valley longwall
INTERNATIONAL
DIESEL DIVISION

Technical Bulletin / Safety Alert

Unique ID No: TBS2011-TBSA-02 **Rev:** 0

Subject: VLI Driftrunner Transport Braking System – Service Brake Diaphragm

Date: 16th November 2011

Applicable to: Design Registered Transport Braking Systems
(MDR 083991 TBS, MDR 083991 TBS-1 & MDR 096013 TBS)

Note: Minimum PPE required to carry out any inspections contained in this TBSA shall be protective clothing & footwear, safety glasses, hearing protection & any site specific requirements. A JSA or equivalent should be carried out prior to performing these tasks.

Introduction:

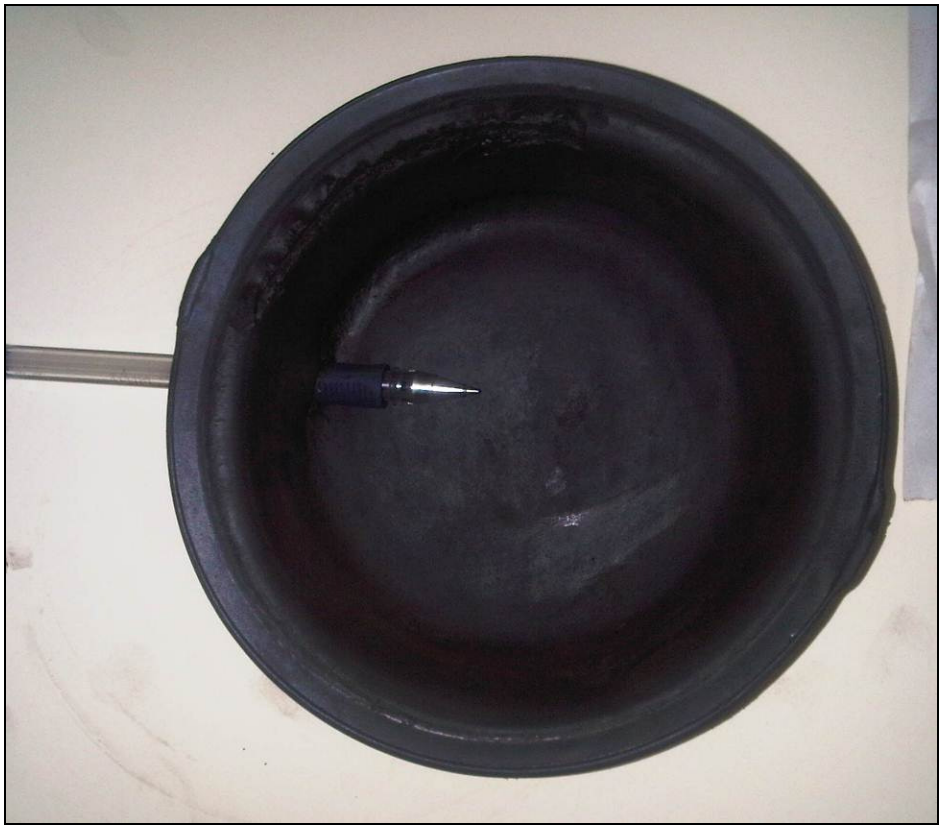
VLI Diesel Division (VLIDD) advises the recent occurrence of an incident in relation to the transport braking system (covered by design registration no. MDR 083991 TBS) at a QLD Coal Mine.

