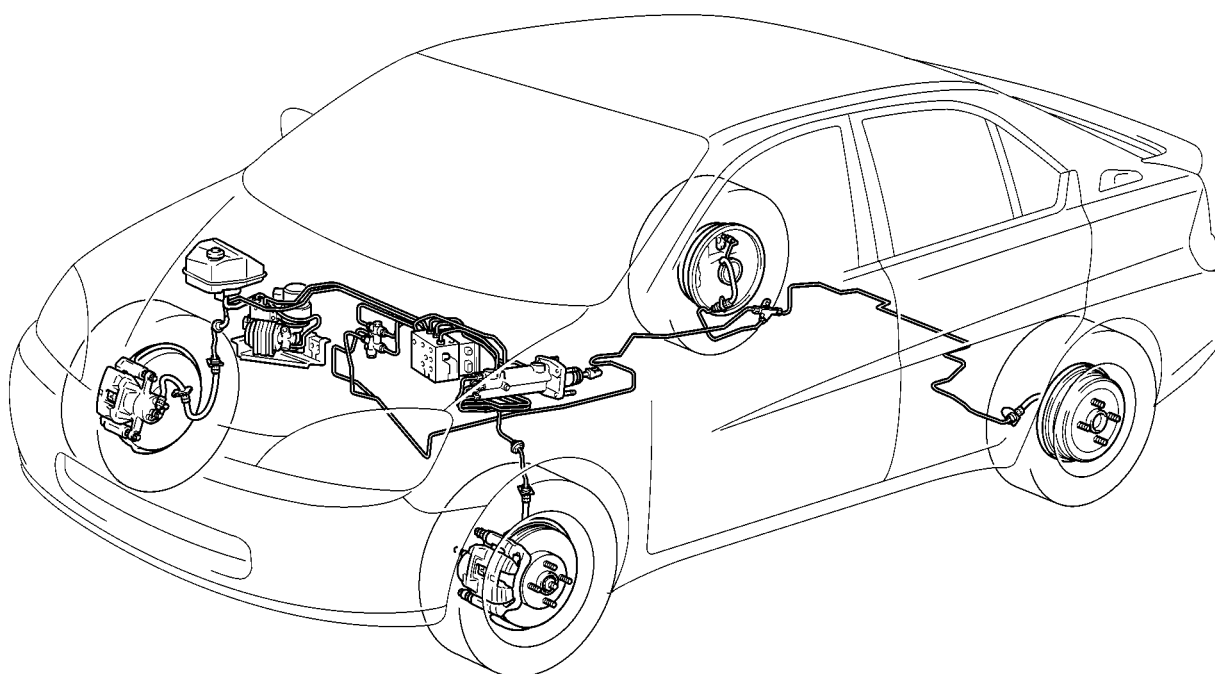


BRAKES

■ DESCRIPTION

- The front brakes use ventilated disc brakes and the rear brakes use leading-trailing drum brakes.
- To adjust the clearance between the shoes and drum, the rear drum brakes uses the incremental type hydraulic auto adjuster.
- On the Prius uses a pedal type parking brake that is released by pressing the pedal further.
- A hydraulic brake booster in which the master cylinder and booster are integrated has been adopted.
- The Prius has adopted the ABS with EBD (Electronic Brake force Distribution) as a standard equipment.
- A regenerative brake system, which uses the MG2 that is used for driving the vehicle as a generator to efficiently convert the energy that is created during braking has been adopted. This system enables to collect more driving energy by having the control to cooperate the hydraulic brake and the regenerative brake.



