HALE PUMPS

June 1, 1979

SERVICE BULLETIN #41

TO: HALE MIDSHIP, LIGHT TRUCK & FIRE ACCOUNTS

SUBJECT: Hale Model BL & B Valves

Gentlemen:

Hale model BL and B Discharge and Suction Valves have been relatively successful in the field for over thirty years. This success is due, in part, to the design and construction of the all bronze construction, including the valve ball. The bronze valve ball and the Buna N valve sealing ring have always required periodic lubrication, as without lubrication the valve will become more difficult to operate (open and close). The requirement of "regular" lubrication apparently can be misunderstood; it is more than just an item on the yearly maintenance check list. Let us emphasize, it is necessary to lubricate these valves on a more frequent schedule if maximum performance is to be realized.

Plate 313B is enclosed for your convenience and future reference; it outlines the details of weekly lubrication and service when required. In addition to the waterproof grease recommended on Plate 313B, we can also recommend Dow Corning silicon grease to minimize swelling of the sealing ring.

We have found conditions, water, tank additives, etc., that adversely effect the Buna N valve sealing ring (item 1 on Pl. 313B) in the form of swelling. The swelling of the ring, although only a few thousandths of an inch, adds excess preload to the valve ball, resulting in tight movement of the valve (open and close). This tightness in the valve may be overcome by adding a gasket (item 3) between the valve cover and body. The addition of the gasket will act as a shim, to relieve the excess preload and allow the valve to operate easier. Caution should be exercised as too many gaskets will allow leakage.

If you have a tight valve, do not remove the original sealing ring (item 1) unless it is damaged. The addition of a gasket and lubrication should free it up. When a new ring is needed, use a pretreated ring or you will probably experience a similar swelling of the new ring when placed in identical conditions. The BL and B valve sealing rings currently being supplied from Hale have been pretreated for water absorption and sealed in air tight packages. This package process helps to prevent the drying out of the sealing ring; therefore, it should not be removed from the package until ready to use. Any untreated rings you have in current stock should be pretreated by submerging in water for at least 30 days before using.

Very truly yours,

Fred Buchler

Fred Buchler
Manager, Customer Service

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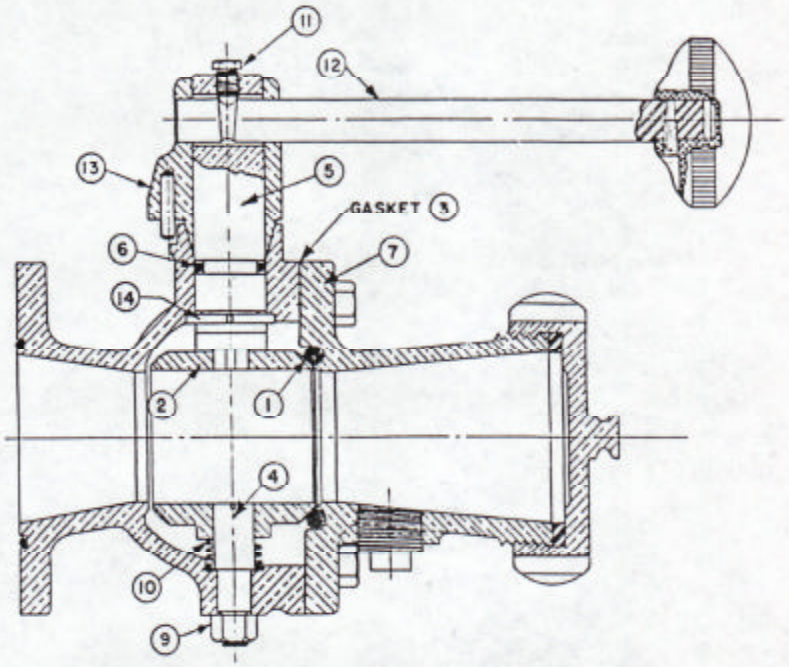
Encl.

SERVICE INSTRUCTIONS FOR BL & B SERIES VALVES



LUBRICATION

Using a brush, lubricate the face of the ball (2) with a waterproof grease once a week. Additionally, on a suction valve, squirt some oil in the space next to the rubber washer to lubricate the swivel balls. The remote control linkage connecting the valves should be lubricated monthly.

If a drain valve is installed on the discharge valve, insert an oil can tip in the open end of the discharge valve and allow some oil to run down the connecting pipe to the closed drain valve.

SERVICE

If the valve leaks, it is probably due to the "O" ring seal (1) not pressing tightly enough against the ball (2). To increase the pressure of the "O" ring (1) against the ball (2), remove one cover gasket (3) and reassemble. If valve still leaks, remove another gasket. The valve is usually assembled with two or three gaskets. Do not remove too many gaskets. The valve should turn easily yet hold a vacuum and pressure. Never remove the last gasket. If you are down to the last gasket and the valve still leaks, turn the "O" ring (1) around and put the new side against the ball (2). If this fails, install a new "O" ring (1). If the valve has high usage and wear, it might be necessary to install a new ball (2), pivot (4) or stem (5). Should the valve leak up thru the stem (5), install a new stem "O" ring (6).

TO DISASSEMBLE VALVE

Remove cover (7) and "O" ring (1). Take off nut (9), tap pivot (4) up through the ball and remove. Remove ball (2) and spring (10). Remove adjusting screw (11), handle (12) and stop (13). On some valves, the handle adjusting screw (11) will be two pieces. In this case, loosen the nut and then remove the screw. Push stem (5) in and remove split shoulder ring (14). Pull out stem (5).

TO ADJUST HANDLE LOCK

Both the handle (12) and adjusting screw (11) are made of hardened steel and should wear very little in service. If the lock on the handle does not function, adjust as follows:

Put handle (12) thru stop (13) and stem (5). Enter adjusting screw (11) in the cam slot of handle (12). Turn knob to unlocked position and tighten adjusting screw (11). Back off on adjusting screw (11) until handle (12) locks with 1/8 to 1/4 turn. Valve ball (2) must be free to turn. The adjusting screw will stay in the set position due to the nylon locking element on the threads. If the valve is equipped with a set screw and nut, hold the screw in the set position and tighten the locking nut.

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