

Technical Bulletin

Bulletin No: TCH-002-014

Effective Date: 2/29/2012

Cancels: N/A

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Subject: **Bendix® Air Disc Brake Actuator Vent Hole Orientation**

Issue:

It has come to our attention that some Bendix® brand air disc brake actuators in service have the bottom vent hole plugged in error. This allows moisture and contaminants to enter, but not drain, causing corrosion and premature failure of the actuator.

Background:

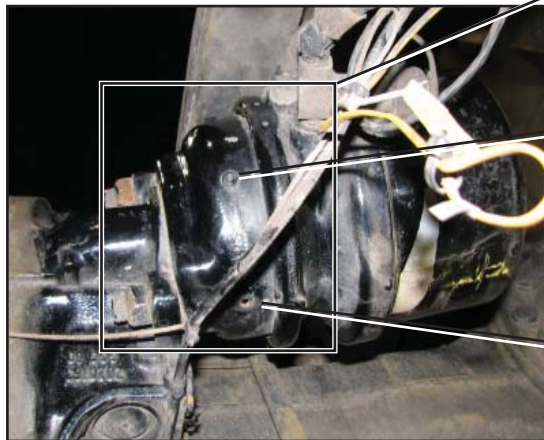
When Bendix Spicer Foundation Brake Systems LLC (BSFB) introduced brake actuators for Bendix® brand air disc brake calipers in North America, the actuators were manufactured with one vent hole on the perimeter of the non-pressure side of the actuator. This vent hole was oriented so that with the actuator mounted on a vehicle, the hole would point down to the road surface to allow moisture and contaminants to drain.

In 2006, a change was made to facilitate flexibility in manufacturing and servicing. Five additional vent holes were placed around the perimeter of the actuator and removable plugs were placed in five (5) of the six (6) holes, leaving one open vent hole. A variety of actuator configurations were made available for OE installations to ensure that the open hole was properly positioned in each installation.

With the increased demand of air disc brakes came an increase in unique applications and configurations. As such, it is believed that, at times, the vent plug location may have been overlooked in the specification or manufacturing process as production ramped up. If the open vent hole location is not properly positioned, the potential issue referenced above may occur.

Other scenarios that may lead to this same condition include 1) failure to remove the bottom plug when a service replacement was installed; or 2) parts that have been used in unapproved orientations. There are no indicators leading to a particular incident, manufacturer, or application that can point to an isolated segment (or population) of actuators or vehicles that are incorrect.

Since 2006, BSFB has made improvements to the caliper sealing interface, boot, and return spring coating. Along with these improvements, the actuators were tested – comparing those with five(5) holes plugged and the bottom open to those with six (6) holes open – with negligible performance differences. This means that, as long as the bottom hole (closest to the road surface) is open the other holes do not need to be plugged.



Air Disc Brake Actuator - Bottom View Shown

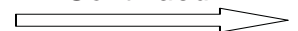
Plugged Vent
(All other vent
holes may be
open or closed)

Open Vent
(Bottom vent hole
must be open)



Enlarged View

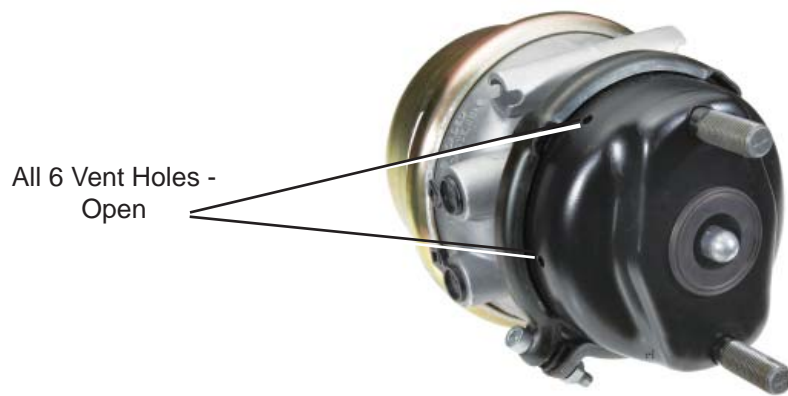
Continued



Subject: Bendix® Air Disc Brake Actuator Vent Hole Orientation

Action: Vehicles with Bendix® brand air disc brake actuators should be inspected to verify that the vent hole closest to the bottom of the actuator is open. If a plug is found in this location, it must be removed to allow proper draining. The removed plug can be discarded. It is not necessary to place it in the other open port. Removal of the plug is easily completed by pulling it out with a pair of needle nose pliers. Note that the removal of this plug will not impact the actuator warranty.

Since testing has shown that having more than one vent open does not impact either performance, or the life of the product, the plugs are being removed from all Bendix air disc brake actuator designs. This will eliminate the possibility of water and contaminants collecting in the actuators, reduce part numbers and inventories, and make servicing the actuators easier.



New OE and Aftermarket
Air Disc Brake Actuator Design

If you have questions regarding this bulletin, please call the Bendix Tech Team at 1-800-AIR-BRAKE (1-800-247-2725). Representatives are available Monday - Friday, 8:00a.m. - 6:00p.m. E.T.