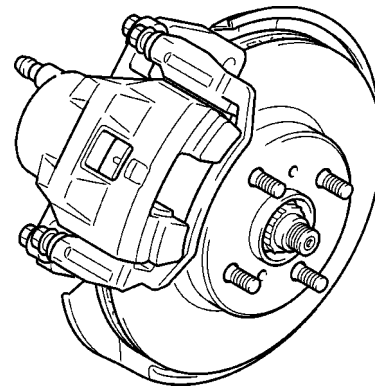
► Specifications ◀

Master Cylinder	Type	Single	
	Diameter	mm (in.)	22.22 (0.87)
Brake Booster Type			Hydraulic
Front Brake	Type	Ventilated Disc	
	Caliper Type	PE54	
	Wheel Cylinder Dia.	mm (in.)	54.0 (2.13)
	Rotor Size (D x T)*	mm (in.)	255 x 22 (10.04 x 0.87)
Rear Brake	Type	Leading-Trailing Drum	
	Wheel Cylinder Dia.	mm (in.)	20.64 (0.81)
	Drum Inner Dia.	mm (in.)	200 (7.87)
Brake Control Valve Type			P & B Valve
Parking Brake	Type	Drum	
	Size	mm (in.)	200 (7.87)
	Lever Type	Pedal	
ABS with EBD			STD

*: D: Outer Diameter, T: Thickness

■ FRONT BRAKE

The PE54 type brake calipers and ventilated disc rotor have been adopted. These brake calipers are lightweight and compact to realize excellent brake performance.

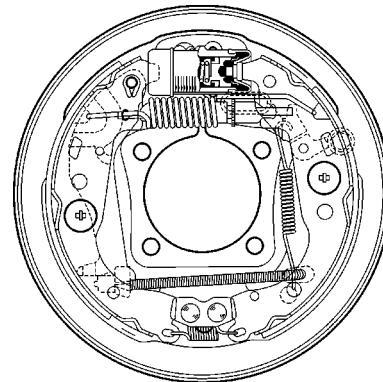


182CH39

■ REAR BRAKE

General

- The leading-trailing type drum brakes using drums with a 200 mm (7.87 in.) inner diameter have been adopted.
- A hydraulic system that adjusts the clearance between the shoes and the drum has been adopted.

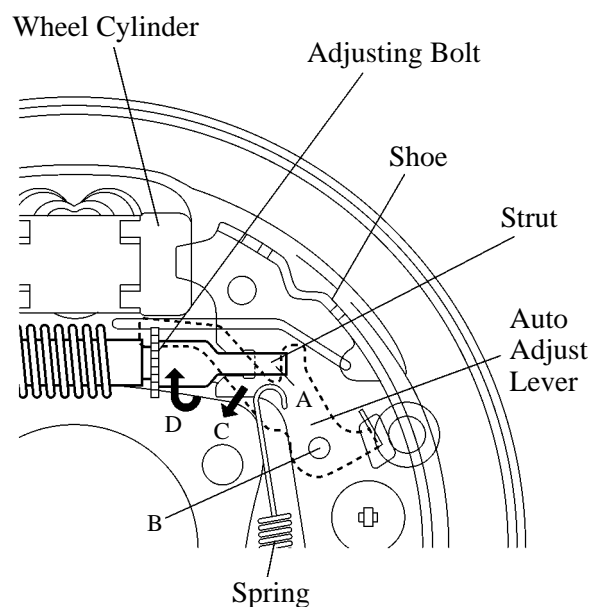


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Incremental Type Hydraulic Auto Adjuster

Ordinarily, when the rear brakes are applied, the shoes expand until they come in contact with the inner surface of the drum.

While the auto adjust lever remains in contact with point A of the strut, the spring force causes the auto adjust lever to rotate in direction C, with adjust lever point B as the fulcrum. At this time, if the shoe clearance exceeds a predetermined amount, the tip of the auto adjust lever rotates the adjusting bolt in direction D by 1 tooth, causing the strut to move for a predetermined amount towards the direction that expands the shoes. As a result, by pushing and expanding the initial position of the shoes, an appropriate amount of clearance is maintained between the shoes and the drum.



