STEERING

■POWER STEERING

1. Power Steering Gear

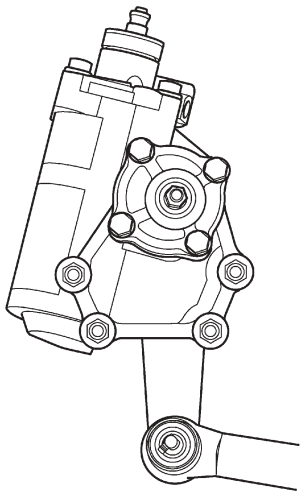
- All models with the power steering use a compact and lightweight steering gear. Its basic operation is the same as the previous models.
- On the wide cab models, the steering gear bracket has been discontinued.

▶ Specifications ◀

Cab Type		Regular			
Model		New Model		Previous Model	
GVWR		6.5 t or less	more than 6.5 t	6.5 t or less	more than 6.5 t
Steering Gear Type		Recirculating Ball Steering Gear		←	
Cylinder Diameter	mm (in.)	80.0 (3.15)		85.0 (3.35)	
Module		6		7	
Gear Ratio		22.6		23.4	
Control Pressure	MPa	9.3	11.3	7.4	8.3
Basic Pumping Volume	cc/rev	13.3		←	
Weight	kg (lb)	16.0 (35.2)		21.0 (46.2)	

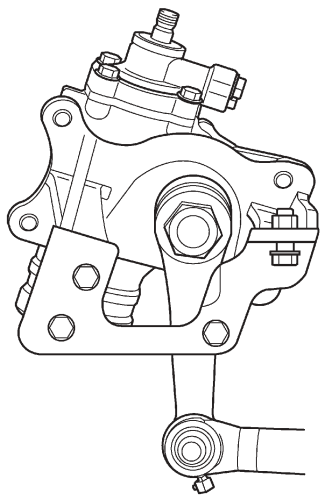
Cab Type		Wide			
Model		New Model		Previous Model	
GVWR		6.5 t or less	more than 6.5 t	6.5 t or less	more than 6.5 t
Steering Gear Type		Recirculating Ball Steering Gear		←	
Cylinder Diameter	mm (in.)	85.0 (3.35)		←	
Module		6		7	
Gear Ratio		20.9		23.4	18.6
Control Pressure	MPa	9.3	11.3	7.4	9.3
Basic Pumping Volume	cc/rev	13.3		13.3	
Weight	kg (lb)	17.0 (37.4)		21.8 (48.0)	

▶ Wide Cab Model ◀



04VCH015Y

New



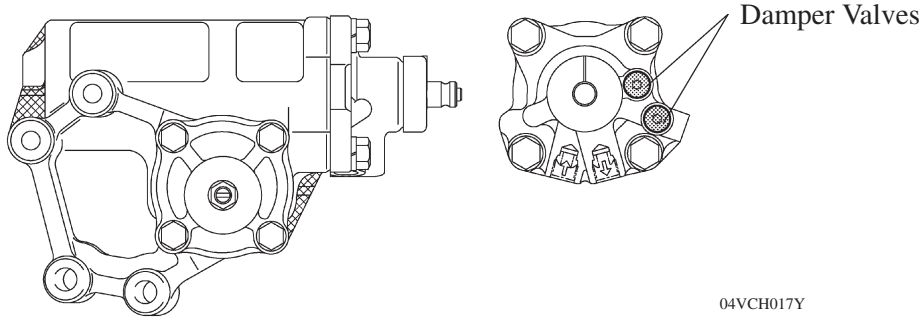
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Previous

2. Damper Valve Mechanism

General

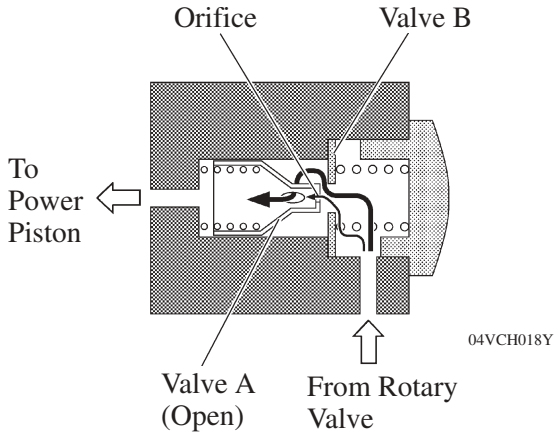
The RHD wide cab models newly use a damper valve mechanism. This suppresses the back flow of the power steering fluid created by the reaction force from the wheels, thus reducing the vibration at the steering wheel.



Mechanism

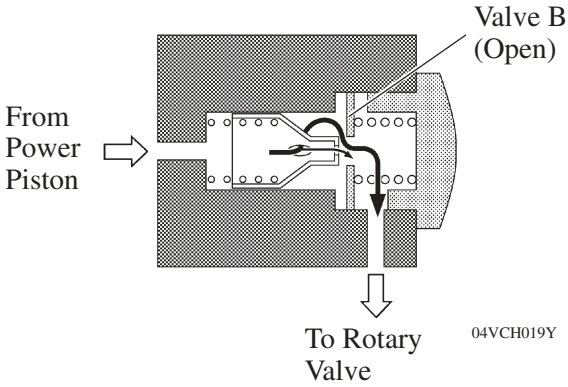
1) Turning Steering Wheel

When the driver turns the steering wheel, a large volume of power steering fluid flows from the rotary valve. The power steering fluid that cannot pass through the orifice compresses valve A, thus opening the large-diameter port. As a result, a large volume of power steering fluid flows to the power piston.



2) Returning Steering Wheel

The power steering fluid from the power piston compresses valve B, opens the large-diameter port, and flows to the rotary valve.



3) Steering Wheel in Neutral Position

When the vehicle is driving straight, the power steering fluid that is input back from the wheels passes only through the orifice. This creates a damping effect and reduces the vibration at the steering wheel.

