



STARTUP & OPERATION

Section

2

General Guidelines

When performing the XP startup, remember these simple guidelines:

- Don't rush to put a vehicle in bay. Complete all the steps in one area before moving on to others.
- Water is not a constant. Sand, silt, lime and muck can all adversely affect the XP's performance and component life. Failure to pre-flush water lines and install filters where needed can cost in repairs, customer confidence and down time, and may also affect your warranty.
- If the XP is located in an extended bay (does not adjoin the equipment room) you must follow Oasis' recommendations for pipe size and type.

Hydraulics

Fill hydraulic tank with approximately 13 gallons of Dexron III ATF. Visually inspect all hydraulic hose connections. The Onboard XPert allows all hydraulic functions to be performed in Remote Mode. The drive gear on the bridge motor has not been installed at this point, so 'Bridge Extend' and 'Bridge Home' commands make it possible to prime the hydraulic pump without being under load.

On the Onboard XPert, scroll to 'Remote B/Trolley Movement', and press the enter key. Press F2 to activate Remote Mode, then press 'F3 Bridge Extend'. This should activate the hydraulic motor. If motor is running, check pressure gauge on pump. Once it purges the air from the pump, it should run at approximately 1400 psi. If pump does not start, check main 3-phase breaker and hydraulic motor starter breaker. If pump motor started but pump failed to build pressure, most likely the pump rotation is wrong. To correct rotation, shut off 3-phase power at both the main breaker and at Oasis panel. Reverse any two of the three leads coming from the hydraulic motor starter. Tighten leads very snugly. Visually inspect wires for loose whiskers, and turn 3-phase power back on.

Reactivate 'Bridge Extend' and check pressure gauge. When pressure is stable at approximately 1400 psi, proceed to bay to inspect motor rotation. Upon entering bay, check transition box, IGUS tube, and bridge for any sign of hydraulic leaks. With your back to the wall, look at the bridge motor hub. Your right hand should be facing the entrance of the bay, and the hub should be rotating in a counter-clockwise direction. Allow hydraulic motors to run for several minutes. This will aid in purging the line as well as flushing debris which may have infiltrated the system. If rotation is correct, return to the Onboard XPert and enter a 'Bridge Home' command. Return to bay. Inspect for oil leaks and confirm a clockwise rotation. If all is correct, turn off remote function and secure drive gear to hub. With gear attached, ensure gear is meshed into rack and bolts are tight on hydraulic motor.

Repeat the purge process with the trolley hydraulic motor as well. Remove the gear and activate the hydraulics. Allow this motor to run for several minutes. Once complete, replace gear and ensure it has meshed into rack and bolts are tight on hydraulic motor and mounts.

Return to the Onboard XPert and enter a 'Trolley Extend' command. Go to bay. Check for leaks and ensure trolley has moved adjustable wand to opposite side of bay from fixed wand. With adjustable wand in extended position, check the rotation on adjustable wand. Return to the Onboard XPert and

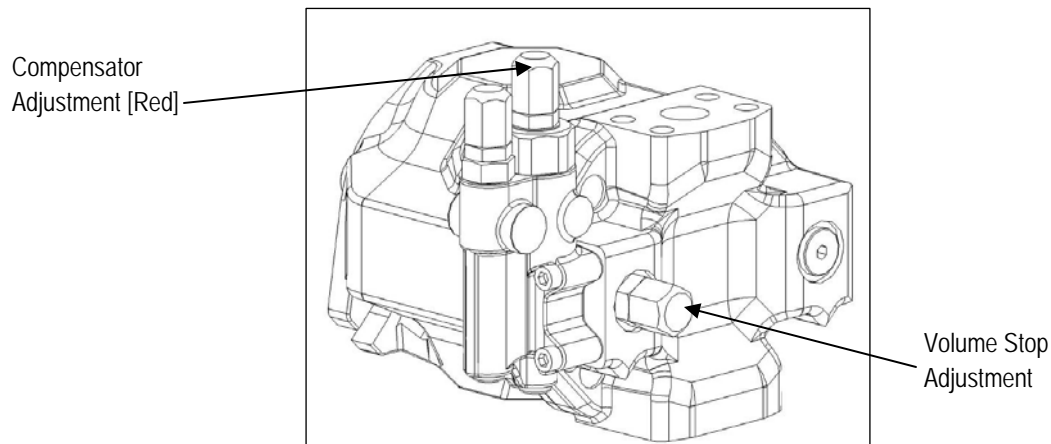
select 'Remote Adjustable Wand'. Follow screen instructions. Rotate wand clockwise and check bay for oil leaks and wand position. Wand should be in rear position, with nozzles pointing to exit end of bay. Return to Onboard XPert and rotate wand completely counter-clockwise. Check bay for wand position and oil leaks. Rotate wand both directions three (3) times to ensure all air is purged from lines, and stop wand in the car front position (nozzles pointing toward entrance of bay).

