



Technical Bulletin / Safety Alert

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(This document supersedes SMV TB060901)

Subject: Possible Oil Injection Occurance

Date: 4/6/09

Applicable to: All Machines (occurred on JUG-A-0 UL/UV)

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.

Occurance:

A tradesperson was struck by a fan of oil from quick release couplings while trying to fault find a problem with an implement attached to the machine.

The fan of oil hit him in the side of the neck from arms reach, around 700mm. He was admitted to hospital & luckily found not to have been injected but suffered welts to his neck.

Investigation & Cause:

Following is a copy of the investigation that has been carried out on the minesite:

MACHINE INSPECTION ; fit pressure gauge to each valve bank port supplying the PTO hoses operated several times approx 12 each port found that the pressure goes to 2800psi. With PTO valve in neutral then de-pressing the DE-PRESSURISATION button holding it in for 2-3 seconds the pressure in the lines went to zero every time, This was done with engine running and engine stopped with the same result.

With the PTO lever locked in a position ENGAGE/DISENGAGE and doing the same test as above with the machine running pressure stays in the line, with the engine turned off the pressure goes to zero. (This is how the circuit works the machine operated correctly).

When inspecting the PTO fittings on the MIS plate the both snap couplings were leaking when under pressure, further investigating found that one fitting had a 3/4" JIC male

screwed into a 1/2" NPT female fitting this is where a spray of oil was coming out of (these thread don't match).

The machine was found to have had the PTO lever in the locked position when Dayshift got to it to bring out the pit.

The tradesperson had operated the implement via the Third Function Lever which pressurises the system but had also depressed the depressurisation button in the dash, this was however done with the engine running. As noted in the investigation above the Third Function Lever was found to be engaged in which case the system would be repressurised as soon as the depressurisation button was released. It should be noted that as per the training manual the machine should be shut down then depress the button after which time the QRC can be detached.

Given the circumstances above it appears there may be a lack of understanding as to how the depressurization system is designed to work.

Dissimilar fittings had been installed in the coupling & this certainly would have been a contributing factor in the failure at this point.

Dissimilar QR Couplings were also installed & although on inspection this does not appear to be an issue as they are manufactured to the same SAE standard, consideration should be given to the use of same brand couplings to ensure compatibility.

Recommendations:

Immediate Action:

Replace the fittings with the correct items

Inspect all other machines on site for conformity

Carry out toolbox talks with all personnel

Future Action:

Training to be carried out with all personnel on the use of the depressurisation system

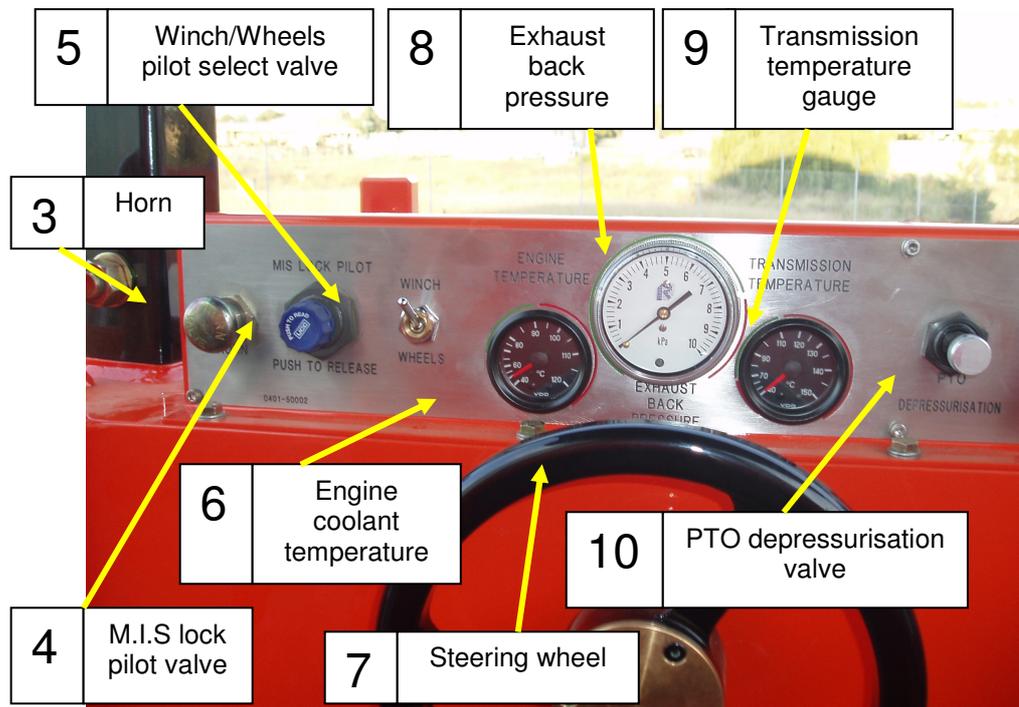
Training to be carried out with personnel on hydraulic fitting compatibility

Investigate the requirement to have detents on the Third Function Lever

Supporting Documentation:

Below is an excerpt from section 8 of the training manual showing the depressurisation valve (item 10) & its function.

8 CONTROLS AND THEIR FUNCTIONS (continued)



10. PTO Depressurisation Valve

By pushing this valve once the engine is stopped, both the front and rear 3/4" PTO hydraulic hoses are bled of any stored hydraulic pressure. This will enable easy changing of the PTO hydraulic quick couplers.

Conclusion:

Implement recommendations mentioned above.

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
28 Old Punt Road
Tomago NSW 2322
P: +61 2 4913 7500
F: +61 2 4964 8919

Rutherford Operation
20 Shipley Drive
Rutherford NSW 2320
P: +61 2 4015 3200
F: +61 2 4932 1722

Mackay Operation
6 Fursden Street
Glenella QLD 4740
P: +61 7 4942 7495
F: +61 7 4942 4944

Emerald Operation
25 Hawkins Place
Emerald QLD 4720
P: +61 7 4987 5011
F: +61 7 4987 4711