Installation and environmental recommendations

Make sure your pump lives a long happy life !

■ **The tank :**
Generally, hydraulic pumps much prefer a tank above the pump.
Leduc pumps can also operate with oil level beneath the pump, for further information on such installations, please contact our Technical Department.
Correct inlet conditions are between 0.8 to 2 bar absolute pressure.

The tank should preferably have a separation between inlet side and return. This avoids fluid emulsion and the introduction of air into the hydraulic circuit.
Ensure also that the suction is not from the very bottom of the tank, so as to protect the pump from any deposits (particles).

■ **Hosing :**
Should be dimensioned to ensure flow between 0.5 and 0.8 m/second.
Choose as direct a supply line as possible, avoiding sharp bends.

■ **Filtration :**
Hydro Leduc recommends using a very clean tank, filtered during filling and with filter on air vent.
The pump supply line must be cleaned (decontaminated) and the return line should be filtered as follows :
- for relatively simple circuits (e.g. tippers) :
  use a 20 micron filter on pump return line.
- for more complex circuits (e.g. cranes) :

Ideal solution :
- high pressure filter between the pump and the crane hydraulic circuit ;
- 10 to 20 micron filter ;
- clogging indicato.

■ **The fluid :**
Use a mineral hydraulic oil with viscosity between 10 and 400 cSt. It is in this viscosity range that the pumps keep their volumetric characteristics. If you wish to use other fluids, please consult our Technical Department.
Maximum temperature of fluid in the pump should not exceed 100°C.

■ **Drive and assembly recommendations :**
If cardan shaft drive : check the quality and assembly of the cardan shaft. Fit the pump with the deflector designed for this application, the DEF 054111 (see page 12).

For PTO mount applications, be careful to respect the tightening recommendations in terms of pump onto PTO and PTO onto vehicle gearbox.

PA/PAC, X pumps are not designed to withstand any axial load on the pump shaft. Check your installation conforms to this requirement.

■ **Preparation of the pump :**
For X pumps, check the direction of rotation needed, and change it if necessary. See instructions on page 6.
PA and PAC pumps rotate in either direction.

Before start-up, the pumps should be filled with oil. This is essential for X-pumps.

■ **Start-up :**
- open the supply valve if there is one ;
- check the valve is in “back to tank” position ;
- partially unscrew the output fitting ;
- start up at low speed, or by successive starts/stops ;
- retighten the output connector as soon as air bubbles have disappeared ;
- let the pump run for one to two minutes, and check that the flow is well established ;
- check the pump is running correctly, with no vibrations nor abnormal noise;
- after several hours of operation, check the tightening torque of the pump fixture to PTO.

■ **For twin-flow pumps :**
It can happen that one of the flows does not purge correctly, especially if the crane is situated some distance from the pump. In such cases, do not unscrew the output valves of the pump, it is possible to ensure rapid and efficient purging by disconnecting the pressure connector of the circuit and letting the truck engine run at low speed, until all air bubbles have disappeared. Reconnect afterwards.

■ **Maintenance :**
Some regular checks are necessary, namely :
- tightening of pump to PTO ;
- cleanliness of fluid ;
- state of filter ;
- if you notice traces of oil in the plastic tube, it is essential to check the sealing between PTO and pump.