The last step in hydraulic startup is to test the trolley. From the Onboard XPert, select 'Remote Trolley Home'. Check bay for position and oil leaks. Run 'Trolley Extend' and 'Trolley Home' three (3) times to ensure proper travel. Finally, check oil level in reservoir tank.

Calibration of Flow of the Rexroth A10VSO Size 18 Pump

The volume adjustment screw is located beneath the nut on the rear of the pump, opposite the pump drive shaft [see Fig 1 below]. The cap nut and locknut require a size 19mm end wrench. The adjustment screw requires a size 5mm hex wrench. Remove the cap nut and loosen the locknut. Turn the adjustment screw counter-clockwise until there is little to no tension or resistance against the screw. Next, turn clockwise until resistance is encountered. At this point continue to turn the adjustment screw clockwise six (6) full turns. Turning the adjustment screw volume stop counter-clockwise will increase flow. Turning the adjustment screw volume stop clockwise will decrease flow. The volume stop should not be set less than 50% of maximum displacement. Each revolution is approximately 0.5 GPM (1.09 cc/rev) at the 1750 RPM. There is a total of approximately 18 turns of adjustment; however, do not exceed 9 turns. This setting will provide approximately 5 GPM. This adjustment is required to maintain a reliable service factor on a 5 HP motor at the required 1400 psi setting.

Fig 1. Rexroth A10VSO Size 18 Hydraulic Pump

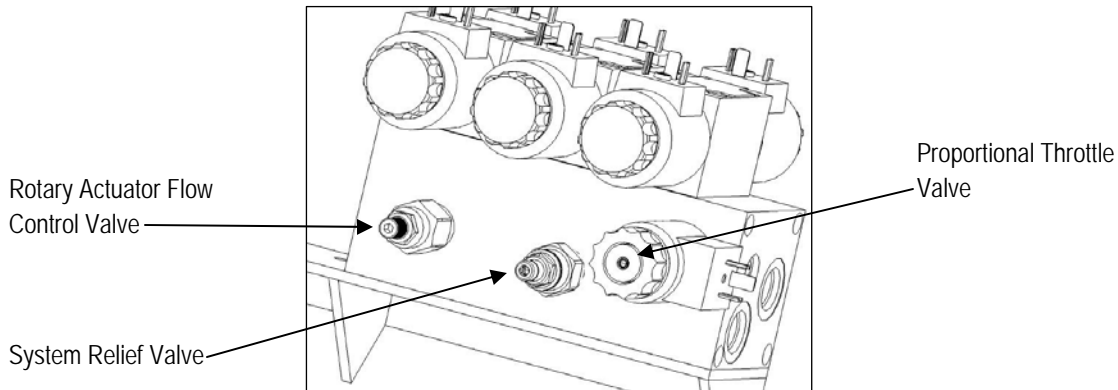


Pressure Adjustment for System Relief and Pump Compensator

The pressure compensator is located on the side of the pump. The cap nut has been painted red to indicate proper adjustment screw [see Fig 1 above]. Remove the red cap nut and loosen the locknut with a 17mm end wrench. Beneath the cap nut is the compensator adjustment screw. A 3mm hex wrench is required to adjust pump pressure. Turning the compensator adjustment screw clockwise will increase pump outlet pressure. Turning the compensator adjustment screw counter-clockwise will decrease pump outlet pressure.

The system relief is located on the valve manifold opposite the outlet ports [see Fig 2]. The valve is designated by relief RPEC marked on the block. Loosen the locknut with a 9/16" end wrench. The adjustment screw requires a 5/32" hex wrench. Turning the adjustment screw clockwise increases the system relief pressure, and turning counter-clockwise decreases the system relief pressure. The safety relief valve pressure is typically set at 15% greater than system pressure requirement.

