



Main System Hydraulic Pump Replacement

Models Affected: All Operator Aboard Extractors

Tech Tip
TT-914

Subject:

The importance of secondary component replacement during main pump replacement.

Description:

The main system hydraulic pump may require replacement due to environmental issues or normal internal wear over time. When performing this service, the following recommendations are necessary in order to ensure longevity and dependability from the new pump

Recommendation:

Change the oil and filter prior to the initial start-up of the new pump. Foreign material and contaminants in the existing hydraulic oil drastically reduce the life and operation of a new pump. In some instances, immediate damage could result if the suspended particulate matter becomes lodged in an area of the pump critical to its internal lubrication. This could also lead to internal pressure compensating ports or components becoming restricted in movement or function.

In addition, replace the main system relief valve cartridge. This is especially important if the relief valve cartridge was possibly the defective component leading to the pump failure. If left undiagnosed, the new pump would be subjected to full flow across the relief valve. This creates an extreme amount of heat that will lead to overheating of the new pump and subsequent bearing and seal damage leading to repeated pump failure.

Proper pressure setting of both the system and relief pressure is critical. Refer to Technical Procedure TP-610 for additional information on correct pressure setting procedures.

TECHNICAL SUPPORT DEPARTMENT
1.877.BHS.4YOU M-F 9:00 a.m. - 5:00 p.m. CT
(1.877.257.4368) BHS.com

System and Relief Pressure Setting Procedure TP-610

IMPORTANT:
• Read and understand TP-606 - Safety and De-energization Procedures before starting this procedure.
• Read and understand these instructions completely before starting this procedure.
The battery extractor system pressure as well as system relief pressure is properly set from the factory. Deviations from the factory settings can be detrimental to machine operation. Left uncorrected, improper settings can cause substantial component damage. If factory settings have been altered or if re-adjustment is required due to pump and/or relief valve cartridge replacement, the following steps will ensure proper settings.

Tools Required:
• 9/16" Open end wrench
• 30 mm Open end wrench or adjustable wrench
• 5/32" Hex key

Note:
• Relief pressure must be 300 psi greater than system pressure
• System pressure should never exceed 1800 psi

Procedure:

- Verify the correct pressure settings for your machine in the service manual or contact the BHS Tech Support Department.
- Locate the system pump compensator knob and main system relief valve.
- Using the 30 mm wrench, loosen the locking nut below the pump compensator adjustment knob.
- With the pump running, increase the pressure by turning the compensator adjustment knob in a clockwise direction. The pressure gauge will show the pressure increasing. Continue until the pressure stops rising. This is the current relief pressure setting.
- If the pressure reading does not reach or exceeds the required relief setting, adjustment of the relief valve will be required per Step 6. If the relief pressure does not require adjustment, go to Step 8.
- To adjust the relief pressure, locate the relief pressure adjustment screw. Use the 9/16" wrench to loosen the locking nut and the 5/32" hex key to turn the adjustment screw.
- With the pump running, adjust the relief pressure (clockwise to increase pressure, counterclockwise to decrease pressure) until the required relief pressure is obtained. Once properly set, tighten the locking nut. **Note: The system pressure may have to be increased in order to verify proper setting of relief pressure.**
- Adjust the system pressure to 300 psi below the relief setting by turning the pump compensator adjustment knob counterclockwise (with the machine running) until the correct pressure is reached. Tighten the locking nut to complete the process.

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