GEJE Truck Hydraulics

Installation and start-up recommendations

OPTIMIZE THE SERVICE LIFE OF YOUR LEDUC PUMP

► Tank

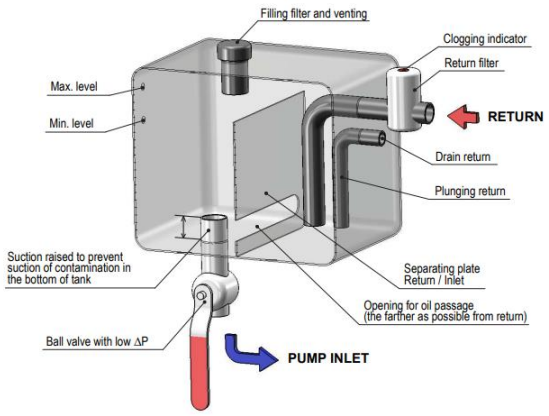
Generally, hydraulic pumps perform better when the tank is above the pump. LEDUC pumps can also operate with oil level beneath the pump.

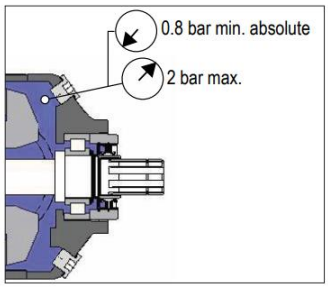
For further information on such installations, please contact our Technical Department.

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).

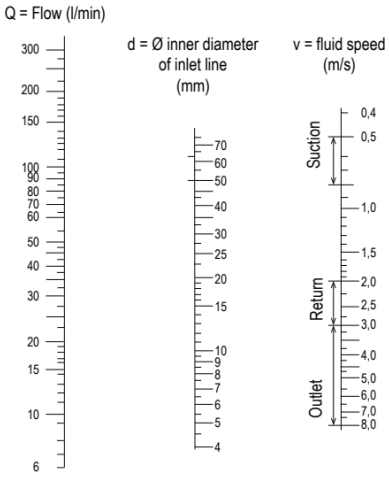




► Hosing

The supply line should be dimensioned to ensure fluid speed between 0.5 and 0.8 m/second.

Choose as direct a supply line as possible, avoiding sharp bends.



► Filtration

The service life of the pumps is highly dependent on the quality of the hydraulic fluid and level of cleanliness.

We recommend the following minimum cleanliness:

- Cleanliness class 9 according to NAS1638;
- Cleanliness class 6 according to SAE;
- Cleanliness class 20/18/15 according to ISO/DIS 4406.

We recommend using of a return filter of 20 µm absolute maximum.

► Drain pressure

It is essential to drain the pump, to avoid excessive pressures on the shaft seal. Maximum acceptable internal pressure depends on pump rotating speed.
Ensure that the working pressure in the housing does not exceed 2 bar, whatever the pump rotation speed and the viscosity of the fluid. Other operating may be possible; please consult our Technical Department.

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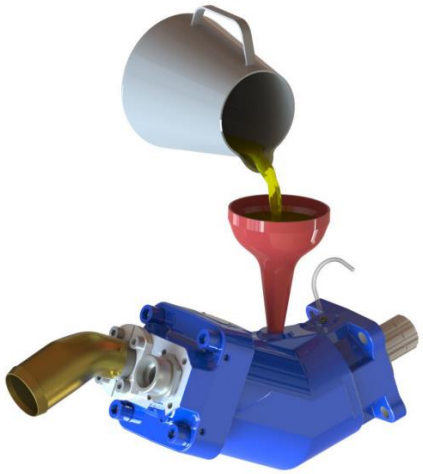
► Preparation of the pump

Before start-up, the pumps should be filled with clean hydraulic oil. (minimum 50%).

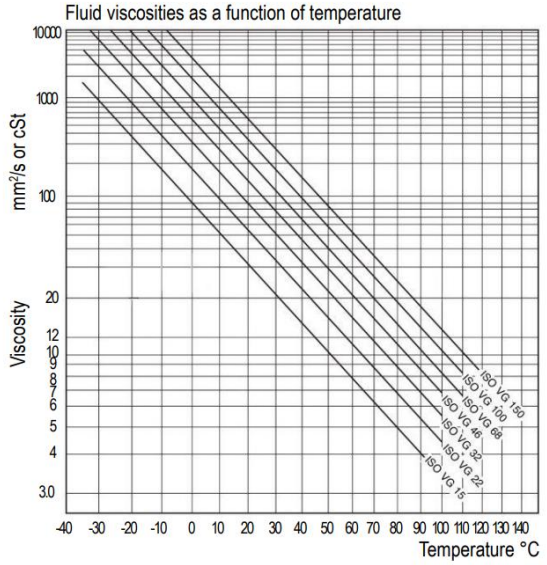


► Fluid

Use a mineral hydraulic oil type HLVP according to DIN 51502 (or HV according to ISO 11158) with viscosity between 10 and 400 cSt.
It is in this viscosity range that the pump keeps its volumetric characteristics.

