

LAGOON FEEDER

OPERATING INSTRUCTIONS



Lagoon Feeder Set - Up

Attaching Hoses

Ensure all hoses are attached with approved clamps, and that fasteners are placed in a downward position so they cannot fall out.

Hydraulic Hose Connections



Yellow – Connection for controlling the riggers

Green – Connection for the case drain line

Blue – Male fitting for high pressure lines

Red – Female fitting for high pressure lines

Purple – Transport block
(To be installed after running lagoon feeder to give hydraulic oil a relief point)



1. When running a new feeder/pump combination together for the first time, always hook up hydraulics on dry land and test first to ensure proper fitment, proper feeder pump rotation, etc. before beginning to set unit in the manure storage. If any issues arise, call your Puck dealer or representative.
2. Place machine in desired location.
 - a. Select correct area of storage from which to pump
 - i. Consider slope and condition of the bank, where your lead pump will be placed, and how your outflow and inflow hose will be routed at your lead pump.
 - ii. Consider where the liquid enters the storage, how the storage be agitated, and depth of the storage.
 - iii. Consider obstacles such as rocks on the bottom and debris.
 - iv. Think through the entire pump and any moves that may need to be made to get the storage empty.
3. Remove cylinder stops on landing gear (if equipped).

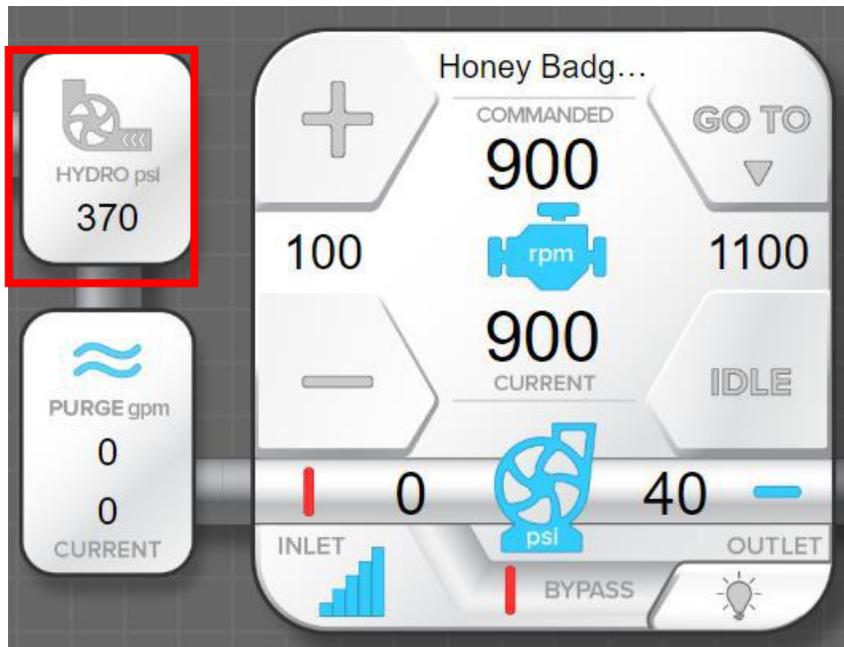
4. Remove transport relief block (if equipped).
5. Raise landing gear into highest possible position
6. Carefully back attachment into storage to desired position
7. Slowly lower the attachment. If it hits the bottom of the storage, raise back up a minimum of a foot.
8. Stabilize the unit
 - a. Lower downriggers
 - b. If necessary due to bank slope or condition, tether the unit to a sturdy anchor point on land to prevent it from sliding down the bank
9. Hook up the hydraulic hoses. There are two 1 ¼" high pressure hoses, and one case drain hose. All must be properly hooked up and locked into position to operate. Failure to fully engage and lock a hose in place may lead to damage to the pump unit and/or the attachment.
10. Hook the lay flat hose up. Use proper clamps. Ensure seals, coupling, clamp, and hookups are all in safe working condition. Ensure adequate fit to pump unit.
 - a. Only use couplers and clamps that are specifically designed and manufactured for the type of connection you are making.
 - b. Always orient pins, keys, or bolts in a downward position to ensure that if the lock fails or nut falls off, the bolt or pin will remain engaged.
 - c. If using adapters, give considerations to the increased force that is created on the pumping system by increasing the distance from the pump to the connection. Do not use 90° adapters on the outflow of the pump. This hampers flow, and causes dangerous forces on the outflow of the pump.

