PULSAFEEDER®
ENGINEERED PRODUCTS

INTERNAL HYDRAULIC ADJUSTABLE MAKEUP VALVE
ADJUSTMENT PROCEDURE

All internal hydraulic adjustable makeup valves (parts orders included) are preset from the factory to function in a properly configured system. Dimension "A" (see Figure 1 & 2) is set to 13/16" (0.8125" / 20.6 mm). Typically, these valves do not require any further maintenance provided that the system has proper NPIP (NPSHr) as required by the pump and the oil Being used is of the Pulsafeeder brand, clean and free of moisture. In the event that it is necessary to adjust the makeup valve due to system configuration, high or low altitudes, high viscosity fluids, or special customer oils, please follow the procedure below to readjust the valve for proper operation.

NOTE: MAKE ALL ADJUSTMENTS WITH THE PUMP TURNED OFF AND SET THE STROKE POSITION SET TO ZERO (0).

<u>Adjustment Procedure for Valves supplied prior to 1/1/2015 or are of the style shown in Figure 1</u>

1. With the pump off and the stroke position set to zero (0), loosen the lock nut from the adjustment nut.
2. Slightly turn the adjustment nut to vary the spring tension on the valve stem either clockwise (to operate sooner) or counter-clockwise (to operate less often). Make adjustments in ¼ turn increments until proper operation is met.
3. Turn the pump on and slowly increase the stroke setting up to 100%.
4. Place your hand over the makeup valve to feel when the valve opens. This requires a very slight just touch the end to insure you are not opening the valve itself.
5. Repeat steps 1 through 4 until the valve "cracks open" every third or fourth stroke of the pump.
   NOTE: If the spring is set too tight, large air bubbles will form in the hydraulic system and will be seen coming out of the automatic bleeder.. If the spring is set too loose, then excess oil will be drawn into the hydraulic system which will cause the internal hydraulic bypass valve to operate.
6. With the pump off and the stroke position set to zero (0), tighten the locknut up against the adjustment nut. Please ensure that the locknut is firmly hand tightened against the adjustment nut, else the valve may become loose and result in eventual pump failure.

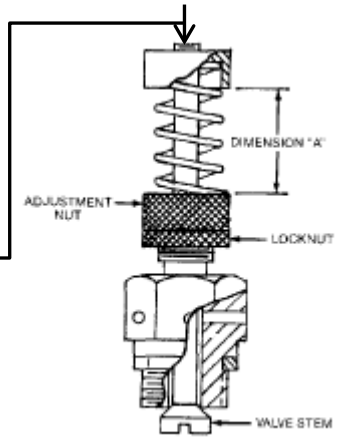

Figure 1

NOTE: IF THE HYDRAULIC MAKEUP VALVE HAS TO BE REMOVED, MAKE SURE THAT THE COPPER GASKET IS IN PLACE BETWEEN THE VALVE AND PUMPHEAD UPON REINSTALLATION.

Adjustment Procedure for Valves supplied after to 1/1/2015 or are of the style shown in Figure 2 which have a self locking adjustment nut

1. Slightly turn the adjustment nut to vary the spring tension on the valve stem either clockwise (to operate sooner) or counter-clockwise (to operate less often). Make adjustments in ¼ turn increments until proper operation is met.
2. Turn the pump on and slowly increase the stroke setting up to 100%.
3. Place your hand over the makeup valve to feel when the valve opens. This requires a very slight just touch the end to insure you are not opening the valve itself.
4. Repeat steps 1 through 4 until the valve "cracks open" every third or fourth stroke of the pump.
   NOTE: If the spring is set too tight, large air bubbles will form in the hydraulic system and will be seen coming out of the automatic bleeder.. If the spring is set too loose, then excess oil will be drawn into the hydraulic system which will cause the internal hydraulic bypass valve to operate.

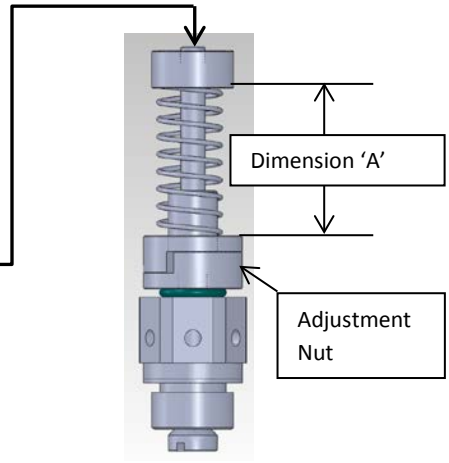

Figure 2

NOTE: IF THE HYDRAULIC MAKEUP VALVE HAS TO BE REMOVED, MAKE SURE THAT THE COPPER GASKET IS IN PLACE BETWEEN THE VALVE AND PUMPHEAD UPON REINSTALLATION.