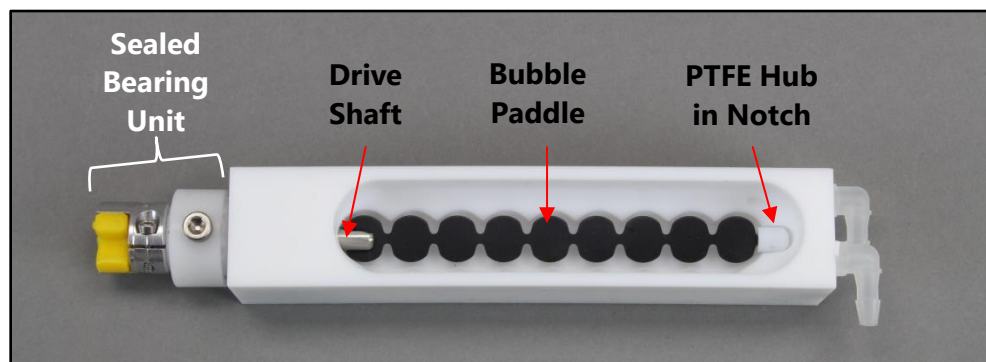


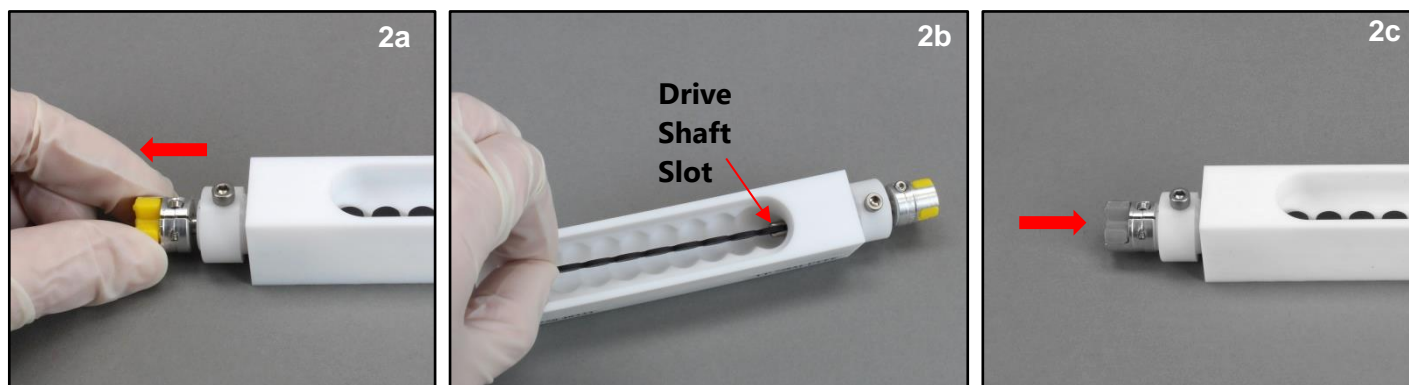
## Maintenance of Direct Drive Bubble Paddle Reservoirs

### A. Removing and replacing Bubble Paddles can be done for cleaning or if paddle has been damaged



**Figure 1. Close-up view of a Bubble Paddle Reservoir**

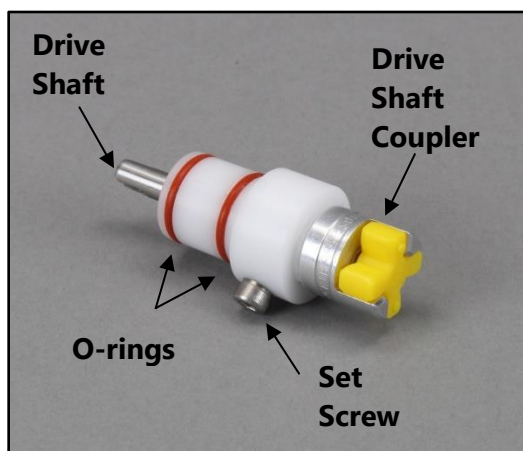
1. Remove VP 758M series Reservoir from the VP 767M-3 Motor Base as described in step 3 (page 3 of TN).
2. Turn the Bubble Paddle so that it is in a vertical position.
3. Grasping the coupler gently pull the drive shaft partially out of the sealed bearing to release the Bubble Paddle (see Figure 2a and 3). **DO NOT pull the drive shaft out all of the way out of the sealed bearing to release the Bubble Paddle.** This is not recommended because of the risk of damage to the seal in the bearing.
4. Lift up in the far end of the Bubble Paddle (see Figure 2b). Pull Bubble Paddle out of the drive shaft slot by pulling away from the sealed bearing.



**Figure 2(a-c). Replacement of Bubble Paddle (VP 758AL)**

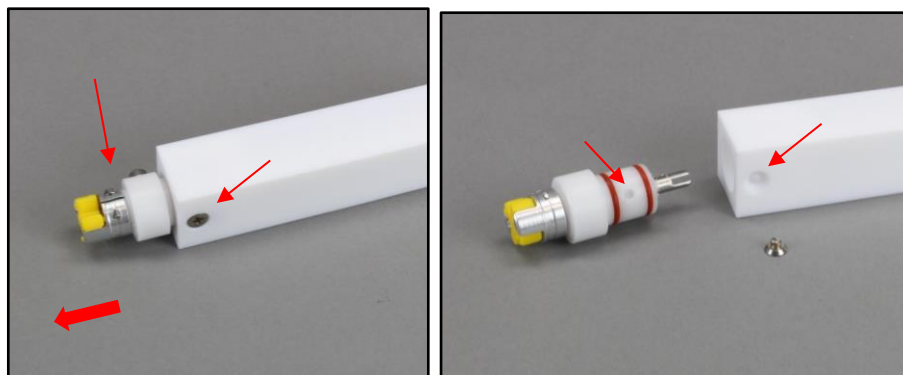
5. To replace the Bubble Paddle, grasp the coupler to gently pull the drive shaft partially out of the sealed bearing. Place the end of the replacement Bubble Paddle without the Teflon hub into the drive shaft slot (see Figure 2 above).
6. Gently place the hub end of the paddle into the contoured notch at the other end of the reservoir. Do not force into place. If necessary, grasp paddle near drive shaft on other end and move slightly up and down until hub end falls into place
7. Push the drive shaft back into the sealed bearing to lock the Bubble Paddle into the drive shaft slot (see Figure 2c).
8. Replacement Bubble Paddles, VP 758AL, are available.

**B. VP 758MS sealed bearing units can be removed for cleaning and replaced with a new one as needed**



**Figure 3. Replacement Sealed Bearing Unit VP 758MS**

1. Replacement sealed bearing units (VP 758MS, see Figure 3) are available in the event the reservoir begins to leak.
2. To remove sealed bearing unit from the reservoir, remove the screw at the bottom of the reservoir (Figure 4 below) and pull out the sealed bearing unit. It is positioned in the hole in the end of the Bubble Paddle Reservoir by a friction fit with two O-rings (see Figure 3).
3. The set screw at the top of the sealed bearing unit should NOT be removed.



**Figure 4. Bottom of Bubble Paddle Reservoir VP 758M**

4. Clean the bearing hole and apply a thin coat of silicone grease.
5. By hand, press a new (or clean) VP 758MS into the reservoir.
6. Line up the hole in the bearing unit with the one on the underside of the Bubble Paddle Reservoir (Figure 4b).
7. Insert and tighten screw to lock the sealed bearing unit in place. Do not over tighten.
8. Replace Bubble Paddle as instructed on page 1