Hale Products, Inc. Service Bulletins

Bulletin#: SB106 **Revision#:** A **Date:** 9/10/2009

Product Type Covered: Hale Pump X **Hurst Tool** **Lukas Tool**

Product Covered:

Hale CAFSPro System Air Injection Check Valves

Problem Statement:

Regular inspection and maintenance of the Hale CAFSPro air injection check valves is required to prevent costly system repairs.

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Body of the Bulletin

There are two 1-1/4 inch air injection check valves (P/N 038-1631-02-0) on the Hale CAFSPro system. The first is located at the outlet of the air sensing valve on top of the separator tank located behind the operator's panel and the other is located where air enters the CAFSPro manifold on the front of the pump. The check valves are designed to prevent water/foam solution from entering the air compressor's oil/air separator tank. Hale designed the CAFSPro system with two check valves – if the first one fails, the second will provide back-up protection. While these valves are designed for a long service life an annual check of these valves will verify their proper operation and prevent a time consuming job of cleaning the compressor oil system of contamination with water.
To prevent the possibility of incurring a major repair bill, the following maintenance procedures and frequency are recommended:

1. **Annual air injection check valve maintenance**:
    a. The check valves must be checked as part of annual apparatus maintenance
        i. Gain access to the separator tank air outlet connection behind the operator panel.
        ii. Using a wrench loosen the JIC fitting on the air inject hose and disconnect it.
        iii. Once the hose is disconnected inspect for water/foam solution in the hose.
            1. If there is water/foam solution present, replace both check valves.
        iv. With hose disconnected apply pressure to the pump to see if check valve leaks.
        v. Replace check valves if any leaks are observed.
2. **Every five years**
    a. Replace both 1-1/4 inch air inject check valves.

During day-to-day system operation, indications that these check valves have failed are as follows:

1. Loss of air pressure control due to moisture in the control system
2. Oil level in separator tank rises for no apparent reason
3. Oil remains foamy in sight tube after sitting for more than 1 hour.
4. Excessive water taken from the moisture drain on the separator tank
5. System Pre and Post operation checks
    a. Weekly or Prior to operating system:
        i. Check condition of compressor oil in sight tube. Oil should be clear.
        ii. Check compressor oil level before starting CAFSPro system. Oil should be visible in lower half of sight tube only
    b. After operating system:
        i. Observe oil in sight tube about 1/2 hour after shutdown. Foaming should subside and oil should clear up.
        ii. Oil level should not be above level prior to start-up.
        iii. Open separator moisture drain and check for excessive water.

If any of the above symptoms occur the check valves should be inspected and replaced. In addition to replacing the check valves if the above symptoms are present it will be necessary to drain the oil from the system; replace the separator tank elements; oil filter; flush all components in the system including hoses, heat exchanger, compressor, etc.; and refill as necessary. This is a major repair undertaking.

If you have additional questions or require technical assistance with inspecting or replacing the Air Inject Check Valves please contact Hale Products customer service department at 610-825-6300.
Thank you for your attention in this matter.