

**To:** All Distributors  
Regional Sales Managers and National Sales Manager

**From:** Technical Support

**Model:** Labrie Automizer, Expert with Helping Hand Arm

**Subject:** Arm Control Valve Resealing

The following work instructions outline the procedure to reseal the arm control valve on the Labrie Automizer and Expert (with Helping Hand arm) product models. Please note that these repairs should be performed only by trained, experienced Technicians.

---

Please contact LabriePlus at (800) 231-2771 with any questions or for further information.



## Labrie Expert/Automizer Arm Control Valve Resealing

### Tools Required

- Ratchet
- ¾" socket
- ½" socket
- 13mm socket
- 5mm Hex Key Driver
- 4mm Hex Key Driver
- 3mm Hex Key Driver
- 6" extension
- 10mm Combination Wrench
- 13mm Combination Wrench
- Torque Wrench
- O-Ring Pick
- Small Snap-ring pliers
- Small Flat Blade Screw Driver
- Lifting device, minimum 500 lb. capacity (overhead winch, shop crane, etc.)
- Nylon sling, minimum 500 lb. rating
- Lint free rags
- Petroleum jelly

### Parts Required

- LabriePlus part number HYV04429 Section Seal Kit, one kit required for each section + end cap (does not include port relief adjustment screw seals, plug seal washers, or dust caps)
- LabriePlus part number HYV04335-01 Electric Actuator Seal Kit, one kit required for each actuator
- LabriePlus part number HYVHYV04330 Manual Actuator Seal Kit, one kit required for each actuator
- LabriePlus part number 633B1816 port relief adjustment screw o-ring seals (as required, not included in seal kit)
- LabriePlus part number 155L6377 port relief dust cap (as required, not included in seal kit)
- LabriePlus part number 684X2120 plug seal washer (as required, not included in seal kit)

Thoroughly clean the valve and coils; please note that the use of brake clean, or similar solvents, may cause damage to the actuator coils (refer to TSB #14-37 for proper cleaner recommendation).

### Valve Removal

Remove the hydraulic tank fill cap to relieve any air pressure from the reservoir. Remove the hoses and electrical connectors (label them prior to removal to aid in re-assembly). Attach the lifting device to the valve with the sling, then using the ¾" socket, 6" extension and ratchet, remove the four ¾" bolts holding the valve mounting plate to the body. Drain the oil from the valve, set it on a clean, flat surface and, using the ½" socket and ratchet, remove the valve mounting plate from the valve.



## Labrie Expert/Automizer Arm Control Valve Resealing

### Valve Resealing

1. Using the 13mm socket/ratchet and 13mm combination wrench, remove the three tie rod nuts holding the valve assembly together, and remove the tie rods. Thoroughly clean the tie rods, nuts and washers, and lightly lubricate the threads on the tie rods.
2. On the end plate of the valve section, use an o-ring pick to remove and discard the old o-rings, clean the inside face of the plate, and inspect for cracks, abnormal wear, rust or uneven sealing surfaces. Slide the tie rods through the backing plate and stand it upward (on end). Lubricate the o-rings with petroleum jelly and install them into their corresponding seats on the backing plate. Ensure the o-rings are pushed fully and evenly into their seats.
3. Starting with the first valve work section, remove the electric coil actuator from the valve work section using a 5mm Hex key driver to remove the four socket head bolts that secure it to the valve body. Use caution when removing the coil as there are small plungers that may fall out of the coil. Clean the sealing surfaces of the valve work section, and inspect for cracks, abnormal wear, rust or uneven sealing surfaces.

Setting the coil carefully on end with the seal side up, use an o-ring pick to remove and discard the old o-rings and bubble shaped screen filter. Clean the seats in the coil face and inspect for cracks, abnormal wear, rust or uneven sealing surfaces. Using petroleum jelly, lubricate the new o-rings and seal edge of the bubble shaped screen filter. Install the new o-rings and bubble shaped screen filter, ensuring that they are pushed fully and evenly into their seats; refer to the attached diagram for seal configuration.

Carefully install the coil to the valve section, taking care to not dislodge the small plungers, and torque the four socket head bolts to 67-75 lbs./in. (7.5-8.5 Nm) in a cross-pattern.

4. Please note that if the LabriePlus part number HYV04315 Manual Actuator is leaking from the manual lever pivot, the actuator must be replaced; this seal is not serviceable (the LabriePlus part number HYV04315 Manual Actuator includes the seals required for installation). Note the amount of threads exposed past the jam nut on the spool stop screws, and using the 10mm combination wrench loosen the two spool stop screw jam nuts on the manual valve actuator, then using a 3mm Hex key driver remove the stop screws.

Remove the four socket head bolts holding the actuator to the valve work section using a 5mm Hex key driver. Turn the manual actuator lever to disengage it from the valve spool, and remove the actuator.

Clean the sealing surfaces of the valve work section, and inspect for cracks, abnormal wear, rust or uneven sealing surfaces. Using an o-ring pick, remove and discard the old o-rings in the face of the actuator. Clean the seats in the actuator face and inspect for



### Labrie Expert/Automizer Arm Control Valve Resealing

cracks, abnormal wear, rust or uneven sealing surfaces. Using petroleum jelly, lubricate and install the new o-rings, ensuring that they are pushed fully and evenly into their seats; refer to the attached diagram for seal configuration.

Carefully install the actuator to the valve section, ensuring that the valve spool is properly attached to the manual actuator lever, and torque the four socket head bolts with a 5mm Hex key driver to 67-75 lbs./in. (7.5-8.5 Nm) in a cross-pattern.

