

WABCO

Technical Bulletin

Hydraulic Power Brake (HPB) Master Cylinder Reservoir Cap Inspection and Replacement Guidelines

Navistar Truck and Bus with Full Power
Brake (FPB) System

Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

⚠ WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

How to Obtain Additional Maintenance, Service and Product Information

If you have any questions regarding the material covered in this bulletin, or for more information about the WABCO product line, please contact the WABCO Customer Care Center at 855-228-3203, by email at wnacustomercenter@wabco-auto.com, or visit our website: wabco-na.com.

How to Obtain Parts

To obtain parts, call the WABCO Customer Care Center at 855-228-3203.

Hydraulic Power Brake (HPB) Master Cylinder Reservoir Cap Inspection

The full power brake system uses a master cylinder reservoir with additional volume to feed brake fluid to the hydraulic compact unit (pump system). To protect the fluid and to prevent pressurizing the reservoir, a venting cap is installed at the reservoir inlet. This cap prevents water and dust from entering the system. Figure 1 and Figure 2.

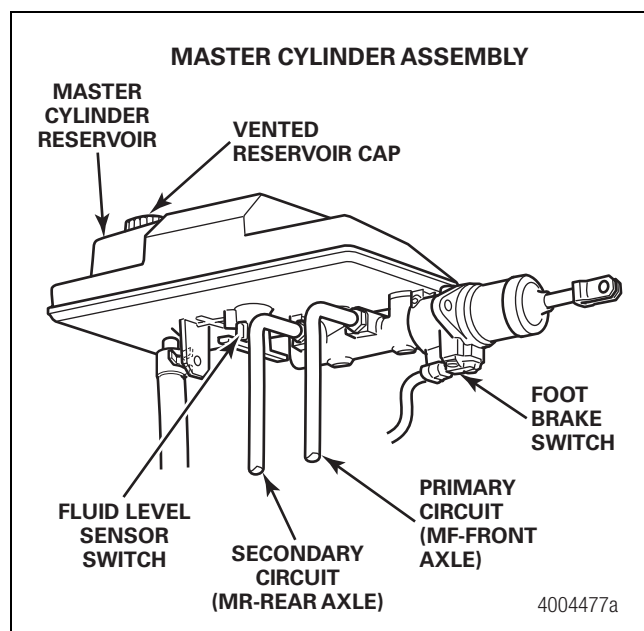


Figure 1

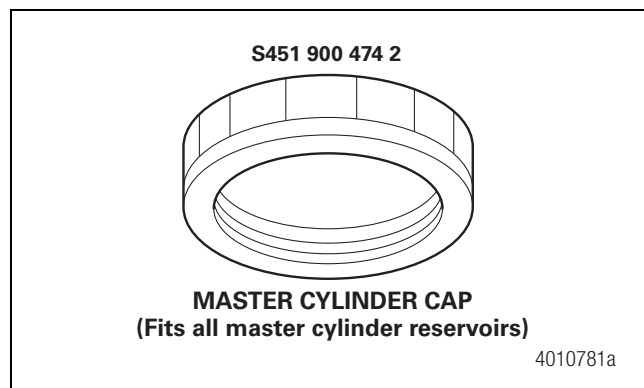


Figure 2

Much like the air inlet filter for an internal combustion engine, the filter mesh in this cap can become clogged with particles over time.

WABCO recommends you inspect and replace this cap as needed as part of an annual vehicle inspection for preventive maintenance.

At any time, the cap can be inspected to determine if the filter is becoming clogged. When inspecting the cap, verify the fluid level is not exceeded. Refer to technical bulletin TP-09121 for fluid fill and level inspection.

Inspection Guidelines

Verify the reservoir cap is venting correctly using the following procedure:

1. If a hissing noise is heard when removing the cap, replace the cap.
2. If no noise is heard, perform the following.
 - A. Deplete the accumulators using TOOLBOX™ Software, or disconnect the battery or pull the pump fuses and press the brake pedal a minimum of 30 times.
 - B. Reconnect the battery or fuses, if pulled, and measure the time it takes for the pumps to run and shut off.
 - C. If the pumps shut off before 60 seconds is reached and the failure disappears, replace the cap.

Affects of Clogging the Filter Mesh

If the filter has become clogged, then a vacuum can build inside this reservoir. The build-up of vacuum affects the HPB pump system and its ability to charge the accumulators. Due to the starvation of fluid to the pump system, an accumulator charging fault may occur. For example:

- SID 57 FMI 10, or SID 60 FMI 10 as indicated by WABCO TOOLBOX™ Software.
- This fault can be attributed to symptoms described as: ABS and “Brake pressure” fault lamps illuminated and an “audible buzzer” activation. Lamps for optional features may also illuminate (ATC or Traction Control and Park Brake Service). Figure 3.

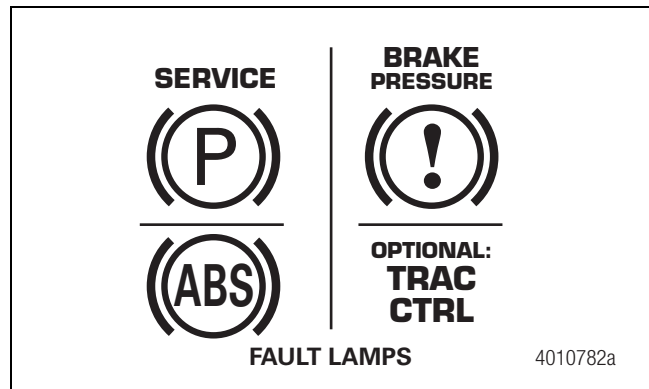


Figure 3

NOTE: The fluid level in this reservoir will move up and down as the accumulator charge varies. The fluid volume in this reservoir can change by as much as 1.2 L (40.58 oz) when the pump system fills both accumulators when the ignition key is turned on.

NOTE: Take care to ensure the fluid is at the correct level to avoid over-filling the system and to avoid soaking the cap’s filter mesh in brake fluid when the system depletes. According to the filling procedure, the fluid level should be at the “Max” line when the accumulators are depleted. With the system fully charged, the fluid level should be 0.98-inch (25 mm) below the MAX line. Refer to technical bulletin TP-09121 for additional information. Figure 4.

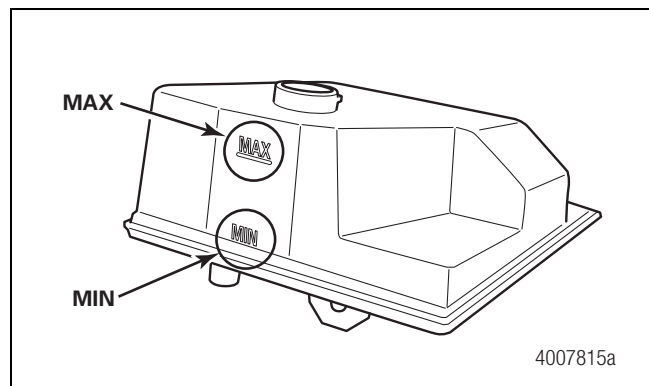


Figure 4

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