

Raybestos Bulletin 18-02

Frozen Wheel Cylinder

Date: 01-29-18

Vehicles Involved: All with Drum Brakes

Condition: Rapid Front Brake Wear, Lack of Stopping Ability

Rapid front brake wear on vehicles with rear drum brakes is often a sign of a problem with the rear brake system. If you have replaced your front pads several times and your brake shoes aren't worn, the problem could be a frozen wheel cylinder.

Your rear brakes will not apply when you have a frozen wheel cylinder. This leaves only the front disc brakes to stop the vehicle.

Frozen wheel cylinders are caused by rust build up on the inside of the wheel cylinder. This rusting usually occurs when there is moisture in the brake fluid. Most brake fluid is hygroscopic in nature, meaning it absorbs moisture over time. DOT 3, DOT 4 and DOT 5.1 are hygroscopic fluids. Enough moisture in your brake fluid will corrode the metal parts of the hydraulic system. This includes the wheel cylinder.

Repair Procedure:

When inspecting the rear brakes, tap the brake shoes with the palm of your hands back and forth (See Figure 1).

Figure 1



Don't tap too hard. Only tap hard enough to ensure that the brake shoe link pins are moving freely. If they move freely, the wheel cylinder is still working. If they don't move freely, you have a frozen wheel cylinder that you should replace.

We recommend you follow this procedure on any vehicles parked for long period of time (snow plows, classic cars, landscaping vehicles, farm trucks, etc.).

To prevent a frozen wheel cylinder, we recommend:

- Keeping the cap sealed on the master cylinder and only opening it to test or add brake fluid.
- Only use fresh brake fluid. Brake fluid only has a shelf life of a couple weeks once opened.
- Test your brake fluid yearly for moisture content. Fluid with a moisture content above 3-4% should be replaced.