

PRODUCT PUMP STARTUP & ADJUSTMENT INSTRUCTIONS

NOTICE DAMAGE TO THE PRODUCT PUMPS AND/OR THE FLOW METER MAY OCCUR IF THIS PROCEDURE IS NOT FOLLOWED

STEP 1) If the product tank is empty, the pressure switches should be disconnected. Verify all the pressure switches on the product pumps are unplugged as shown. Do not plug in the switch until directed to in the procedure below, or damage to the product pump and/or flow meter may occur.

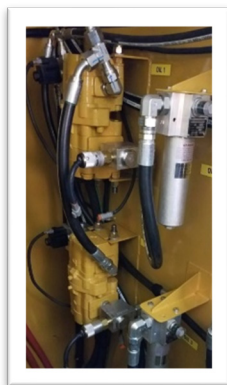


Before the pressure switches can be adjusted, all the air must be purged out of the hydraulic system and the product pump systems.

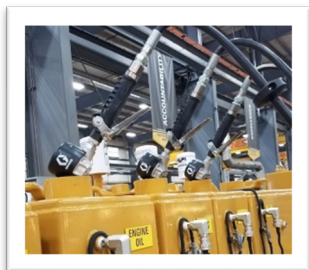
Oil delivery pumps are controlled by a common master switch installed at the operator's station. The individual pumps operate on demand and are individually controlled by a pressure switch installed in each delivery system. Each pressure switch will need to be adjusted for the specific product being delivered.

STEP 2) Verify there are oils in each of the tanks before starting this process.

STEP 3) The product pumps' hydraulic systems are hooked together in parallel. Inspect the physical layout of the hydraulic motors and determine the longest flow-path to the last motor. Set the pressure switch for this motor first.

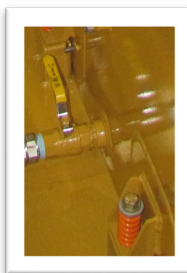


STEP 4) Run the hose that is going to be purged of air from the hose reel to the oil tank. Make sure the hose end is clean of contaminants. Insert the hose end into the tank opening.

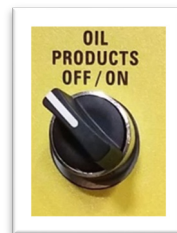


NOTICE THE OIL DELIVERY METERS ARE SUBJECT TO DAMAGE BY THE RUSH OF COMPRESSED AIR. PHYSICALLY HOLD THE DISPENSING NOZZLE OPEN AND SECURE IT BEFORE STARTING THE PUMP.

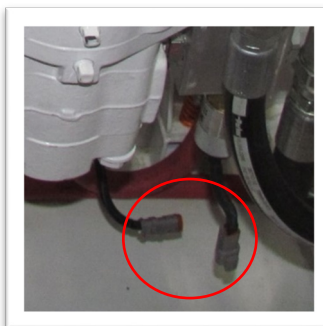
STEP 5) Verify the product valve is open on the product tank.



STEP 6) With the truck running and the Ground Force system engaged, turn on the oil products switch on the main panel.



STEP 7) With the hose reel dispensing valve open, plug in the pressure switch to the pump for the hose reel you are purging.



STEP 8) The pump will then automatically start. Allow the pump to run until the oil runs without air passing through

the system. With all the air purged out of the system, you can release the valve on the hose.

STEP 9) Each of the oil product pumps should shut off when the nozzle is released (it may have a couple of short on/off cycles). When the handle of the nozzle is depressed, the pump should turn on until released. The pressure switch may need to be adjusted. If the pump does not shut off, the pressure switch is set too low. If it keeps turning on and off or chattering, the pressure switch is set too high. The ideal pressure setting is between these points.

STEP 10) To adjust the pressure switch loosen a set screw on the switch. Turn the knurled end of the switch clockwise to increase the pressure and counter-clockwise to decrease the pressure. Adjust for the correct operation as described above. Retighten the set screw, once properly set.



Repeat this process for each of the oil product pumps as needed.

As seasonal changes occur, and as the temperatures fluctuate, the viscosity of the oils will change. Operators should pay attention to the pumps to make sure they are correctly adjusted for these changes.

If you have any questions,
contact Ground Force Worldwide.
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