Instruction for Use -

Replacing a Hydraulic leg on an Adjustable Height Sink (Electronically or Manually Operated Hydraulics)

Processing Sink Hydraulic Leg Replacement

Our example in this process will demonstrate the replacement of a hydraulic leg on a triple basin sink. Single and Double basin sinks will follow the same procedure. This applies to both electronically operated hydraulic legs or manually operated processing sinks.

Parts Needed

• Hydraulic Leg with tube (H0091-03)

Tools Needed

- Hydraulic Service Kit (H0090-10)
- 7/16" wrench
- 7/16" socket
- Phillips screw driver
- 10mm line wrench (included in hydraulic service kit)
- 3/8" x & 7" bolt (H0016-08)
- Tube cutter (included in hydraulic service kit)

Sink Preparation

- 1. Lower the sink to its lowest level.
- 2. Remove all accessories on the sink.
- 3. Unplug the sink from its power source.
- 4. Disconnect the sink from its drain and water lines.
- 5. Remove any seismic foot anchors on the legs.
- 6. Obtain sturdy supports (like saw horses). Wrap the supports with some foam sheeting or other protection to avoid scratching the sink top when the sink is set on it.
- 7. The triple basin sink is very heavy. Four men will be needed to lift, turn the sink over and set the sink flat on its top on the supports (Fig. 1 Fig. 2).



Fig. 1: Turn sink upside down on supports



Fig. 2: Triple basin sink position for leg replacement

2. Unscrew the hydraulics pump compartment (4 places) and remove the cover (Fig. 3). Set the screws aside for future re-attachment.



Fig. 3: Hydraulic compartment cover

Hydraulic Leg and Hydraulic Leg Kit

- 1. Unpack hydraulic leg (H0091-03) and Hydraulic Service Kit (H0090-10).
 - A. Hydraulic Leg with wiring (Fig. 5)
 - B. The hydraulic leg kit (Fig. 6) includes:
 - Bottle of hydraulic fluid
 - Syringe
 - Syringe needle (for injecting the fluid into the hydraulic pump)
 - Wrench
 - Wire cutter
 - Bag of brass screws
 - Bag of brass ferrules (tubing connectors)
 - C. A 7" long Bolt (not a part of the kit) is included for this operation



Fig. 4: Hydraulic pump in compartment



Fig. 5: Hydraulic leg with cord



Fig. 6: Hydrualic fluid kit

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Remove Lower Shelf

- 1. **IMPORTANT** Make sure all the hydraulic legs (including the defective one) are **completely lowered and level with each other.** This is important because when the new hydraulic leg is installed, the hydraulic system is in the correct position to keep all the legs in alignment with each other as the sink hydraulic system raises or lowers the sink.
 - A. If one leg is still unlevel with the others, **manually push that leg all the way down** so that all the legs are level with each other. This pushes the air out and the hydraulic fluid back into the pump for that leg, correcting its hydraulic level in the pump.
 - B. This hydraulic leveling process will be further adjusted on page 7 when the new hydraulic leg is connected..
- 2. Unscrew the foot levelers from each of the hydraulic legs (Fig. 7).
- 3. Detach the sink lower shelf by removing the U-bolts and nuts attached to the drain assembly (Fig. 8) and the other bolts, nuts, clamp saddles and red/black rubber pads (Fig. 9) attaching the lower shelf to the drain assembly. Set these aside in an orderly manner for later re-attachment.
- 4. Lift off the sink lower shelf (Fig. 10) and set aside for later re-installment.



Fig. 7: Remove foot levelers



Fig. 8: Remove U-bolts



Fig. 9: Remove bolts - clamp saddles



Fig. 10: Remove lower shelf

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Remove Old Hydraulic Leg

- 1. Temporarily insert the 7" long bolt into the hydraulic leg and inner leg (Fig. 11). This is to allow easy removal of both legs together.
- 2. Unscrew the top and bottom ends of the old hydraulic leg from the upper leg (Fig. 12 - Fig. 13 - 4 screws). Set these aside for later re-insertion into the new leg.
- 3. From the hydraulic pump, trace the wire connected to the old hydraulic leg. Disconnect the old hydraulic leg wire from the pump by unscrewing it from the pump. Use the kit supplied wrench to unloosen the pump connection screw (Fig. 14 - Fig. 15).
- 4. Using the long bolt as a handle, draw out the hydraulic leg and the inner leg together (Fig. 16). Set the inner leg aside for later re-insertion.