The optimal viscosity range is between 20 and 30 cSt.
A maximum viscosity of 1000 cSt is accepted when starting up at low speed and without pressure.

If you wish to use other fluids, please consult our Customer Service Department.
Maximum temperature of fluid in the pump should not exceed 80°C.



► Drive and assembly recommendations

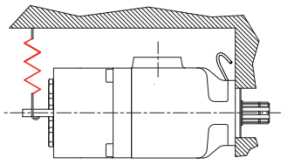
If cardan shaft drive: check the quality and correct installation of the cardan shaft.

For PTO mount applications, be careful to respect the tightening recommendations in terms of pump onto PTO and PTO onto vehicle gearbox. (according to the PTO manufacturer's specifications).
If the mounting on the PTO is not lubricated, grease the splines with graphite grease (example Molycote G rapide).

LEDUC pumps are not designed to withstand any axial or radial load on the pump shaft. Check your installation conforms to this requirement.

► Elastic support device

For pumps with a greater overhang torque than that accepted by the PTO, it is recommended to use an elastic support device to support the weight of the pump.
This support has to be designed to avoid strain on the pump flange.



We do not sell the elastic support.
It must be suitable for the environment of the pump assembly.

► Start-up

- Open the supply valve if there is one.
- Check the valve is in “back to tank” position.
- Start up at low speed, or by successive starts/stops.
- Let the pump run for one to two minutes, and check that the flow is regular.
- Check the pump is running correctly, with neither vibrations nor a normal noise.
- After several hours of operation, check the tightening torque of the pump on the PTO according to the PTO manufacturer's specifications.

► Maintenance

Some regular checks are necessary, namely:
- tightening of pump to PTO;
- cleanliness of fluid;
- state of filter.

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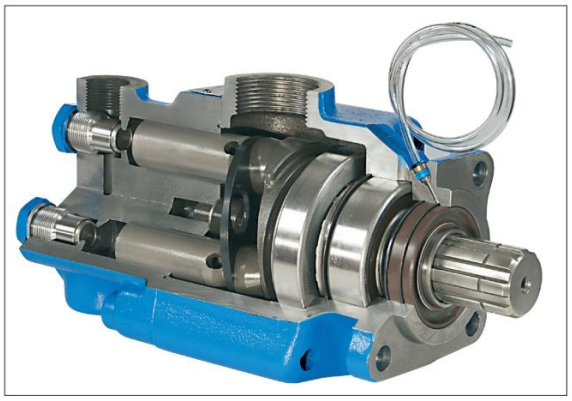
LEDUC pumps designed for truck hydraulics are all fitted with reinforced sealing comprising:

▶ **two radial seals** :

- an outer seal adapted to the needs of PTOs and gearboxes;
- an inner seal adapted to the hydraulic requirement.

▶ **an original protection of the pump shaft seals** :

This is a flexible transparent tube which avoids any entry of contaminants between the two seals, and guarantees high pressure water jet cleaning of vehicle will not damage the sealing area. It also allows air vent of the chamber between the two seals.



WARNING : if you notice any trace of oil in the tube, the tightness of PTO-pump should be checked immediately.

RECOMMENDATIONS FOR ATTACHING THE PROTECTIVE TUBE

☑ Make a siphon with the tube so as to avoid any introduction of dirt from road, and water or damp from high pressure washing of vehicle.

☑ Put the end of the tube downwards, or in a place sheltered from any projections.

☑ Fix the tube in place using a collar/clip.

☒ Avoid attaching the tube to any parts which may move, this could lead to it being damaged or torn off.

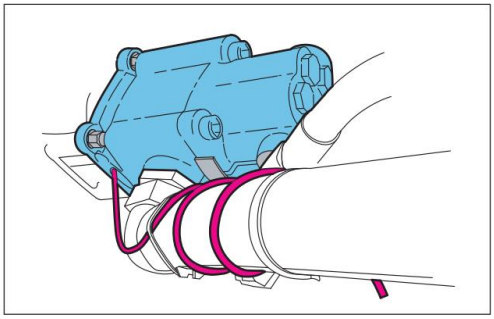
☒ Avoid any pinching or folds in the tube when fixing it in place.

☒ Make sure the end of the tube is not blocked.

INFORMATION

HYDRO LEDUC stresses that on non-sealed PTO installations it is the hydraulic pump which ensures the sealing of the vehicle gearbox.

This is why HYDRO LEDUC offers tried and tested solutions approved by vehicle manufacturers.

Note in particular the pump - PTO sealing has to be done via the seal C002510 supplied with the pump.

Example of tube attachment