)
	Wheel cylinder I.D. mm (in)	57.2 (2.25)
	Pad thickness mm (in)	10.0 (0.39)
	Clearance adjustment	Automatic adjustment
Rear brake	Type	Floating caliper 1 piston solid disc (S6-S38)
	Disc effective dia × thickness mm (in)	302 × 10 (11.9 × 0.39)
	Wheel cylinder I.D. mm (in)	38.1 (1.50)
	Pad thickness mm (in)	10.0 (0.39)
	Clearance adjustment	Automatic adjustment

CONSTRUCTION DESCRIPTION

MASTER CYLINDER

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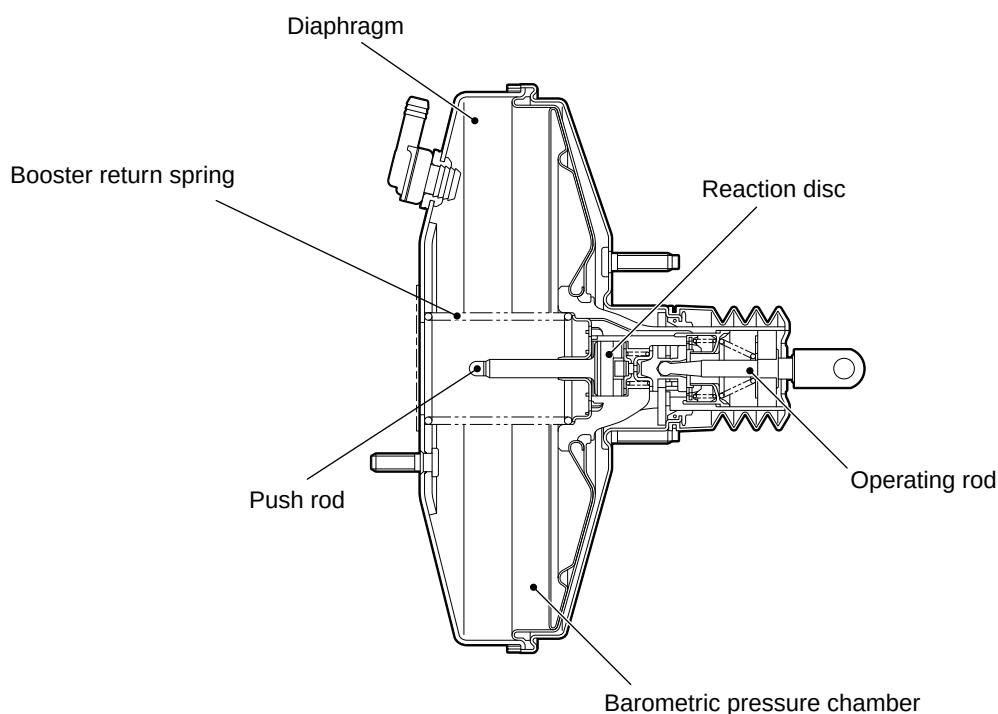


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The master cylinder is a tandem type and is integrated with the brake fluid reservoir with the level sensor.

BRAKE BOOSTER

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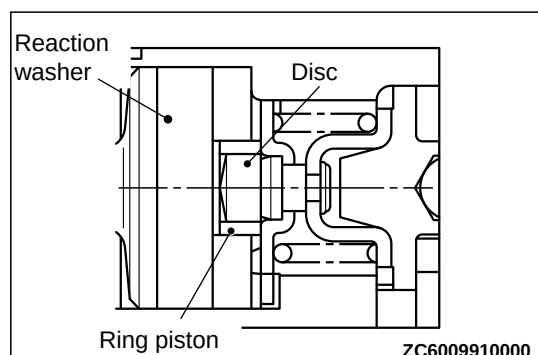
10-inch single brake booster has been installed. The variable boost ratio mechanism which increases the brake booster gain has been adopted.

VARIABLE BOOST RATIO MECHANISM

The variable boost ratio mechanism changes the input/output characteristics of the brake booster in two phases by changing the reaction force applied to the valve plunger during the assist phase.

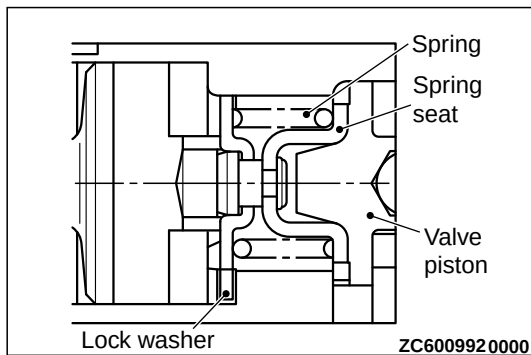
AT INITIAL BRAKE ASSIST

1. When the brake pedal is not depressed (no input load applied), the reaction washer is not deformed.
2. When the brake pedal is depressed, the reaction washer is deformed to reach the ring piston and disc, then the first input characteristics begin (Ratio 1).

