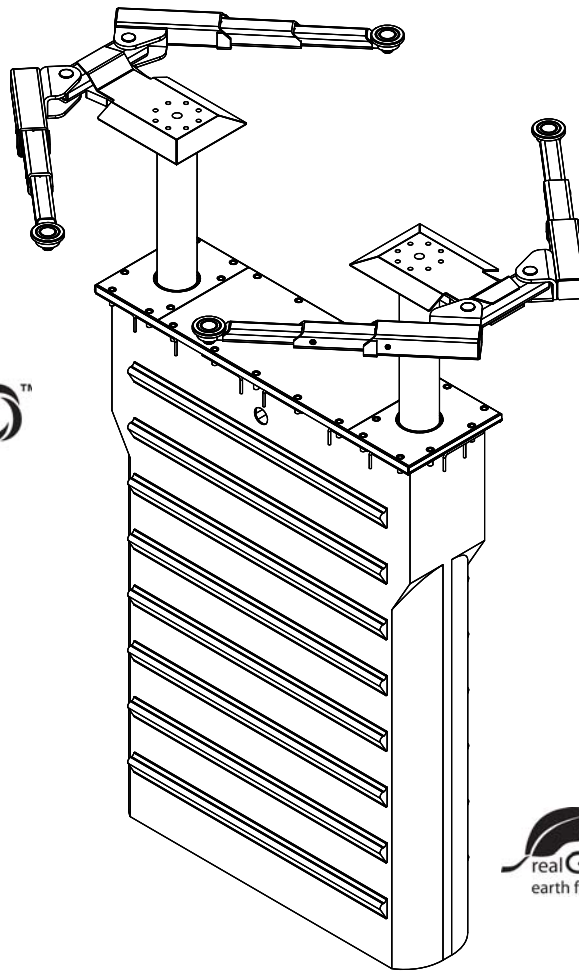


# **CL Challenger Lifts**

## **ANNUAL MAINTENANCE KIT SUPPLEMENT MODEL AV1020WV**

**EnviroLift®**  
with **AquaVantage™**



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**IMPORTANT: READ THIS MANUAL COMPLETELY BEFORE  
INSTALLING or OPERATING LIFT**

**Annual Maintenance Kit  
Model AV1020WV**

**Annual Maintenance Kit Parts List**

	<b>P/N</b>	<b>Qty</b>	<b>Description</b>
<input type="checkbox"/>	<b>AVAMK-IOM-A</b>	<b>1</b>	<b>Annual Maintenance Kit Supplement</b>
<input type="checkbox"/>	<b>AVGREASE</b>	<b>2</b>	<b>AquaVantage Grease Cartridge</b>
<input type="checkbox"/>	<b>CAL125</b>	<b>1</b>	<b>AquaVantage Water Additive</b>
<input type="checkbox"/>	<b>CAL026</b>	<b>1</b>	<b>AquaVantage Muffler</b>
<input type="checkbox"/>	<b>VS5096</b>	<b>4</b>	<b>Grease Fitting</b>
<input type="checkbox"/>	<b>CAL128</b>	<b>2</b>	<b>AquaVantage Grease Plug</b>
<input type="checkbox"/>	<b>17403</b>	<b>2</b>	<b>1-5/8" Hole Plug, Fill</b>
<input type="checkbox"/>	<b>17402</b>	<b>16</b>	<b>13/16" Hole Plug, Bolt</b>

