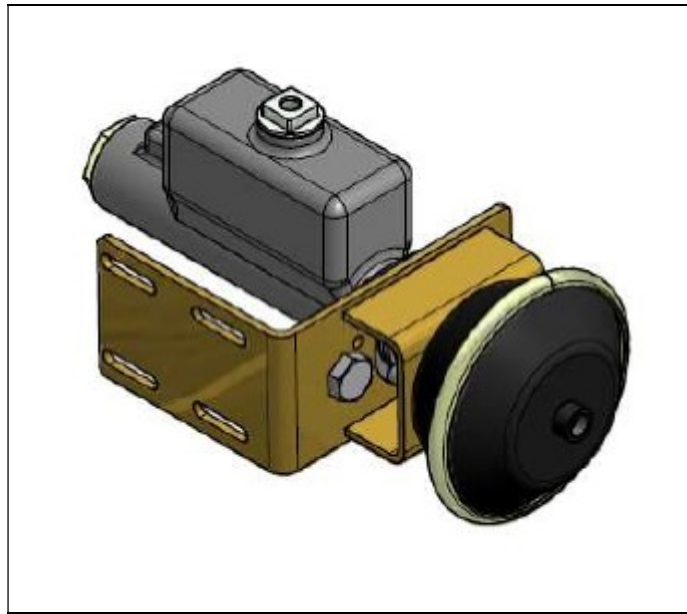




## PRODUCT TECHNICAL BULLETIN 36355 MINECRUISER BRAKE BOOSTER IMPROVMENT



**Date:** 24-06-2024  
**Issue:** A  
**Prepared for:** Industry/ End Users

**Applicable machines:** MineCruiser Mk6, Mk7 & Mk8

## Background:

The air over hydraulic brake booster converts applied air pressure into service brake pressure in the Minecruiser brake circuit. Over the past few years, numerous reports have been made of hydraulic oil leaking from the protective boot between the hydraulic master cylinder and the air chamber on the brake booster assembly, P/N BK00331. Usually, this does not result in a loss of applied pressure, but fluid weeping past the secondary seal.

A detailed root cause investigation into the leaking has identified that there is potential for the pushrod between the air chamber and the hydraulic booster to stray from its axial alignment. This misalignment can lead to side loading of the hydraulic piston arrangement and result in premature failure of the piston seal, allowing fluid to leak from the push rod end.



Figure 1: Hydraulic piston assembly scuffing



Figure 2: Air chamber pushrod.

## Improvement:

- A DFMEA was conducted for an alternate pushrod assembly, with a guide bush arrangement.
- The alternate guide bush and non-threaded pushrod assembly were manufactured and cycle tested on a test rig simulating an in service condition.
- The assembly was tested in service with no leaks detected.

## Communication:

- Cougar has developed an alternative guide bush and push rod assembly that prevents misalignment and premature failure of the hydraulic piston seal.
- The improvement has resulted in a price increase on the BK00331 and handed 7-091051-700 brake boosters, due to additional parts and labor cost associated with this improvement.
- The new boosters are distinguishable by being painted blue and have inspection certificates for QA and traceability purposes.

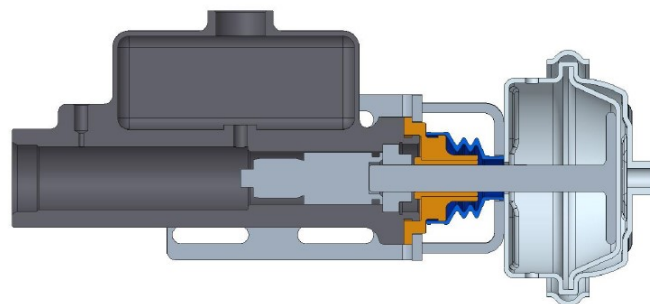


Figure 3

Figures 3: new guide bush arrangement (Gold)

Please distribute this bulletin to all relevant personnel

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