

AGITATION BOAT

OPERATING INSTRUCTIONS



Transporting, Unloading, and Loading Information



Warning! Before You Begin

Before operating this Floating Agitation Machine, make sure you are familiar with all procedures involved in safe and effective use of the equipment.

Do Not Ride

Before operating the Floating Agitation Machine, make sure there is no one on the machine. Keep everyone away while operating. Never allow anyone to ride the agitation machine at any time. Never operate this Floating Agitation Machine if any part is damaged or missing.

Transporting

Follow the state and local laws concerning the transportation of agricultural equipment on public roadways. Never travel at speeds that exceed 35 miles per hour or at speeds that could make the lead pump unstable and potentially roll.

Check that the tire pressure is correct before moving the trailer. Ensure tires are adjusted to manufacturer's recommendations before transporting the trailer.

Always make sure the machine is secured to avoid injury or damage. Check that the hoses are secured into their traveling position and will not drag.

Check that the safety pins, safety bar, and safety chains are secure.

Never pull more than one Floating Agitation Machine at a time.

Be sure to check tow vehicles' manual for its Gross Vehicle Weight Rating (GVWR) to ensure its ability to transport trailer PRIOR to transporting. Always use a tow vehicle with safely rated towing capacities before transporting trailer.



DO NOT EXCEED 35 MPH.

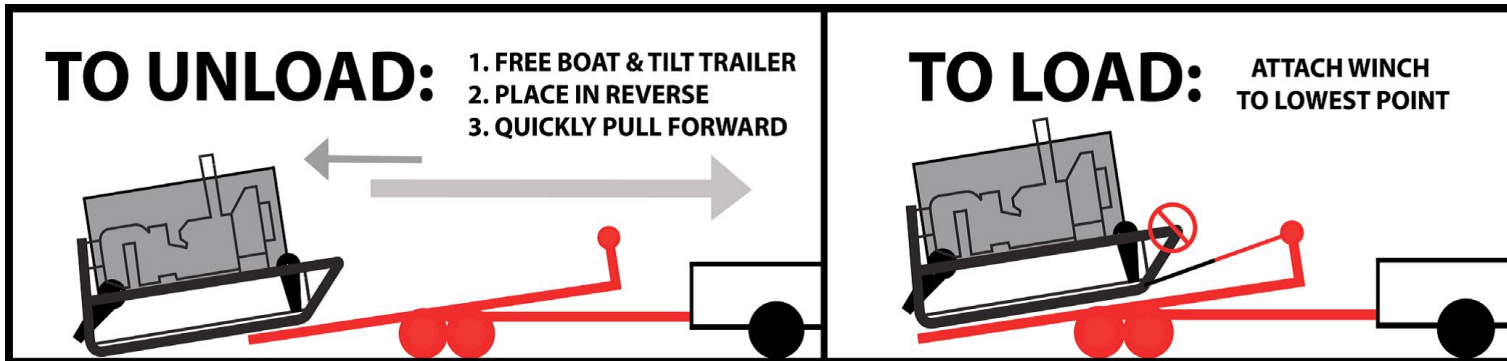
Hinged flotation makes for easy transport with an adequately rated tow vehicle and trailer. When transporting your agitation machine, make sure that it is securely fastened to the trailer. The hinged flotation should be all the way retracted, and the travel bar must be securely fastened between flotation devices prior to transporting machine. Make sure the winch is securely attached to the agitation machine and that it is pulled tight. Utilize safety chains and tie-downs. Do not use this trailer to transport anything other than your agitation machine as it is designed only for that purpose.



Retracted hinged flotation in position for travel.
Transporting, Unloading, and Loading Information

Unloading

When unloading the agitation machine, unhook the winch, tilt the trailer up, back tow vehicle and trailer up, then quickly pull forward so the agitation machine slides off the trailer. Stay away from the back of the trailer while unloading. Always place floating agitation machine into the water using a tractor.



Loading

Always use a tractor to remove unit from lagoon. When loading the agitation machine, tilt the trailer down, and attach the winch to the provided chain loop in the lower front portion of the agitation machine. Make sure the chain is hooked only near the ground. Center the agitation machine with the trailer before winching the agitation machine up. After the agitation machine is loaded, tilt trailer back so it is level. Use safety chains to secure unit to trailer.

Wireless Remote and Gate Operation

Wireless Remote

The Floating Agitation Machine comes equipped with a wireless remote for controlling operation from the shore. Your machine will be controlled using a Scanreco® Wireless Remote. Below you will find a diagram and descriptive table for operating the remote.