Fig. 11: Insert 7" bolt in leg



Fig. 12: 2 screws top end



Fig. 13: 2 screws lower end





Fig. 14: Remove old wire from pump Fig. 15: Extract wire with screw/ferrule



Fig. 16: Extract inner & hydraulic leg

Re-position the Hydraulic Pump

- 1. To aid in adding hydraulic fluid to the pump pressure element (chamber where the replacement hydraulic leg cord will be connected), remove the hydraulic pump from its compartment and set upright.
 - A. To release the pump from the compartment, unscrew the locknut underneath the pump compartment at the head end. A metal spacer is above the locknut and will come off when the locknut is removed. Remove the 3 1/2" bolt (Fig. 17). Set the locknut, spacer and bolt aside for future re-insertion.
 - B. Remove the two locknuts at the rear located under the pump itself. Remove the bolts. Set the locknuts and bolts aside for future re-insertion (Fig. 18).
 - C. Prop the pump in an upright position with the wire connections upwards (Fig. 19).







Fig. 17: Long bolt at pump head end Fig. 18: 2 bolts at pump back end Fig. 19: Wire extracted - pump upright

Install New Hydraulic Leg

- 1. Cut the zip tie from the new hydraulic leg cord (Fig. 20).
- 2. Temporarily insert the 7" bolt into the new hydraulic leg. This bolt will make inserting the leg into the sink upper leg easier (Fig. 21).
- 3. Thread the hydraulic leg cord into the sink upper leg (Fig. 22). The leg cord should appear at the bottom of the upper leg. Pull the cord through (Fig. 23).
- 4. Insert the hydraulic leg into the sink upper leg (Fig. 24). Make sure the screw holes on one side of the hydraulic leg faces the screw holes of the upper leg.

Fig. 22: Thread leg cord





Fig. 21: Insert 7" bolt





Fig. 23: Cord threaded thru



Fig. 24: Insert hydraulic leg

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- 5. After inserting the new hydraulic leg into the upper leg, re-insert the four screws (top and bottom) of the upper leg to secure the hydraulic leg to the upper leg. (Fig. 25 Fig. 26).
- 6. Remove the 7" bolt from the hydraulic leg (Fig. 27).



Fig. 25: 2 screws top end



Fig. 26: 2 screws lower end



Fig. 27: Remove long bolt

Connect Hydraulic Leg Wire to Pump

- 1. Thread the hydraulic leg cord through the grommet hole at the front of the hydraulic pump compartment (Fig. 28).
- Pull the hydraulic leg cord coming out of the grommet hole to the pump. Measure a length of the leg cord from the new hydraulic leg to the pump for trimming. Use the kit wire cutter to cut the wire to length (Fig. 29).
- 3. Insert the wire end through the screw provided by the kit. Then insert the kit-supplied ferrule (tubing connection) onto the wire end (Fig. 30).



Fig. 28: Thread wire thru grommet



Fig. 29: Trim wire



Fig. 30: Hydraulic screw & ferrule

- 4. Prepare the kit-supplied hydraulic fluid syringe (Fig. 31). Remove the syringe and needle from its wrapping. Remove the red cap from the needle and attach it to the syringe end.
- 5. Insert the needle in the hydraulic fluid bottle and fill the syringe with hydraulic fluid. Squirt out a little to eliminate air bubbles.



Fig. 31: Kit syringe & needle

- 6. Turn the pump clockwise in its highest position (by handle or by pump). This presses presses the fluid into the hydraulic legs and presses out the air completely from the legs and tubing while turning back the pump (top drawing Fig. 32).
- 7. Turn back the pump until its end. The legs will drive back (bottom drawing Fig. 32).
- Hold the pump in an upright position with the pump wire connection pressure elements (fluid chamber) facing upward. Insert the needle into the pump connection pressure element. Fill the chamber until a little fluid flows out of the pressure element brim (Fig. 33).
- 9. Keep the pump upright to prevent the fluid from leaking out.



