valley longwall
INTERNATIONAL
DIESEL DIVISION

Technical Bulletin / Safety Alert

Unique ID No: TBS2009-TBSA-02 **Rev:** 0

(This document supersedes SMV TB0509/01)

Subject: Failure of JUG-A-0 UL/UV brake pedal linkage

Date: 13/5/09

Applicable to: All JUG-A-0 UL/UV machines

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.

A JUG-A-0 UL/UV machine was being used at a Colliery to position an item when the L/H pivot boss assembly on the brake pedal failed. This rendered the service brake ineffective & the operator selected reverse gear & re-applied the park brake.

The linkage on the L/H boss of the brake pedal assembly failed due to the separation of the boss & link arm.

See the pages following for the incident report from the end user:-

Date and time	*10/05/2009 11:10pm*
Location	*XXXXXX*
Maximum reasonable outcome	*High*
Actual outcome	*Moderate*
Maximum reasonable consequence	*Major*

Incident description	*The JUG-A-0 loader was being operated at slow speed on a 15 degree slope to position a conveyor sacrificial base. The base was positioned and the park brake on the loader applied so that the chains securing the sacrificial base to the fork arms could be removed. As one securing chain was tight, the operator was asked to release the park brake and " inch" the loader forward. With the loader in neutral, the operator applied the service brake and released the park brake. The loader immediately rolled forward down the 15 degree slope. (approximately 200mm) The operator selected reverse gear to halt the movement and then re- applied the park brake.*

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Actions	*Inspection of the brake linkage revealed that the mounting pivot boss had broken rendering the activation of the service bake ineffectual. The machine was immediately placed out of service pending a detailed investigation* *The detailed investigation revealed that at the time of manufacture the pivot boss had only been tack welded. The full, final weld had not been completed*

Brake pedal assembly- arrow points to broken pivot boss on brake pedal.

Detail of broken pivot boss showing only two "tack" welds with no weld penetration.

Lessons learnt	*This type of incident highlights the importance of being aware of any potential hazards with a job. The persons involved all ensured that they were out of the "line of fire" whenever the loader or load was moved. This undoubtedly saved a serious injury to them or a work mate.*

Following are the results from our investigation:-

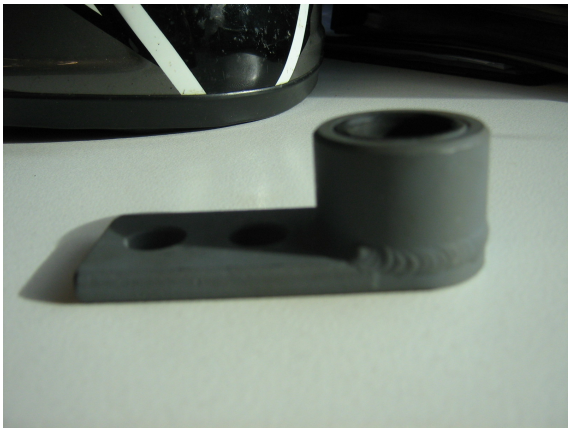
Investigation & Cause:

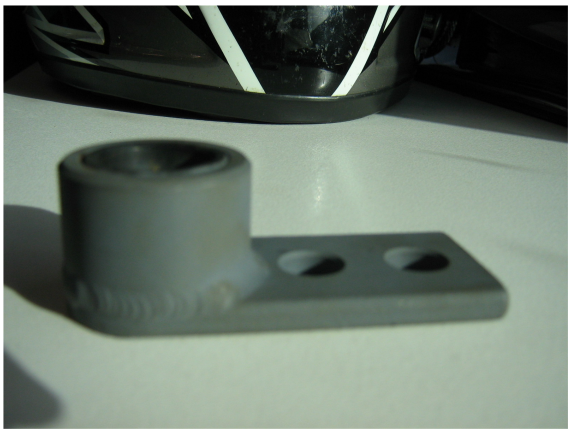
The investigation of the failed components has shown an issue with the welding carried out to join the boss to the link arm.

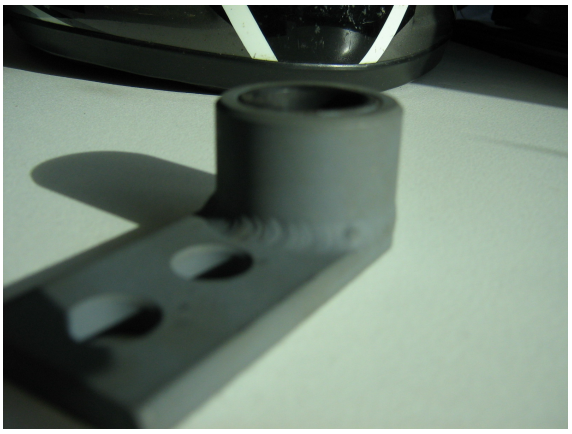
Recommendations:

Immediate Action:

Inspections must be carried out on all pedal assembly's to ensure that the boss & link arm are fully welded. Below is an example of a properly constructed linkage:-







It is also recommended that the pedal to shaft assembly & R/H pivot boss assembly weldments be inspected & repaired/replaced as required.

We have field service personnel to assist in carrying out these inspections should you require this.

Future Action:

VLI Diesel to review quality procedures relating to this to ensure no recurrence.

VLI Diesel to carryout load testing of the assembly to ensure suitability.

Supporting Documentation:

After load testing, report to be circulated.

Conclusion:

Inspections are to be carried out to determine the quality of the weldments on the pivot bosses.

The load testing will confirm the integrity of the assembly.

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.

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