



## **Technical Bulletin / Safety Alert**

**Unique ID No:** GEN2010-TBSA-04

**Rev:** 2

(This document supersedes previous revisions of GEN2010-TBSA-04)

**Subject:** JUG-A-0 UL/UV Exhaust Conditioner Makeup Tank Exhaust Check Valve

**Date:** 23<sup>rd</sup> May 2013

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

**Details of Revision:** 0. Original Issue

1. Additional information added. Removal of second check valve from the circuit. Pneumatic schematic revised.
2. Addition of check valve to circuit.

**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:**

Valley Longwall International (VLI) advises of a product improvement available in relation to the airline to the exhaust conditioner makeup tank installed to all JUG-A-0 UL/UV machines.

In a previous TBSA (DES2007-TBSA-03) failure of an electric solenoid valve due to water ingress in the safety circuit was investigated and discussed. Investigation of this incident "found that the scrubber make up tank air pressure check valve was faulty, allowing pressurised scrubber make up water to flow back into the system air pressure manifold, if the tank was 100% full to the brim, when the Stop / Run valve was switched to the stop position." As a result of the investigation, a second check valve was fitted to the pressure side of the scrubber water make up tank air pressure regulator.

Previously (refer GEN2010-TBSA-04 Rev 1), the existing check valves (2 off part no. 0601-10022) installed in the air line between the manifold and the exhaust conditioner

water makeup tank were recommended to be replaced with an exhaust check valve (part no. 0601-60007) to improve air line serviceability.

Subsequently it was discovered that the absence of check valves at this position resulted in release of air system pressure from the main air circuit each time the machine was shut down, and in some instances insufficient air pressure remained in the circuit to enable the machine to be restarted. To counter this unintended outcome, a new stainless steel check valve (0601-10027) is recommended to be installed with the exhaust check valve to maintain air circuit pressure at shutdown. The exhaust valve continues to provide secondary protection to the main air circuit from moisture ingress, at the same time as providing self-evident fault indication in the event that the check valve fails, since air system pressure will be lost.

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**Recommendations:**

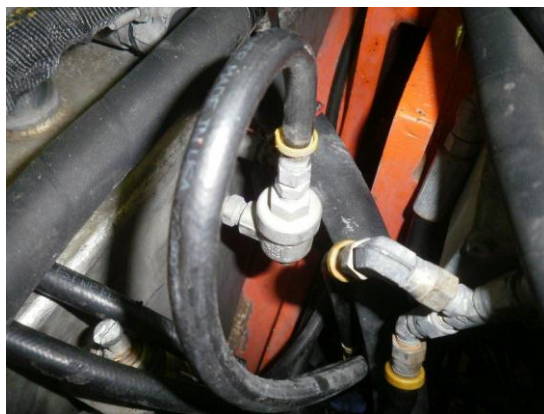
1,2

Replacement of the two (2) check valves, described above, with a single stainless steel check valve and quick exhaust valve reduces the risk of valve deterioration and failure due to moisture exposure, and improves protection of the shutdown circuit from moisture ingress.

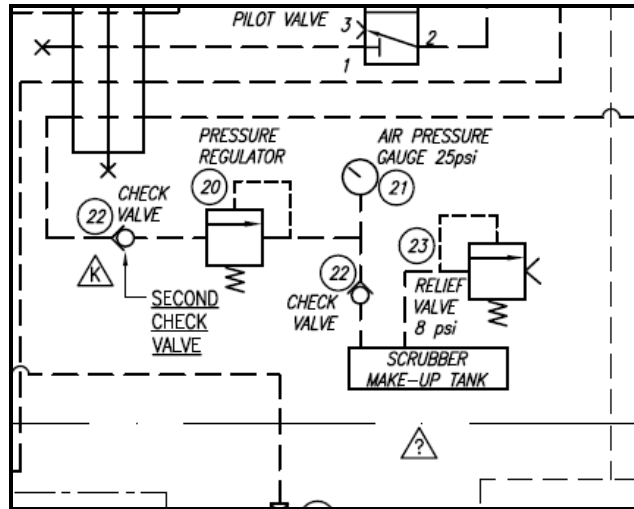
| VLIDD Part No. | Description         |
|----------------|---------------------|
| 0601-60007     | Quick Exhaust Valve |
| 0601-10027     | Check Valve         |

The exhaust check valve (0601-60007) is shown in Figure 1 for reference.

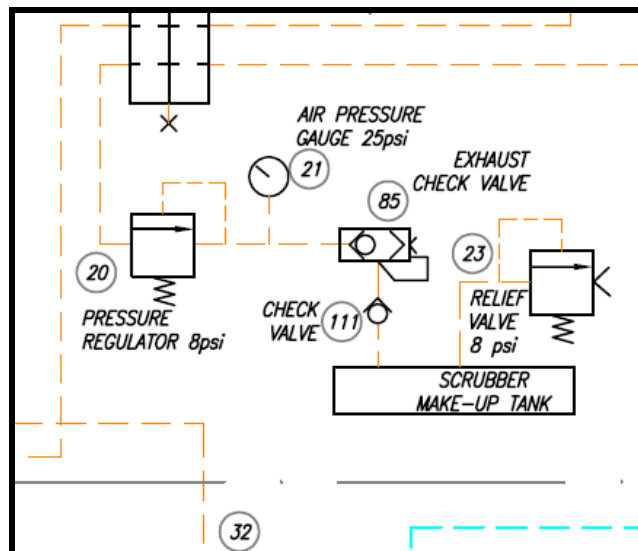
The original pneumatic circuit is shown schematically in Figure 2 and the current recommended pneumatic schematic installation is shown at Figure 3.



**Figure 1:** Photographs showing quick exhaust valve Part No. 0601-60007, and as installed.



**Figure 2:** Original Pneumatic Circuit showing two (2) check valves (Item No. 22, Part No. 0601-10022) installed.



**Figure 3:** Recommended Pneumatic Circuit installation of exhaust check valve (Item No. 85, Part No. 0601-60007) and new check valve (Item No. 111, Part No. 0601-10027).

**Immediate Action:**

It is recommended the described circuit changes be implemented at the next major service interval.

**Future Action:**

All new build JUG-A-0 UL/UV machines to have the exhaust check valve and check valve installed as standard.

Upgrade of existing machines is an optional product improvement.

**Conclusion:**

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

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

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