



## TECHNICAL BULLETIN

**REF:** How to properly flush oil from the Hydraulic System on all standard two cylinder winch cable model truck mounted hoists

**TO:** End Users

**FROM:** RDk Truck Sales and Service - Service Department

**Before starting the following procedures, make sure that all hydraulic cylinders are retracted completely.**

- 1) Shut gate valve, located at bottom inside of the oil tank, and close the valve by turning the knob clockwise. Remove the suction line at the gate valve and drain oil from tank using the gate valve to regulate the flow.
- 2) Once all the oil has drained out, remove the suction strainer which is located in the tank where the gate valve is. With the strainer out, clean with a solvent by flowing the solvent from the inside of the strainer out. After cleaning, check that the relief valve in the end of the strainer is operational. It should push inwards with about 3 pounds of pressure.
- 3) Remove the return filter and replace it with a new filter. **DO NOT REUSE THE OLD RETURN FILTER.** Reinstall return filter and suction strainer using appropriate thread sealant and/or "O" rings. The "O" rings need to be checked for nicks or cuts before reinstalling. Also reinstall the suction hose to the gate valve. **OPEN GATE VALVE (COUNTERCLOCK WISE) FULLY.**
- 4) Trace down the retract line to the main control valve from the lift and winch cylinders. Mark the lines so that they don't get crossed when you reconnect them to the control valve. Disconnect the retract lines at the main control valve and place the lines in an appropriate sized container or add enough hose to the retract lines that they can reach into a 55 gallon drum.
- 5) Fill the oil tank with AW32 or equivalent type hydraulic oil so that it just comes to the top of the sight gauge mounted on the oil tank.

- 6) Start up the truck and engage the PTO. With the truck idling and the PTO running, activate the main control valve lever to “extend” or “on” for the winch cylinders. This will force the oil out of the retract hoses that are disconnected and flush the old oil out. When the winch cylinders are completely extended, shut the truck off and reconnect the retract hose for the winch cylinders back on the main control valve. Start the truck again, engage the PTO and retract the winch cylinders completely. Check the oil level in the tank and fill to the top of the sight gauge again. **Before starting step 7, determine if you have telescopic lift cylinders or single stage lift cylinders.** UT, UM, UX and some U5 model hoists have telescopic or multi state cylinders. If you have telescopic (multi stage) lift cylinders, proceed to step 8.
- 7) For single stage lift cylinders, with the retract hose in a container or 55 gallon drum, activate the main control valve lever for the lift cylinders to extend or raise the hoist. This will force the old oil out of the lift cylinders. When the lift cylinders are fully extended and raised, shut off the truck and reconnect the retract hose to the main control valve. Start the truck, engage the PTO and lower the hoist to retract the lift cylinders. Check the oil level and add if necessary. Cycle the cylinders for the winch and lift to purge any remaining air out of the system. Check for leaks and correct oil level.
- 8) For multi state (telescopic) lift cylinders, first locate the hoses at the base or bottom of the lift cylinders. Mark them in a way to identify retract and extend (colored bread ties work well) for ease in reconnecting later. Disconnect the hoses at the base of the cylinders so the oil can drain in a 5 gallon bucket. When both lift cylinders are drained, reconnect the hoses to their respective ports. Opening the bleeder screws on the tops of the cylinders will speed up the draining process. Reconnect the retract hose at the main control valve for the lift cylinders. Double check all the hose connections that were mentioned in step 4. Fill the oil tank to 1/2 to 1 inch from the top of the sight gauge. (Be sure to tighten bleeder screws before start up.)
- 9) Start up truck and engage PTO. At an idle, operate the main control valve lever to the “retract” or “lower” position until the cylinders are full and the hydraulic system is dumping over the relief valve. Now move the lever to the raise position to raise the hoist approximately 12 to 18 inches above the subframe. At this time, using the bleeder screws, bleed out any air trapped in the cylinder. Once pure oil comes out of the bleeders, tighten the bleeders and cycle the hoist to full up and full down several times. This will finish purging any existing air trapped in the lift cylinders. Lower hoist and check the oil level in the oil tank. Refill if necessary and check for leaks.

**Conserve resources and recycle the hydraulic oil. Always dispose the oil properly.** If you have any questions pertaining to the procedures involved, please contact the Customer Service Department at RDk Truck Sales and Service, Inc..