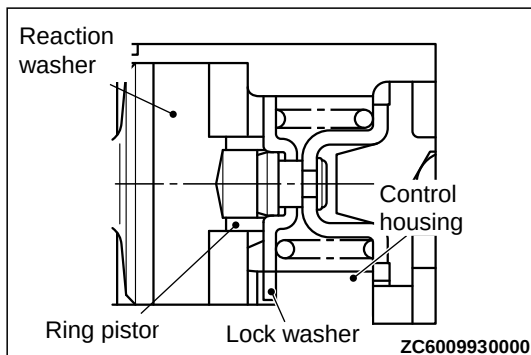


AT AN INCREMENT OF ASSIST RATIO

1. The reaction washer is further deformed and pushes down the ring piston and lock washer, deflecting the spring. All the force pushing the ring piston and disc is transferred to the brake pedal via spring seat and disc as the reaction force.

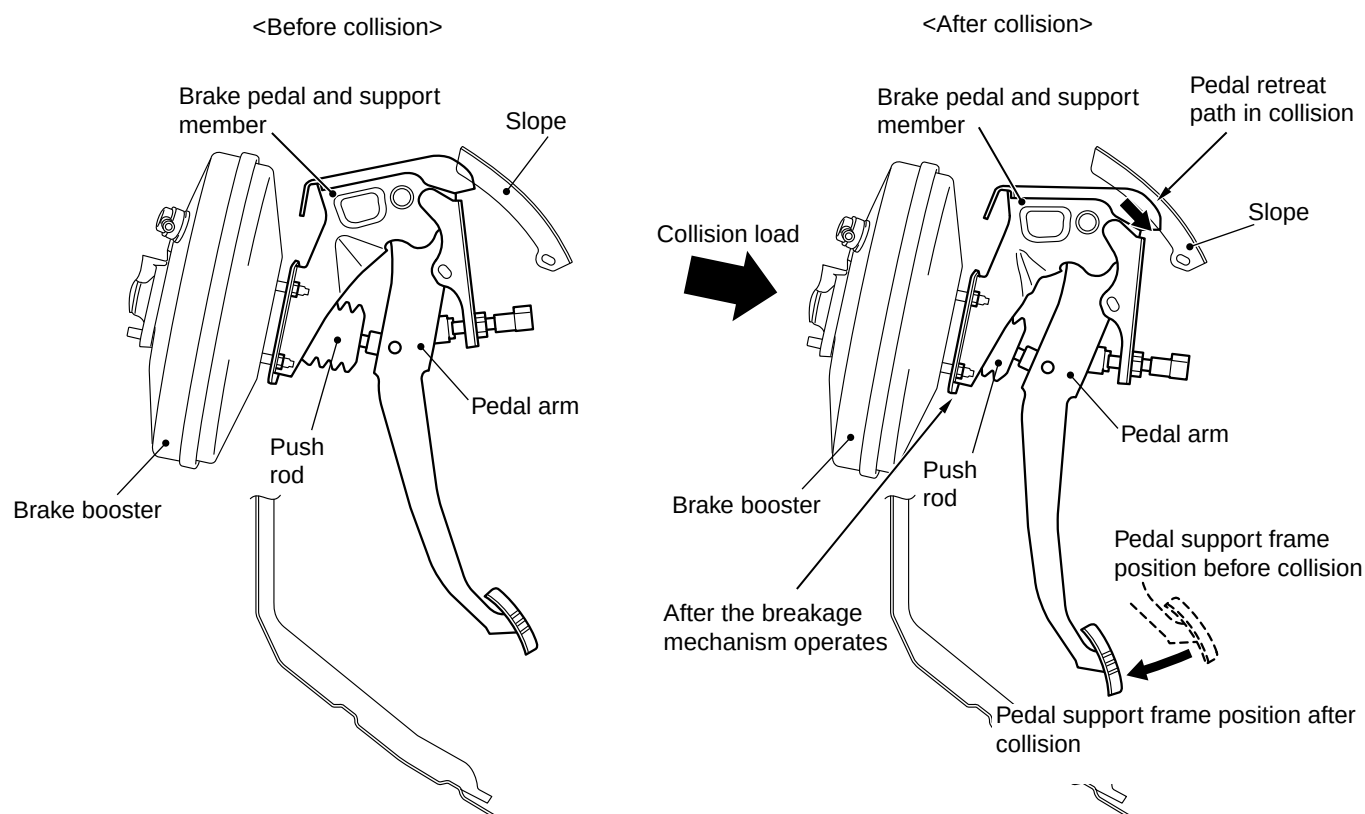


2. The reaction washer is then further deformed, and when the lock washer makes contact with the control housing, the input characteristics change. All the force applied from the reaction washer to the ring piston is now transferred to the control housing via the lock washer, so no force is applied to the brake pedal. The second input characteristics (Ratio 2) begin.