Fig 2. XP Hydraulic Manifold



To set system relief pressure and pump compensator pressure, first turn the system relief adjustment screw clockwise to maximum adjustment. Next, with the pump running, set the system relief pressure at 1600 psi. While monitoring the gauge, increase the pressure by adjusting the pressure compensator on the pump to 1600 psi.

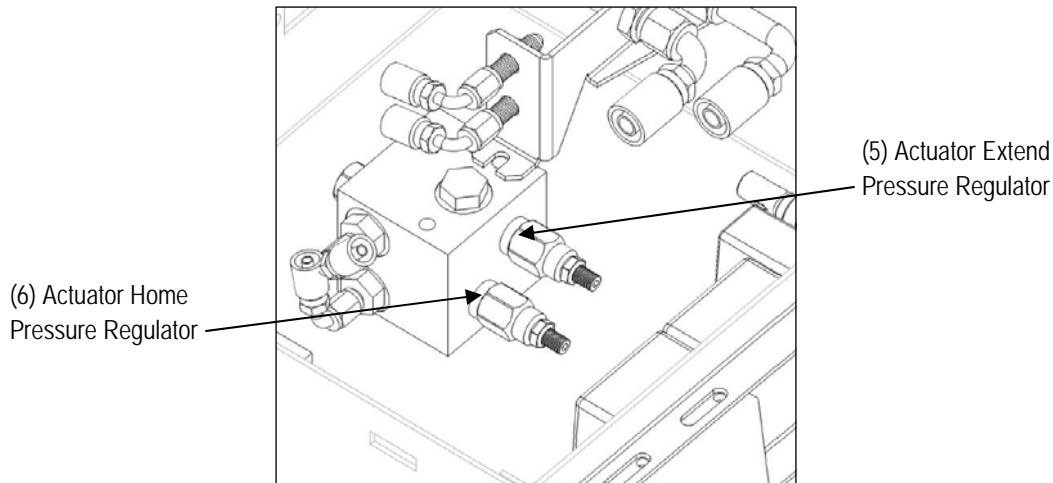
Once the 1600 psi is attained, adjust the system relief pressure counter-clockwise until you hear a sound like water through a faucet and/or the pressure drop. These two (2) conditions indicate the system relief is just at or below 1600 psi. Turn the relief clockwise so that the faucet sound stops. Tighten the locknut to complete adjustment of the system relief pressure.

Next, turn the pump compensator adjustment screw counter-clockwise while monitoring the gauge until the 1400 psi pump pressure is reached. Once the required pump outlet pressure is attained, tighten the jam nut. Finally, replace the compensator adjustment cap nut.

Adjustable Wand Rotation Pressure Adjustment

The cross port relief for the adjustable wand rotation is in the trolley [see Fig 3, Pg 2.4]. Each direction of rotation is controlled with a separate regulator. The top regulator controls pressure on the extend rotation, and the lower regulator controls pressure on the home rotation. To adjust the rotation pressure, first loosen the locknut with a 9/16" wrench. Next, adjust the pressure by turning the adjustment screw with a 5/32" hex wrench. Turning the adjustment screw clockwise will increase the pressure, and turning counter-clockwise will decrease the pressure. To test the pressure setting, simply turn the wand by hand. This will give you an indication of the force required to initiate the go-around feature. The pressure adjustment is adjustable from 50 to 200 psi. Once the desired pressure has been reached, tighten the locknut.

Fig 3. Cross Port Relief Manifold



Bridge Home Prox and Stops

With bridge near front of bay, check for proper contact between bridge stops and rail stops/target. If there is not good contact on either or both sides, remove stop/target from rail and insert stainless steel washers behind stop to give proper distance for secure contact. Move bridge until bridge stops contact rail stops, and then move proximity switch in to within $\frac{1}{4}$ " of rail target. When proper proximity switch distance has been achieved, yellow indicator light on end of proximity switch will come on. Tighten the proximity support brackets. Using remote functions, move bridge to back of bay and repeat above procedure with rear rail stops.

Water Inlets

Before connecting any water source to the XP, the line should be well flushed to minimize potential problems. For each water supply, run for several minutes at full flow. Then turn water source on and off five (5) times, allowing full flow for 15 to 20 seconds each time. If water source is new equipment, follow manufacturer's startup instructions for each given source.