Fig. 32: Turning pump



Fig. 33: Injecting hydraulic fluid

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10. Insert the prepared wire end of the new hydraulic leg into the wire connection socket of the hydraulic pump (Fig. 34 - Fig. 35). Tighten the wire connection screw.







Fig. 36: Bolt & Spacer

11. Re-insert the 3 1/2" bolt into the head end of the pump. Under the pump, re-insert the spacer onto the bolt (Fig. 36). Insert the bolt with the hole in the hydraulic compartment (Fig. 37). Under the hydraulic compartment, secure the pump to the compartment with its lock nut. Tighten nut and bolt (Fig. 38 - Fig. 39).



Fig. 34: Insert prepared wire

Fig. 37: Insert bolt in hole



Fig. 38: Secure with lock nut



Fig. 39: Long bolt at pump head end

- 12. Re-insert the two bolts to the rear of the pump (Fig. 40). Secure the bolts with its locknuts.
- 13. Plug in the power cord to a power source to test the leg hydraulics (for manual units, use the pump crank). Hold down the down arrow on the PCB Enclosure keypad until it clicks. Then press the green set button. Hold down the Up buttom until the leg raises the desired set length (4-5"). All legs should be level with each other (Fig. 41). If not, detach the pump from its compartment and repeat steps 6-7 on page 7.
- 14. Re-install the cover onto the hydraulic pump compartment (Fig. 42). Secure with its 4 screws (top and side).



Fig. 40: 2 bolts at pump back end



Fig. 41: Test leg hydraulics



Fig. 42: Hydraulic compartment cover

Install Inner Leg

1. Insert the inner leg into the upper leg (Fig. 43). If the hydraulic leg is not in the up position, keep a finger on the inner leg to control the rate of drop into the upper leg to avoid cutting the leg hydraulic line at the bottom.

Re-install the Lower shelf

- 2. Place the lower shelf back onto the sink.
- Re-attach the U bolts around the drain pipes at the corners, re-inserting a red rubber block between the pipe and sink surface (Fig. 44). Push the U-bolts up through the support panel holes on the lower shelf (Fig. 45 - circled in red). Temporarily secure the U-bolts with two flat washers and two lock nuts for each U-bolt, but do not tighten down at this point.



Fig. 44: U-bolt & drain pipe

- 4. Place the clamp saddle (Fig. 46 with a black rubber block inserted in it) between the support angle sink panel (Fig. 47 - shown in green) and the drain pipe. From behind the support angle panel, insert 2 carriage bolts through the support angle holes and through the clamp saddle hole (Fig. 48).
- 5. Insert another clamp saddle onto the bolts on the other side of the pipe and secure with 2 washers and lock nuts. Tighten the lock nuts (Fig. 49).
- Next, remove the lock nuts on the U-bolts, insert a total of 8 washers for each U-bolt and re-attach the lock nuts (). Tighten down the lock nuts.
- 7. Tighten down all lock nuts securing the drain pipes to the lower shelf.
- 8. Attach and screw in the 4 foot levelers to the 4 outer legs (Fig. 50).

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Fig. 45: U-bolts securing drain assy



Fig. 43: Insert inner legs



Fig. 46: Clamp saddle



Fig. 48: Insert carriage bolts



Fig. 47: Support angle sink panel - lower shelf



Fig. 49: 2nd clamp saddle



Fig. 50: Install foot levelers

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5. When re-assembled, the drain pipe securements to the lower shelf should look like Fig. 51 - Fig. 53.





Fig. 52: Center - drain pipe secured



Fig. 51: Left - drain pipe secured

Fig. 53: Right - drain pipe secured

Finishing Up

- 1. Set the sink upright on the floor.
- 2. Reconnect drain, air and water connections
- 3. Re-install accessories (faucets, air and water guns, etc).
- 4. Re-connect the sink to its power source