Scanreco® Wireless Remote

The large red master shut off button is in the center of the remote. The switch to the upper right of the master shut off button is the Start/Stop button (Switch No. 9).

Switch No.	Function
1	Left, Right, Forward, Reverse
2	Gate 1, Open/Close
3	Gate 2, Open/Close
4	Gate 3, Open/Close
5	Auxiliary 2
6	Auto On/Off
7	Teach On/Off
8	Auto Resume
9	Start/Stop
10	Idle
11	Lights
12	Auxiliary 1
13	Winch On/Off
14	Throttle Down/Up
15	Emergency Stop
16	Prime
17	Ramp Up/Down



Scanreco® Wireless Remote switch function descriptions.

Using Wireless Remote

Scanreco® Wireless Remote


Floating Agitation Machine will function normally with OR without the wireless remote powered ON. If your wireless remote is “On” when unit is started it can shut down when the wireless remote is powered “Off”.

To power remote ON:

- Auto and Teach MUST be in **OFF** position
- Start/Stop must be in **NEUTRAL** position
- Spin Red E-Stop button **CLOCKWISE** to release
- Press/Prime to power up wireless remote

***Up/Down arrows next to display allow you to scroll through screen options (Switch No. 18).**

To Start Boat:

1. Hold start switch in top position until engine starts
2. Idle: Machine will increase to 900 RPM when pushed
3. Lights: Turn them on or off
4. Ramp: Increases or decreases throttle
5. Auto, Teach, resume switches (used ONLY for Autosteer Machines)
6. /Prime: Use to power on remote or to activate priming function after remote is powered on
7. To use Gate 3, hold down AUX while moving toggle switch
8. Using joystick (Switch No. 1), control machine direction: Forward/Reverse and Left/Right

Gates

All three of the gates are clearly marked on the agitation machine by these decals.



Gate 1: Shuts off flow to front of agitation machine. Used for steering the agitation machine left and right (Switch No. 2).



Gate 2: Shuts off flow to rear of agitation machine. Used for moving the agitation machine in forward or reverse (Switch No. 3).



Gate 3: Is a multipurpose front “cannon” (Switch No. 4).

- Used on the lagoon to break up solids
- Used for attaching a hose for utility transferring, when “docked” by shore

All of the gates can be opened and closed by either the control on the agitation machine or on the wireless remote.

Lagoon Operation

Check ALL maintenance requirements BEFORE operation.

- The master ON/OFF switch turns on and shuts off power to the entire unit.
- Make sure switch is turned to “ON” before placing into the lagoon.
- Turn off unit when not in use by using the manual master on/off switch.

Lower Flotation Devices

Stay Clear! Make sure you, and anyone else, are clear of pinch points.

By using the hydraulic levers, lower the hinged flotation by pressing down on the button in control panel.

*****ATTACH AND TIGHTEN SAFETY CHAINS TO SECURE FLOTATION*****

Placing the Floating Agitation Machine into the Lagoon

- Always use a tractor to place unit into lagoon or remove it from lagoon. Be sure to access the lagoon on a dirt bank. Rocks and cement will damage the flotation.
- Do not start the agitation machine before it is all the way in the lagoon.
- Stand a safe distance from the shore when operating the wireless remote.

Priming a Pump

1. Puck pump units are equipped with a vacuum pump to prime the main pump.
2. When using a priming system, the system must be air tight to achieve a good prime.
3. Follow the General Operation instructions to prepare the unit for pumping.
4. Close all gates except any gate that may be between the primer cap and the suction hose.
5. When ready to agitate, activate the priming pump by either pressing the prime button on the remote.
6. Leave the primer on until liquid reaches the pump and outlet pressure builds.
7. Release the primer, and ensure that outlet pressure is maintained.
8. Open the main gate to send flow to the field when ready.