****Consult your Pump Unit owner's manual for instructions on operating the feeder attachment****

Operating a Hydrostatic Feeder Pump

1. Do not let lead pump idle prior to operating
2. Follow procedures in the General Operation section in your pump manual to set pump and hook up lay flat hose.
3. If operating a secondary feeder attachment, hook up hoses from the pump unit to the feeder apparatus. Hoses consist of two high pressure large hoses and one smaller case drain hose. Ensure that all quick connect ends are very clean prior to hookup. Even small amounts of contamination in a hydrostat system can cause system failure.
4. If equipped with a hydrostatic switch block to divert flow either to the lead pump boom or to a connected feeder pump, ensure that the key switch is in the proper position. Key switch in the 'off' position, or rotated counterclockwise, will divert flow the boom on the lead pump. Key switch in the 'on' position, or rotated clockwise, will divert flow to the secondary hookup for the attachment. When the attachment hookup is powered on, the red light near the key should be illuminated. When flow is to the boom, the red light should be off.
5. Once key switch is in the desired position, remove the key from the switch to prevent vibration from rotating the switch.
6. Once all hoses are hooked up and unit is ready to pump, follow General Operation section in your pump manual to start unit.
7. Charge pressure should remain above 200 psi at all times. If charge pressure is not above 200 psi, power engine off and call your Puck dealer or representative. The charge pressure indicator is shown in a diagram below, under the force feed settings.

8. After starting unit, activate hydrostat system at a low level to ensure oil is circulating through the system. If the pump unit is allowed to run for a period of time without circulating oil, the oil in the pump unit may become hot while the oil in the attachment remains cool. Then once hot oil from the pump unit is sent to the attachment, the rapid change in oil temperature can cause failure due to thermal shock.
9. If you are not ready to pump to the field, close the gate on the pump unit to prevent cycling of the hydrostat at low flow from sending liquid to the field. If equipped with an inlet gate, close the inlet gate. If not, close the outlet gate.
10. Navigate to the Force Feed Settings page by tapping the HYDRO psi button to the left of the pumps.



11. Set the selector to 10% using the toggle on the right



12. Turn the hydrostat on by pushing the pump icon in the middle of the screen.
13. Monitor the difference between the CHARGE PRESS and HYDRO PRESS. If they are the same, the hydrostat loop is not flowing. If HYDRO PRESS is higher, oil is flowing. Manually adjust the hydrostat % on the right so that HYDRO PRESS is about 100-150 psi greater than CHARGE PRESS so that the oil in the system can heat up at a constant rate until you are ready to send flow to the field
14. Once you are ready to send flow to the field, follow the General Operating instructions. Open gates and throttle pump as necessary, but rather than achieving inlet pressure using RPM at the lead pump, you will use the hydrostat % setting on the right to increase inlet pressure.
15. When commanded to an idle, the hydrostat system remains engaged to keep the system charged.
16. When disengaging the hydrostat, the loss of pressure can cause liquid to flow back through the pump and cause significant cavitation and vibration.
17. When shooting the pig from a lead pump, use the following steps:
 - a. Bring the unit to an idle, leaving the hydrostat engaged.
 - b. Close the outlet gate on the lead pump.
 - c. Shoot the pig using the steps indicated in the appropriate section of this manual
 - d. Turn the engine off
 - e. Navigate to Force Feed Settings page and set the force feed to off ***If this is not done, the hydrostat will re-engage when started the next time, unless master power has been turned off.
 - f. Finish instructions indicated in the 'General Operation' section in your pump manual.
18. Prior to unhooking the feeder apparatus hydraulic hoses, navigate to the Force Feed Setting page and wait for the CHARGE PRESS indicator to drop below 10psi, preferably to zero. Periodically activate the Hydrostat Pressure Relief valve located on the pump unit behind the plate where the high-pressure hoses hook up. This will ensure that pressure is not left in the system that may cause injury when unhooking, or difficulty hooking hoses back up next time.
19. Install transport relief block back on the feeder attachment immediately after unhooking the hoses. This allows the unit to drain oil as the unit cools and the hydraulic pipes contract ***Failure to do so can cause catastrophic damage to the hydrostatic motor on the attachment.***

Revision History

Revision Number	Date	Equipment Line	Comments
1	05/10/2019	Lagoon Feeder	Initial