BRAKE PEDAL

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The brake pedal retreat suppression mechanism restrains the retraction of the brake pedal surface during a frontal collision, to reduce the shock to the driver's feet.

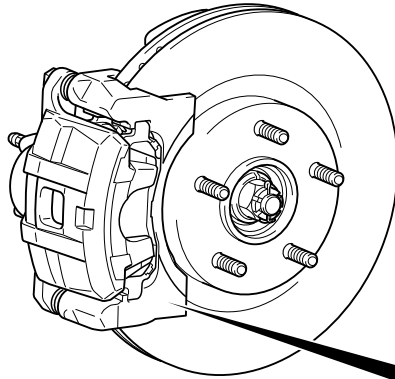
When the brake booster is crushed rearward by the engine retreat during a frontal collision, the installation

surface of the brake pedal is retreated. In this case, the end of the pedal support is forcibly slid down and back by the interference with the slope mounted on the front deck crossmember assembly. At the same time, the linkage (comprised of the pedal support, pedal arm, and push rod) moves the brake pedal surface forward.

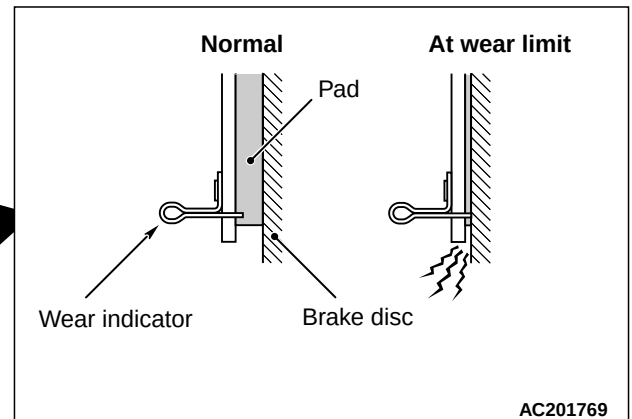
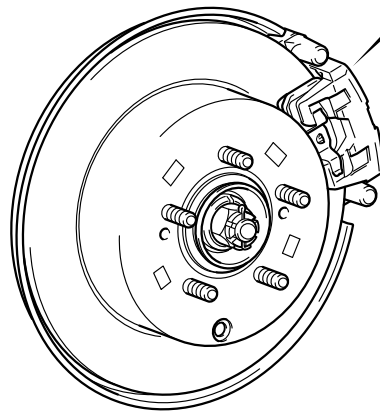
DISC BRAKE

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<Front disc brake>



<Rear disc brake>



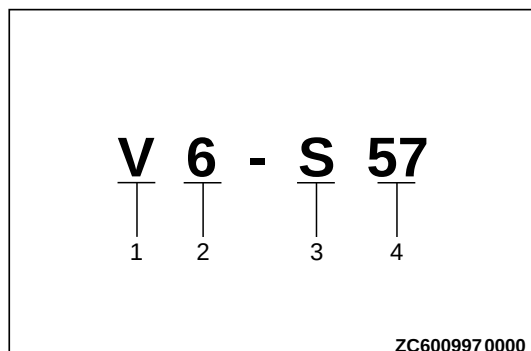
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1-piston ventilated disc brake (V6-S57) has been installed to the front brake, and 1-piston solid disc brake (S6-S38) has been installed to the rear brake.

An audible wear indicator has been adopted to the front brake LH pads and rear brake LH/RH pads to warn the driver of the wear limit.

The outer disc type brake disc which can be tightened together with the wheel has been introduced for better serviceability.

DISC BRAKE DESIGNATION



N o.	Item	Contents
1	Brake disc type	V: Ventilated S: Solid
2	Brake size (Minimum applicable disc wheel)	6: 16-inch
3	Number of pistons	S: 1 (Floating type)
4	Piston size	57: Φ 57.2 mm (2.25 in) 38: Φ 38.1 mm (1.49 in)

N o.	Item	Contents
	(Rounded integral value)	