Troubleshooting a Priming System

1. ENSURE ENGINE AND MASTER SWITCH ARE OFF BEFORE CHECKING THE INLET OF THE PUMP!!
2. If you are not able to prime at all, this generally indicates an issue with the priming system on the pump itself.
 - a. Remove the primer cap, activate the primer, and put the float ball up to the seal to see if you are getting suction to the primer cap. Float ball should hold tight to the seal and cause a noticeable change in tone of the vacuum pump. If not, check the following:
 - i. Vacuum pump is exhausting air out the outlet side
 - ii. Moisture traps are drained
 - iii. All lids are tight and sealed
 - iv. All vacuum hoses connections are tight and hose is free of cracks or holes
 - v. Ball valves and check valves are in the correct position and operating correctly
 - b. If you get good suction to the primer cap but cannot prime, check the following:
 - i. All gates on the unit, except for any gates between the primer cap and the suction hose, are closed and completely sealed. Worn out gate seals can lead to inability to prime.
 - ii. An obstruction in the suction hose

3. If you can prime, but lose prime during pumping, this generally means one of the following:
 - a. Air is flowing backward through the priming system and into the primer cap
 - i. Remove the check valve (approximately 8" long brass valve with banjo fittings) and clean it up. Ensure that the seal surfaces are clean, the ball can move properly, and the spring pushes it against the seal face. Be sure to re-install with the arrow pointing toward the vacuum pump.
 - ii. Check the hose between the check valve and the primer cap, ensure there are no cracks or leaks, and that all seals are tight.
 - iii. Check the primer cap itself that all seals are tight.
 - iv. Check the secondary moisture trap to ensure all seals are tight and there are no air leaks.
 - b. There is a partial inlet obstruction causing inlet flow to not be able to keep up with the pump
 - i. ENSURE ENGINE AND MASTER SWITCH ARE OFF BEFORE CHECKING THE INLET OF THE PUMP!!
 - ii. Wearing leather gloves, carefully check inlet of the pump through the cleanout the verify there is no buildup. Use care, pump parts can be very sharp.
 - iii. Check the end of the suction hose. Pick it up and move it to a new location to ensure you aren't sucking up the same piece of debris over and over.

Pump Should Not Shake or Vibrate

Check for signs of cavitation. If the pump is vibrating or shaking excessively or if there is a wake or ripple in the liquid, your pump may be cavitating.

If the pump is cavitating:

- Lower the Engine RPM
- Check the pump for debris stuck in the impeller
- Check to make sure there are no air leaks

If problems persist, please call Puck: 712-655-9200.

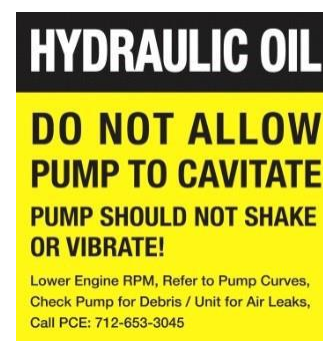
Stationary Agitation

When using your agitation machine for stationary agitation bring the agitation machine against the lagoon bank. Make sure that GATE 1 or the left/right nozzle is off so it does not damage bank. Also make sure the back two nozzles are at full forward angle.



Front Ramp

When using the front ramp of the agitation machine, practice caution entering and exiting plank. Be mindful of plank when in the "Up" position as it drops rapidly and could drop without warning.



*****NEVER APPROACH SHORE WITH GATES OPEN, DAMAGE TO SHORE WILL OCCUR.*****

After Each Use

Prepare to Remove Unit

- Find a bank clear of rocks, sharp objects, or cement that could potentially damage flotation
- Close GATE 1 to keep from damaging the bank, and bring the unit to shore
- Turn the engine OFF
- Open all GATES - so liquid will drain when being pulled from lagoon
- **Using Caution:** attach chains to a low point on the front of the unit
- Pull the machine from the lagoon with the tractor

Once On Shore

- Empty moisture trap on priming system
- Make other maintenance checks
- If Cold Weather: stand clear of unit, open all gates, run the motor 10 - 20 seconds to clean out pump • Unhook ALL safety chains
- Make sure everyone is off unit, and standing clear of any pinch points
- Retract flotation
- Load onto trailer

If transporting a long distance, we recommend strapping the flotation together on the top.

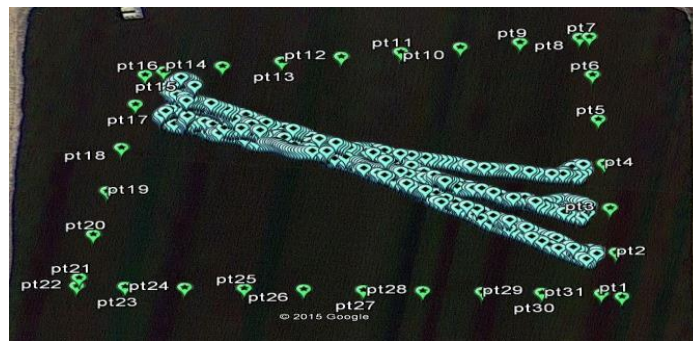
Auto Steer

- GPS AUTOSTEER turns the manually steered Agitator into an Autonomous Agitator.
- Agitator will need the following Auto steer package installed.
 - Auto steer Panel
 - Hemisphere GPS receiver
 - LVDT steering cylinders
 - Proportional Hydraulic manifold
 - Radio control package must be Scanreco