## Annual Maintenance

### -Tools Needed section:

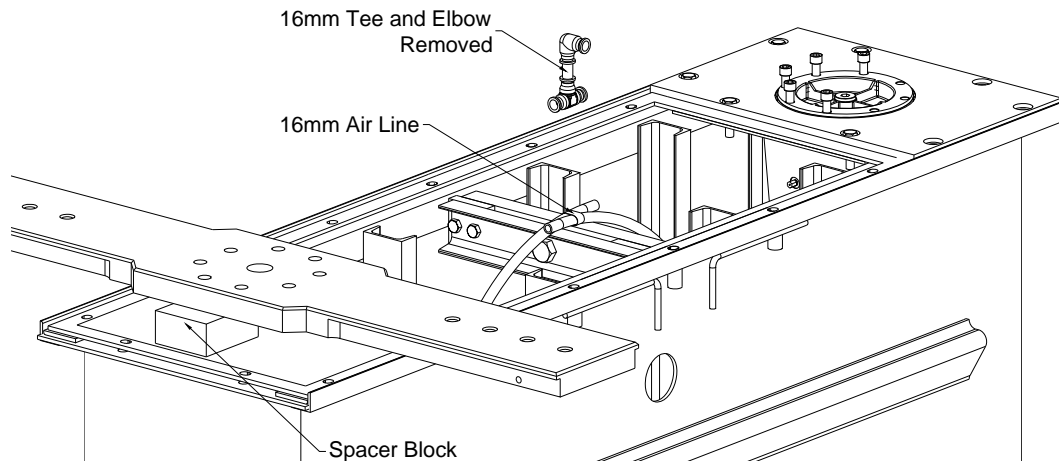
- 3/4" socket for cover plate bolts
- 10 mm Allen head socket for superstructure bolts
- 12 mm Allen head socket for fill plugs
- 2.5 mm Allen wrench for control handle (wall mount only)
- 6 mm Allen wrench for control cover (wall mount only)
- Standard grease gun with AV Grease only.
- Torque wrench

### **Procedure to check water level, top off, add Challenger AV water additive**

Annual service to each lift should take up to 1 hour to complete under normal conditions.

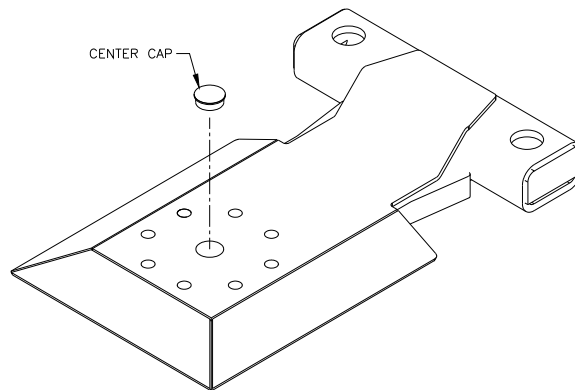
1. Raise lift to comfortable working height for superstructure bolt check.
2. Remove plastic caps on super structures, check superstructure torque to 75 ft pounds.
3. If controls are mounted behind the face of a workbench, please go to step 7.
4. If unit is wall mounted, remove the control handle using a 2.5 mm Allen wrench.
5. Remove the AV control cover by removing the (2) 6 mm socket head bolts from the face of the cover.
6. Replace the control handle onto the shaft of the controls. Note orientation of handle before removing.
7. Remove 10 cover plate bolts and carefully remove cover plate ensuring not to bump plungers. Check to ensure the gasket is in good working order and remove any debris that may have accumulated.
8. Place a foot pad (or rubber block) under the superstructure of the lift (4").
9. Lower the lift to its lowest blocked up position (approximately 4").
10. Turn off air supply to the lift.
11. Repeatedly pull and depress control handle in the down position until all air is exhausted, and gauge is showing zero.
12. Disconnect both 16 mm air lines at the tee inside the box, see figure 1.

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**Fig. 1**

13. Remove plastic center caps over fill plug, see figure 2.



**Fig. 2**

14. Remove fill plugs with 12 mm Allen head socket.

15. Turn air supply back on.

16. Hold the lift control in the down position. This procedure will open the water valves on both sides illustrating the "true" water level of the pistons. Not doing this could result in the lift being under filled.

17. Add  $\frac{1}{2}$  the bottle of AV water additive to each side of the lift.

18. Slowly, using a watering can or bucket and funnel fill both sides of the lift until water is at the top of the fill plug. (be aware with the lift being blocked 4" inches above the ground, you are intentionally overfilling it)

19. Replace fill plugs and tighten. Note fill plug has an O-ring. Do not over tighten.

20. Install both 16 mm lift supply lines to their original position into the tee in the box. Please ensure lines seat firmly in the fitting, see figure 1.

