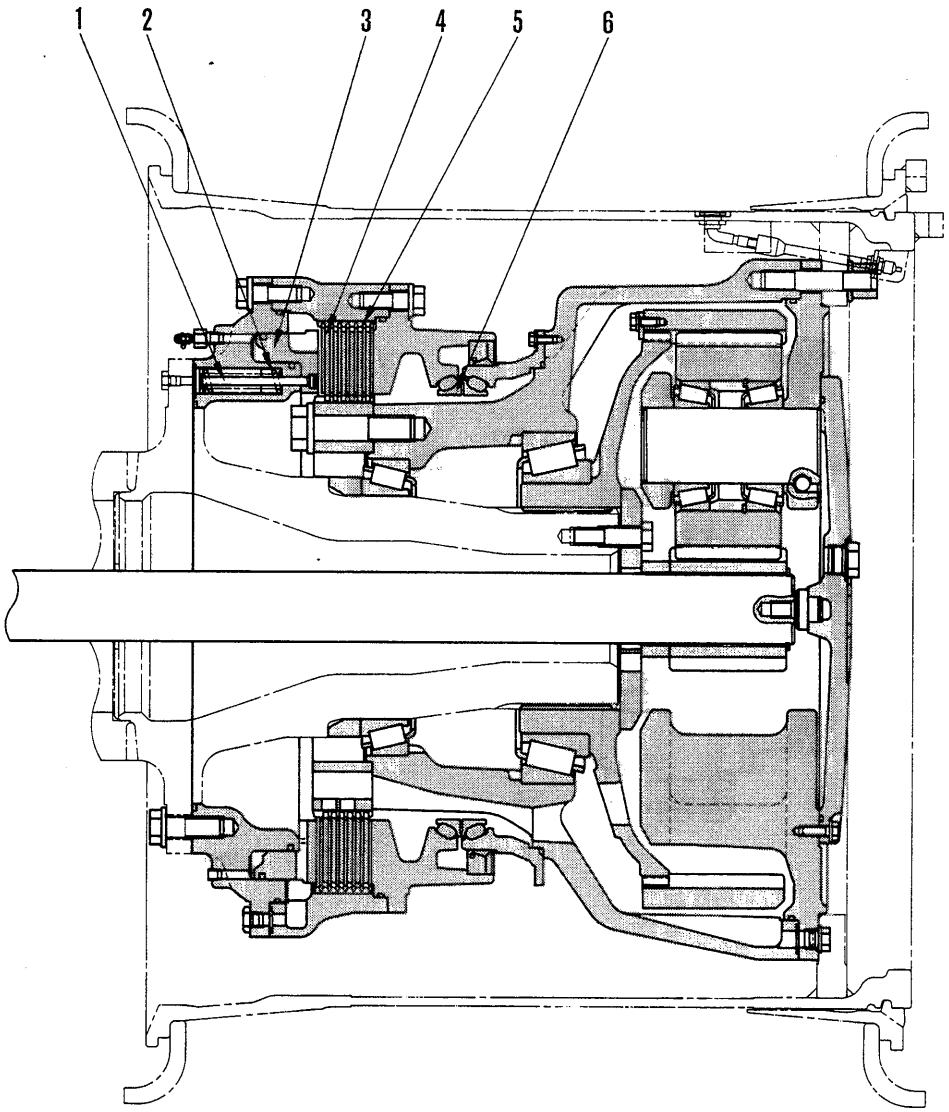
BRAKE



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1. Guide pin
2. Return spring
3. Brake piston
4. Plate
5. Disc
6. Floating seal

FUNCTION

- The brakes are wet-type multiple disc brakes, and are fitted to all four wheels.