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■ PARKING BRAKE

1. General

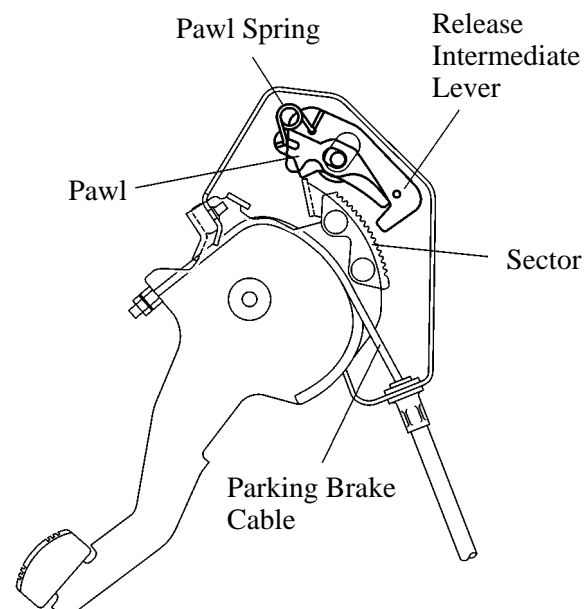
On the Prius uses a pedal type parking brake that is released by pressing the pedal further.

2. Construction

A pedal type parking brake pedal consists mainly of a parking brake pedal, sector, pawl, release intermediate lever, pawl spring and pedal return spring.

The parking brake pedal and sector are integrated, and parking brake cable is attached to the parking brake pedal.

The pawl and the release intermediate lever are linked by the pawl spring and operate together along with the movement of the pedal.



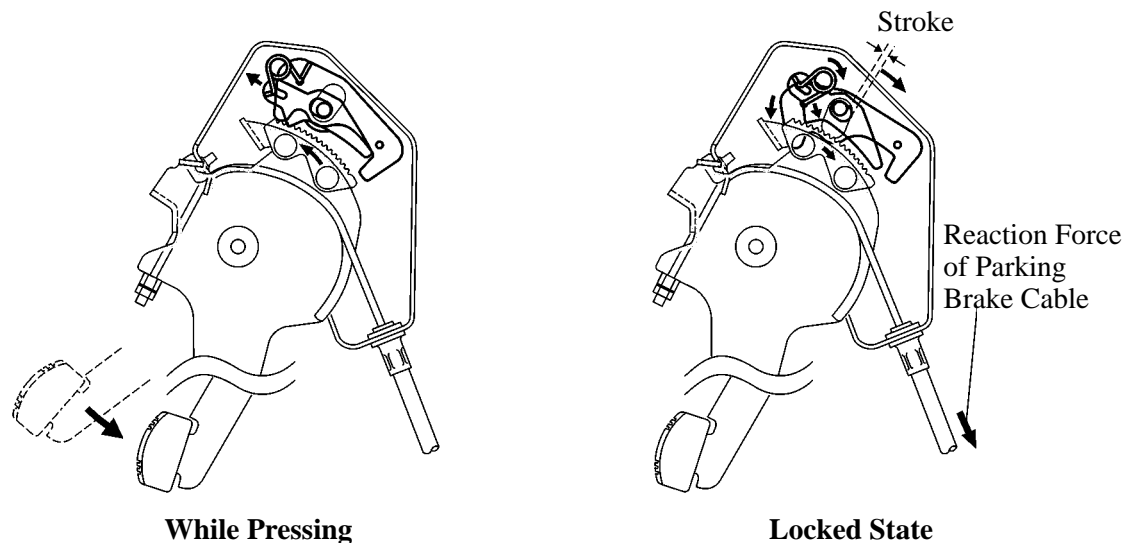
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3. Operation

During Applying

Pressing the parking brake pedal causes the sector's ratchet to engage with the pawl. Then, when the pressure on the brake pedal is released, the reaction force of the parking brake cable and the force of the pedal return spring cause the pawl and sector, which remain engaged, to return (only for the stroke). As the result, the parking brake becomes locked.

At this time, because the relative installed position of the pawl spring changes, the force of the pawl spring that was applied to the intermediate release lever switches its direction and now pushes the intermediate release lever down.



During Releasing

When the parking brake pedal is pressed again, as the reaction force of the parking brake cable and the force of the pedal return spring will not be applied to the pawl, the action of the pawl spring causes the pawl to lift. As a result, the pawl is released from the sector's ratchet.

Next, when the parking brake pedal returns to its initial point, the lift portion of the parking brake pedal causes the intermediate release lever to lift. The pawl is then pushed down by the force of the pawl spring and returns to its initial state.