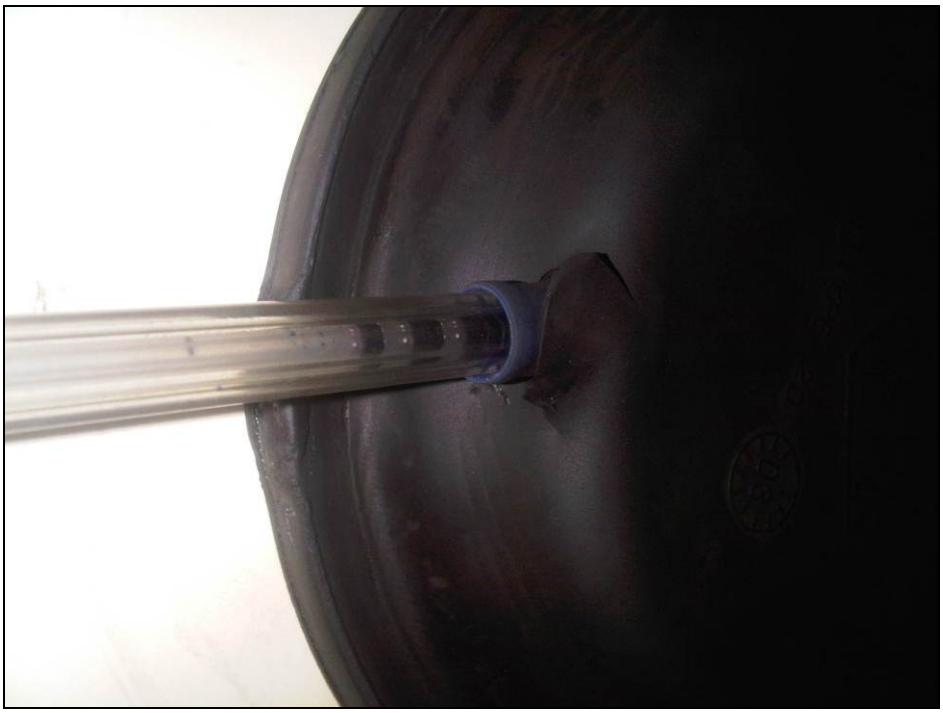
The incident involved the failure of the service brakes of the equipment whilst in operation. The emergency / park brake was used to stop the machine. Subsequent inspection of the brakes identified a hole in one of the service brake diaphragms.

A site based investigation of the incident was completed and the incident report supplied to VLIDD for review and comment.

Incident Review & Discussion:

The following images show the service brake diaphragm after removal from the machine, with the hole highlighted.





Based on the age of the machine, the estimated diaphragm component life was 8 years. This was the first known occurrence of a diaphragm failure on a VLIDD machine. Based on the information and evidence received, it was not possible to identify the root cause of the diaphragm failure.

Subsequently VLIDD initiated an independent re-validation of the safety related parts of MDR083991TBS in accordance with AS4024.1 2006 1501 & 1502 – Safety Category, with the following results:

1. As identified within the incident report the system redundancy met the requirement of Safety CAT 3.
2. The diaphragm component was risk ranked in the original design FMEA with no previous failure known. The re-ranking with a known event has changed the likelihood to possible accordingly the ranking is now 2c (18 Medium). In order to reduce this risk ranking to 2d (21 Low) the OEM is recommending a component change out every 5 Years.

Conclusions:

The failure of the VLI Driftrunner service brake diaphragm occurred after an estimated service life of 8 years.

This was the first known occurrence of a diaphragm failure on a VLIDD machine.

The root cause of the diaphragm failure was not able to be identified.

An independent re-validation of the safety related parts of MDR083991TBS in accordance with AS4024.1 2006 1501 & 1502 – Safety Category, confirmed the system redundancy met the requirement of safety CAT 3.

Recommendations:

Based on the transport braking system design FMEA review and re-ranking of the diaphragm component, following this failure, VLIDD is recommending that service brake diaphragm components are replaced every 5 years.

Please ensure this document is circulated to all relevant personnel within your organisation.

Should you have any further queries please contact your VLI Diesel Representative.

Tomago Operation	Rutherford Operation	Mackay Operation	Emerald Operation
28 Old Punt Road	20 Shipley Drive	6 Fursden Street	44 Industrial Drive
Tomago NSW 2322	Rutherford NSW 2320	Glenella QLD 4740	Emerald QLD 4720
P: +61 2 4913 7500	P: +61 2 4015 3200	P: +61 7 4942 7495	P: +61 7 4987 5011
F: +61 2 4964 8919	F: +61 2 4932 1722	F: +61 7 4942 4944	F: +61 7 4987 4711