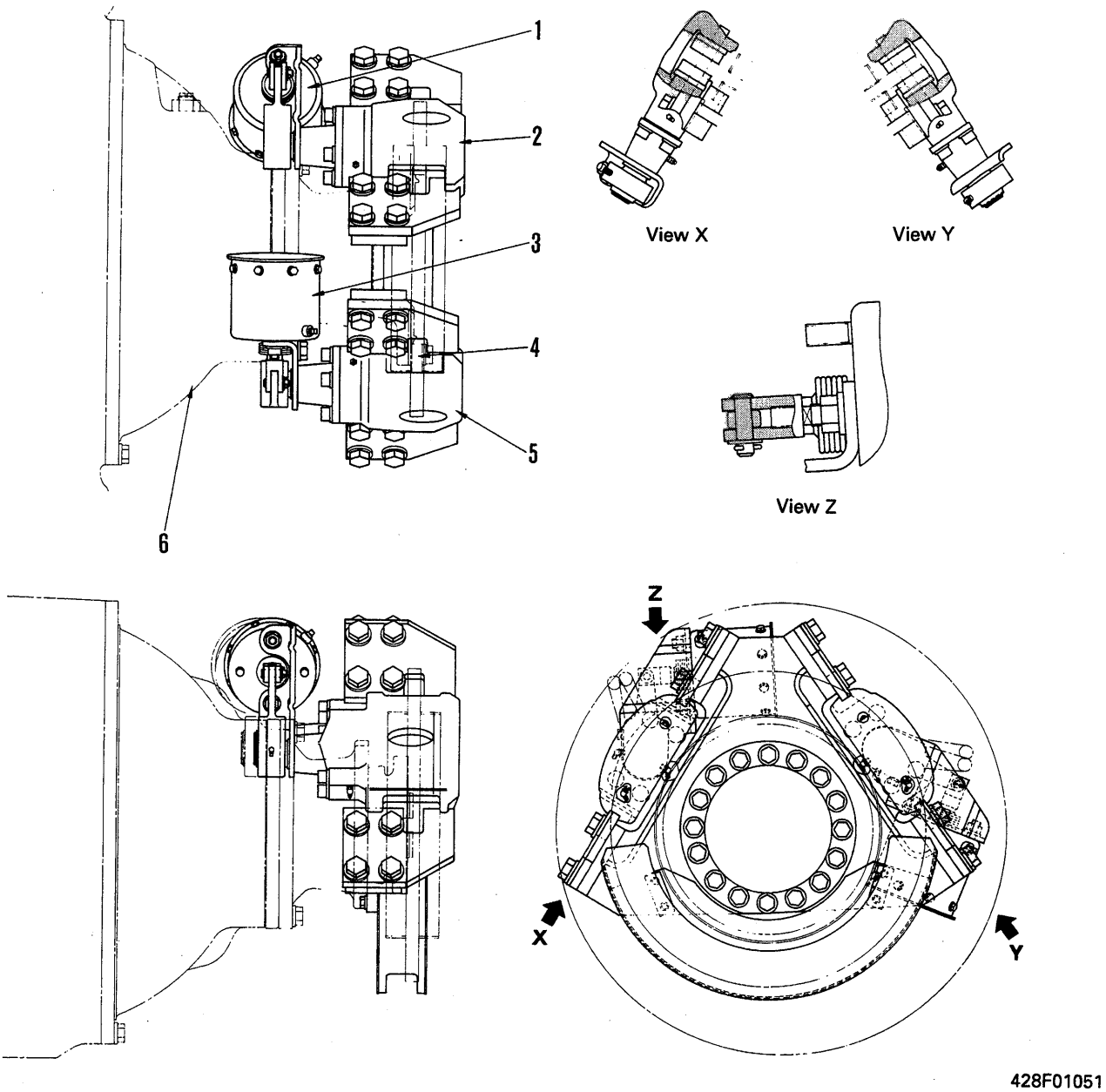
OPERATION

- When the brake pedal is depressed, pressure is applied to the brake oil by the master cylinder of the brake chamber. Brake piston (3) is moved to the right, and disc (5) is kept in close contact with plate (4). Disc (5) rotates together with wheel, so when it is held, the rotation is stopped and the brakes are applied to stop the machine.
- When the brake pedal is released, the pressure on the rear of brake piston (3) is released. The piston is then moved to the left by the force of return spring (2) and the brake is released.

PARKING BRAKE

OUTLINE

- The parking brake is a disc type and is installed on the front axle.
- The force of the spring inside spring cylinders (1) and (3) is used to apply the brake mechanically; it is released by air pressure.
- The parking brake caliper is fixed to the front differential case.
  The disc is installed to the differential yoke and rotates together with the coupling.