21. Raise lift 2 feet and stop.

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22. Remove foot pad or block used to position superstructure above the floor.
23. Lower lift all the way to its lowest position. Be prepared for water to come out of the controls at the muffler. This is normal. We are overfilling the unit to allow all trapped air to be purged from the system.
24. Raise the lift half way to full stroke (approximately 37")
25. Lower lift all the way to its lowest position. Again, water may purge out of the muffler. This is normal.
26. Raise lift all the way to its highest position and deadhead 5 seconds.

### Start of Lubrication Procedure

27. Identify grease fitting on synchronization rail, see figure 3.

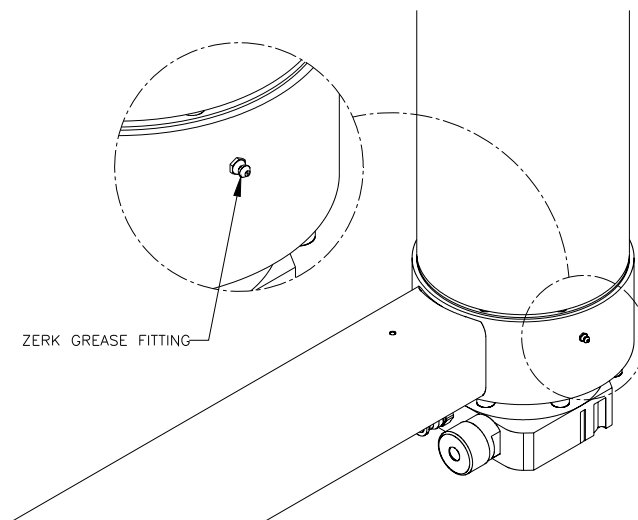
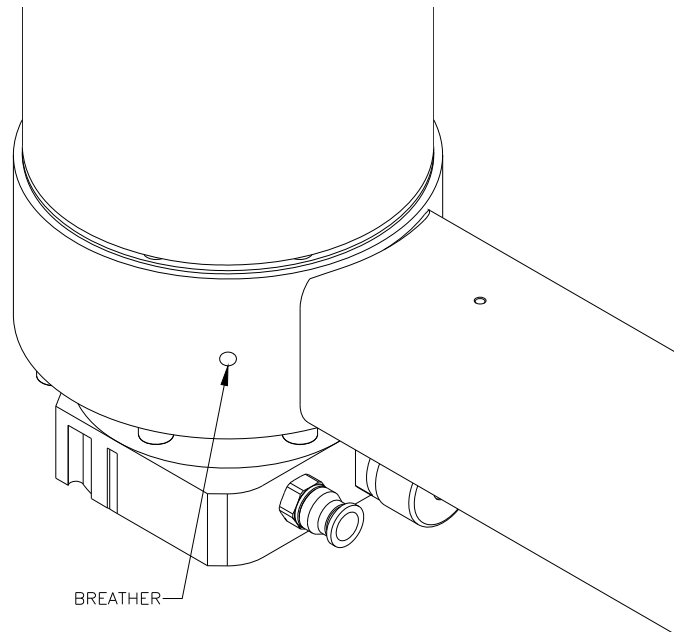


Fig. 3

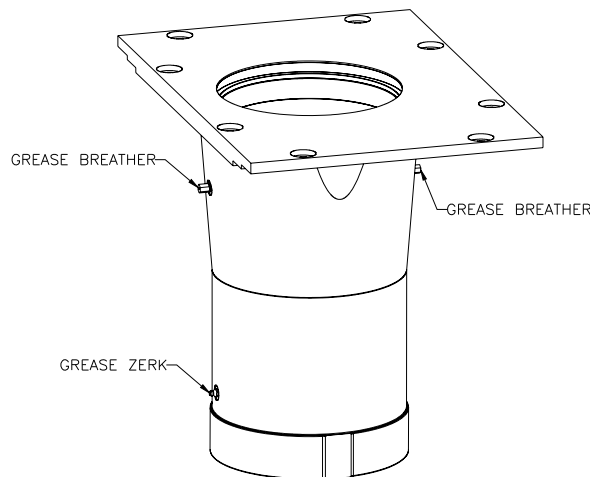
28. Grease synch rail until grease begins to come out the breather opposite the grease fitting, see figure 4.