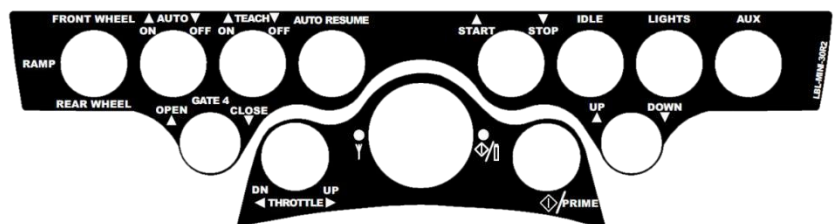
- Four teach points (a minimum of 50 ft. pt. to pt.) will create a Geofence. Inside the Geofence the Agitator will work in a cross pattern in a clockwise rotation around the lagoon.



- The Agitator targets the point until within 20 feet on the target. A new target point is now loaded.
- If the Agitator is placed in manually control, then auto steer is reengaged the current target point is loaded. If the Agitator is powered off, the current GEOFENCE will be loaded upon startup but the target points will start over.
- The Agitator will continue to target points inside the Geofence until a new Geofence is taught.

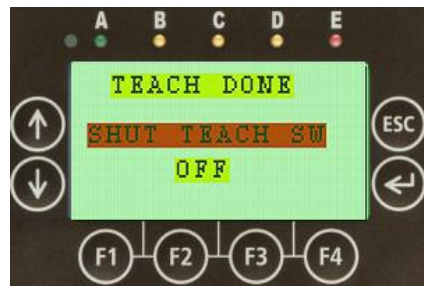
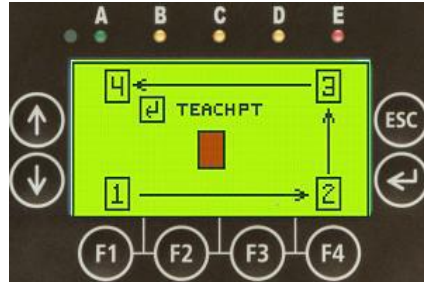
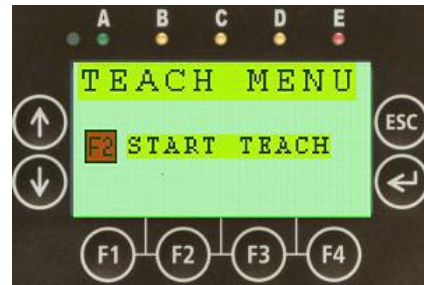


1. START TEACH
2. AUTO SWITCH OFF
3. TEACH SWITCH ON
4. TEACH MENU



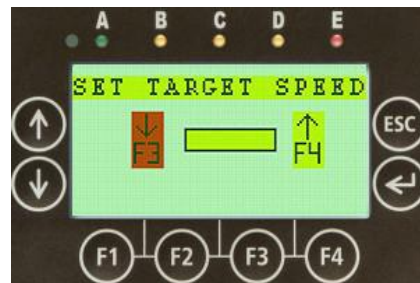
5. SELECT F2 (SHUT TEACH SWITCH OFF TO CANCEL)
6. TEACH SCREEN
7. Position the boat at the first teach point.
8. Leave 15-25ft from shore.
9. Press the enter button on the remote.
10. Center text box will indicate the teach position. If the box did not step to the next point the boat is within 50 ft. of the previous point
11. Teach the four Pts. When all pts are taught. The following screen will appear.

12. Shut the teach switch off



Start Auto Steer

1. TEACH MUST BE COMPLETE
2. Drive the boat inside the Geo Fence.
3. The Geo Fence Red light will be on if in the Geo Fence
4. Turn Auto switch to ON
5. Press the Auto Resume switch
6. Use up/down arrows to find Set Speed target.
Adjust speed with F3/F4 Steps of .1 mph per press
limit .5 to 2 mph.



Stop Auto Steer

1. Turn the AUTO switch to OFF

Resume Auto Steer

1. Position the Boat in the Geo Fence
2. Auto switch to ON
3. Press the Auto Resume

Revision History

Revision Number	Date	Equipment Line	Comments
1	5/10/2019	Boat	Initial