Prior to connecting supply that will fill tank, check tank for dirt and debris that may have entered during shipping. Connect water source to inlet valve with 1" diameter hose. Secure both ends and slowly open valve. Rapid rush into an empty tank may blow lid off and flood pump stand. Observe tank as it fills to ensure high level float is functioning properly. Tank should fill to between 1" and 2" of overflow. If it doesn't, adjust float as needed.

Connect all additional inlet valves and record what source is running to which valve, as you will need that information when programming the vends.

Remove two (2) lowest nozzles (side blaster and high pressure wand), and remove undercarriage from line. On the Onboard XPert, activate Remote Mode. Beginning with the undercarriage, turn 'ON' for thirty (30) seconds. Turn 'OFF' and let water tank fill if low. Repeat three (3) times. Follow same procedure for side blaster and high pressure. Replace nozzles and reattach undercarriage.

In Remote Mode on the Onboard XPert, turn 'ON' high pressure both wands. If pressure is above 1000 pounds, turn unloader valve out until 1000 is achieved. If pressure is under 975 pounds, turn unloader in until 975 is achieved.



Chemical System

First, flush the system. The Oasis XP uses an injector system to draw the chemical in from your supply, so there is no need to do any pre-mixing. In order to meter the flow of chemicals into the system, Oasis has provided a tip kit for each chemical used. The ratios in the tip kit are a very rough guide for chemical use. Accurate chemical ratios can only be determined by testing the chemical delivered in the bay until the proper titration is attained. NOTE: Where there are dual injectors, one chemical barb on the injector has been capped off. If you are using a chemical that requires a dual injector, simply remove the cap.

Set up your chemicals using remote functions on the Oasis Onboard XPert. Run chemical long enough to get consistent chemical to the bay before measuring. If you change tips, re-run long enough to get new concentration before measuring. If using a bulk (50 gallon) presoak heater, be sure to bypass heater until you get proper chemical concentration, then open tank valves, close bypass, and fill tank using remote function.

Winterization System

Whether gas or electric, the startup procedure for the winterization system is the same. Do not power up or light the system until fully filled and purged. Use unblended glycol antifreeze, 6 gallons for an electric unit and 28 gallons for a gas system. After a visual inspection of entire system to ensure all hose connections are made and tight, add antifreeze to expansion tank. With all ball valves on heat manifold open, slowly add water to system. As water rises, turn on circulator pump to work product through system. Fill until reservoir is between $\frac{1}{3}$ and $\frac{1}{2}$ full. At blue manifold, close far right valve to purge that side of system. After one minute, open that valve and open valve just to left of the first one.

Recheck water level. If at least $\frac{1}{3}$ full, light heater and set to warm. With circulator pump running and fluid warm, check copper lines at bottom of both wands for warmth to ensure proper circulation. Turn thermostat to 38°F and system should be operational. Check bay one last time for leaks, and verify fluid level. System should run between 105 and 110 at temperature gauge.

Calibrate the Adjustable Wand

After the hydraulic power unit pressure has been calibrated to 1400 psi, it may be necessary to adjust the adjustable wand bypass regulators. These regulators control the pressure needed to rotate the adjustable wand smoothly in the extending and retracting mode. When the adjustable wand rotates smoothly from home to rear position and back in remote mode.



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CUSTOMER TRAINING

Training in the following areas of operation has been provided by an Oasis' technician:

Electrical Schematic

- Review all inputs on schematic and processor
- Show location of each input device (prox, stop pad, etc.)
- Review all outputs on schematic and processor
- Show location of each valve, relay, contactor and motor starter

Pump Stand

- Review water flow schematic
- Show location and flow on pump stand
- Show location of RPS and flow
- Show water flow on Bridge
- Review chemical flow schematic
- Show how to mix chemicals
- How to change chemical flow control orifice
- Proper operation of chemical pressure air assist control valves
- Location of chemical check valves on pump stand

Bay Equipment

- Review hydraulic flow schematic
- How to change hydraulic filter
- Location of hydraulic solenoid valves
- Hydraulic flow control valves
- Hydraulic motor
- How the Bridge proximity operates
- How to change and adjust proximity switches
- How to change stop pad switches
- Instruction on normal preventive maintenance
- Review preventive maintenance chart
- Gear adjustments
- Show all locations to grease



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