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Model AV1020WV**



**Fig. 4**

29. Repeat synch rail lubrication on other side.
30. Remove upper bearing grease breathers, see figure 5.
31. Grease bearing until air is exhausted out of one of the breathers when a steady stream of grease forms and cap, continue until a steady stream of grease forms out the second breather and cap, see figure 5.

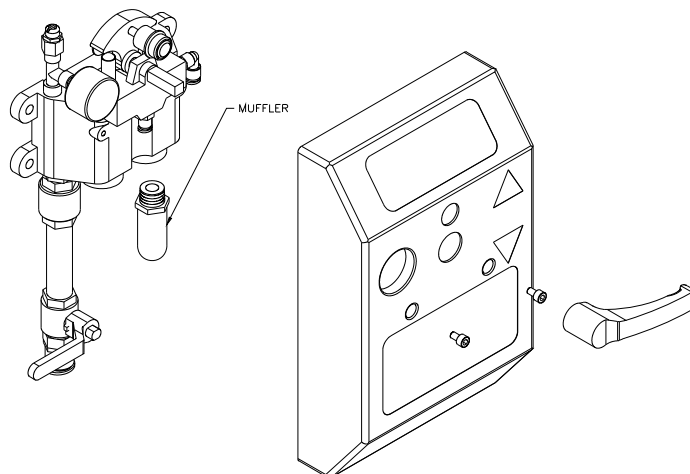


**Fig. 5**

32. Replace upper breathers with included solid style breather plugs.
33. Ensure any accumulated water in containment removed if there is no SD100AV installed. If SD100AV is installed remove and clean out screen filter.
34. Replace cover plate, torque all cover plate and bearing bolts to 60 ft-lbs.
35. Lower lift to comfortable working height for plastic cap replacement.

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36. Install included super structure bolt plastic caps (32) and both fill plug plastic caps (2).
37. Check the valve stems to assure they are not sticking, handle should be horizontal when in a neutral position and have very little play. If there is excessive play in one or more direction, refer to the AquaVantage Controls Maintenance section on page 7.
38. Install replacement muffler into control unit, see figure 6.



**Fig. 6**

39. If bench mounted controls, Maintenance is complete.
40. If wall mounted controls, remove control handle with 2.5mm tee handle Allen wrench.
41. Replace control cover with (2) 6 mm socket head bolts.
42. Replace control handle with 2 mm tee handle Allen wrench.

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### AquaVantage Control Maintenance

If controls stick after letting go during the raise or lower function, please follow the following procedure to lubricate control.

1. **Preparation:** Lift in lower position; air supply disconnected; control unit depressed.
2. Open /remove both **valve caps** (they are glued with liquid seal LOCTITE 577) with spanner wrench (2")
3. Remove both stainless steel **springs**.
4. Remove of both **valve pistons** by activating the up/down lever.
5. Clean the inside of the **control unit box** using air gun.
6. Clean the valve pistons and **check the O-rings** and valve plate.
7. Liberally **grease both valve pistons** with special white water resistant O-ring grease (e.g. MOLYCOTE 55)
8. Re-install **greased valve pistons**.
9. Carefully remove dried glue from the valve caps. Prepare threads for re-installation with coating of **liquid seal** (e.g. LOCTITE 577)
10. Replace cleaned and greased stainless steel springs.
11. **Carefully fasten valve caps back into control body and tighten with spanner wrench.**
12. Liberally **grease rocker** (bearing and contact surface to tops of valves) with the same O-ring grease as before.
13. Allow LOCTITE 577 to set, reconnect air supply and **check function and ensure no leaks.**