Install the spool stop screws and adjust them to their original setting as noted at the beginning of this step, and tighten the spool stop set screw jam nuts to 61-79 lbs./in. (7-9 Nm).

5. Note that the LabriePlus part number 684X2120 washer seals are not included with the valve seal kits, and should only be resealed if any of the plugs on the back of the valve work sections are leaking. If resealing is necessary, remove the plug and replace the washer seal on the plug, install the plug and torque to 281-335 lbs./in. (32-38 Nm).
6. With the valve section fully assembled, ensure that the flat sealing surface is clean and inspect it for cracks, abnormal wear, rust or uneven surfaces. Carefully lower it over the tie rods and mate it to the end plate. Using an o-ring pick, remove and discard the old o-rings. Clean the seats in the o-ring seal face and inspect for cracks, abnormal wear, rust or uneven sealing surfaces. Using petroleum jelly, lubricate and install the new o-rings, ensuring they are seated fully into their corresponding seats; refer to the attached diagram for seal configuration.
7. Repeat steps 3 through 6 with the remaining valve work sections.
8. Ensure that the flat sealing surface of the valve end cap is clean and inspect it for cracks, abnormal wear, rust or uneven surfaces. Carefully lower it over the tie rods and mate it to the valve work section. Lightly lubricate the threads on the tie rods, and install the three washers and nuts on the tie rods. Using a 3 step torque method, torque them to 195-239 lbs./in. (22-27 Nm).
9. Note that the LabriePlus part number 633B1816 valve work port relief adjustment screw seals are not included with the standard seal kit, and should only be resealed if leaking. If resealing is necessary, lay the valve flat on the work bench with the ports facing upward, and, using a small flat blade screw driver or o-ring pick, remove the port relief adjustment screw dust caps. Use the small snap ring pliers to remove the snap ring retaining the work port relief adjustment screw. Using a 4mm Hex key driver, turn the adjustment screw counter-clockwise, counting the revolutions until the adjustment screw is removed (ensure the spring and needle under the adjustment screw stays in position when the adjustment screw is removed).



### **Labrie Expert/Automizer Arm Control Valve Resealing**

Remove and discard the old o-ring from the adjustment screw, lubricate the new o-ring with petroleum jelly and install it onto the adjustment screw, ensuring that it is fully seated in the groove. Coat the outside surface of the o-ring with petroleum jelly and reinstall the adjustment screw, turning it the appropriate revolutions in accordance with the counted revolutions recorded during removal.

Clean and reinstall the snap-ring and dust cap; if the dust cap is damaged or missing, install a new LabriePlus part number 155L6377 dust cap. Repeat this step on all leaking port relief adjustment screws.

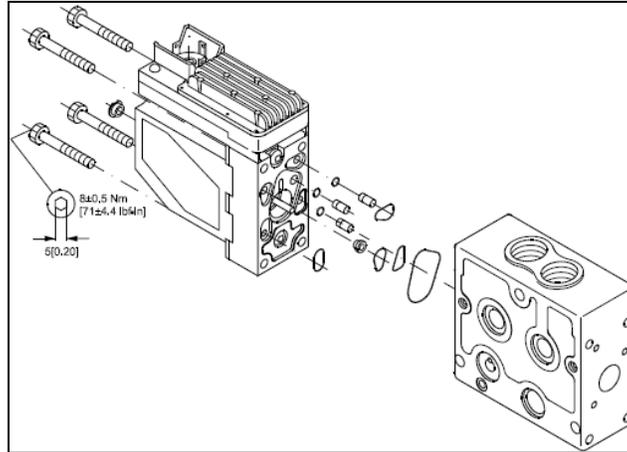
### **Valve Installation/Adjustment/Testing**

Clean the valve mounting plate and install it to the valve assembly; tighten the hardware securing the valve to the mounting plate to 24 lbs./ft. (32.5Nm) and, using a suitable lifting device, reinstall the valve assembly to the body. Tighten the hardware securing the valve mounting plate to the body to 85 lb./ft. (115Nm). Install the hoses and harness connectors that were previously labeled to their respective fittings and connectors. Install and tighten the hydraulic tank fill cap.

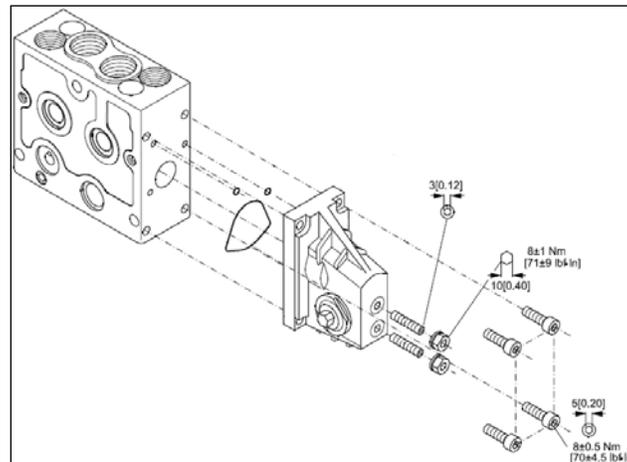
Attach a 0-4,000 PSI hydraulic gauge on the test port of the inlet cover, start the truck, and engage the pump. Check and adjust all function pressure and cycle times (refer to TSB #13-22). Operate all functions until the hydraulic fluid is at operating temperature, and check for leaks. Add hydraulic fluid as required to the hydraulic tank.

## Labrie Expert/Automizer Arm Control Valve Resealing

### Electric Actuator Seal Configuration



### Manual Actuator Seal Configuration



### Valve Section Seal Configuration

## Labrie Expert/Automizer Arm Control Valve Resealing