1. Spring cylinder
2. Caliper
3. Spring cylinder
4. Disc
5. Caliper
6. Differential case

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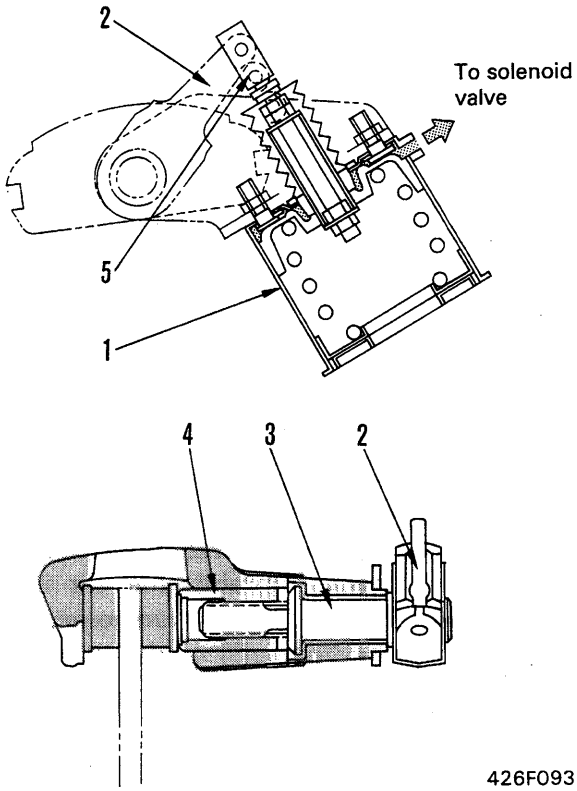
Brake operated

- When the parking brake switch lever is moved to ON, solenoid valve is actuated and the air from the air tank is shut off by valve. At the same time, the air from the spring cylinder is released to the atmosphere from between valve and body. Therefore, the piston of spring cylinder (1) is pushed by the tension of the spring, so when lever (2) is pushed, the parking brake is applied.
- Lever (2) rotates piston shaft (3) and moves piston (4) to the axial direction. Therefore, the pads are pushed against the disc, and the parking brake is applied.



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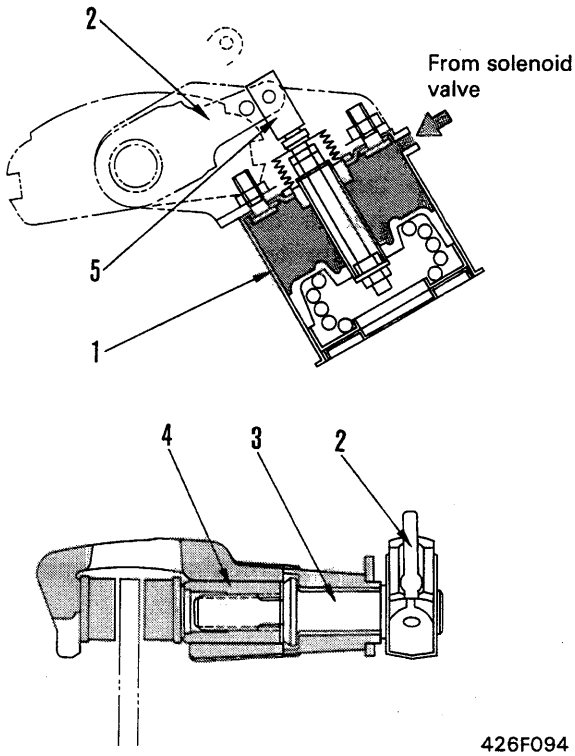
Brake released

- When the parking brake switch is turned to OFF, the solenoid valve is actuated and valve closes the exhaust port.
  At the same time the air in the air tank enters the top part of the piston of spring cylinder (1). It overcomes the force of the spring and pushes the piston. This pulls rod (5), moves piston (4) and releases the brake.
- However, if the air pressure inside the tank drops to a level where it cannot maintain the normal operation of the brake, the pressure sensor installed to the tank sends an electric signal to the solenoid valve. This releases the spring cylinder circuit, and the parking brake is automatically applied.



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