



# Service Bulletin

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**Bulletin 2010-14-ABDE**

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**Date: 12/06/2010**

## **SUBJECT: ATO (Automatic Top Off) Troubleshooting**

**Frymaster is currently testing ATO pumps returned under warranty. Invoices with ATO pumps that test good will NOT be paid; the pump will be returned.**

A clogged oil line can lead to a mis-diagnosis of a failed top off (ATO) pump. That is not necessarily true. If the fryer is not topping off and the onboard oil reservoir (JIB) has oil or has been replaced, the problem is likely a clogged suction line. Oil is not moving from the JIB to the frypot. The low-oil yellow light will come on within five minutes of a reset, which followed the JIB replacement.

The clog can be easily removed and does **NOT** require replacement of the pump.

The pump and the tubing/plumbing leading from the JIB to the pump should be thoroughly examined for clogs.

Follow these steps to troubleshoot top off failures:

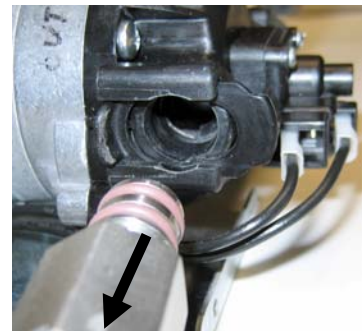
1. Gain access the ATO pump at the rear of the fryer.
2. Disconnect the inlet side quick disconnect (QD) shown in figure 1 by pulling out on the quick disconnect release shown in figure 2. The quick disconnect release is keyed to allow the fitting to be removed from the pump.



**Figure 1** Release quick disconnect on inlet side.



**Figure 2** Release quick disconnect by pulling keyhole release.

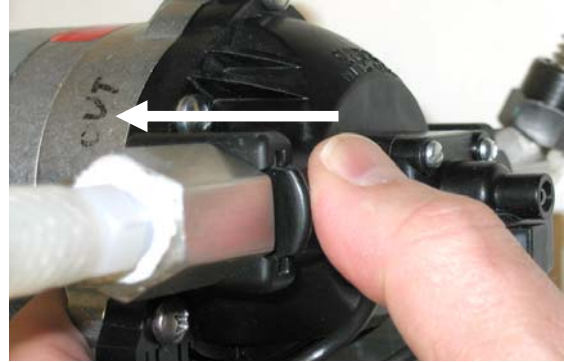


**Figure 3** Pull quick disconnect fitting from pump.

3. Pull the quick disconnect fitting from the pump as shown in figure 3.



**Figure 4** Blow compressed air through inlet side to JIB.



**Figure 5** QD release pushed and locked into place.

4. Using compressed air, blow air through the removed fitting and lines to the JIB to remove clogs. See figure 4 on the following page. **Caution: Use of compressed air can injure you and others around you. Take precaution so as to not place yourself and others at risk. DO NOT BLOW COMPRESSED AIR THROUGH THE PUMP. IT CAN DAMAGE THE DIAPHRAGM.**
5. If a small amount of oil remains in the JIB, empty the JIB into a fryer and replace with a new JIB.
6. Reassemble line into pump, ensuring that the quick disconnect keyhole release is fully pushed and locked into place. See figure 5.
7. Lower the level of oil in a vat below the top sensor. See figures 6 and 7.



**Figure 6** Lower oil level beneath this sensor on electrics.



**Figure 7** Lower oil level beneath this sensor on gas.

8. Reset the power on the fryer using the hidden reset rocker switch. On gas LOV's it is directly under the far left control box. See figure 8. On electrics it is directly behind the orange ATO reset button above the JIB. See figure 9. Ensure power is off for a minimum of 20 seconds.

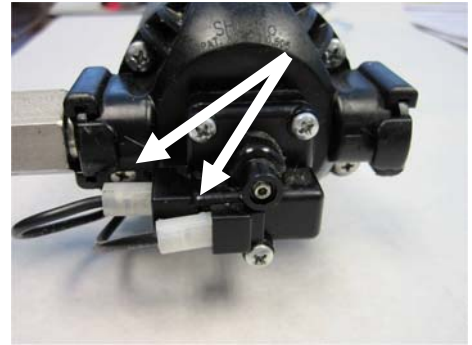


**Figure 8** Resetting control power on an gas.

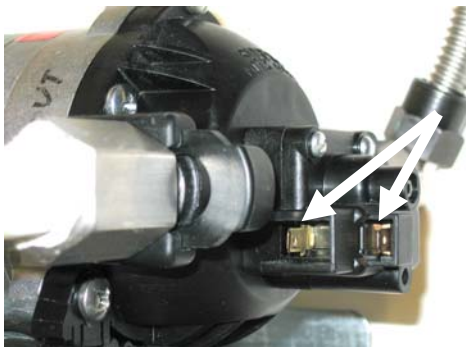


**Figure 9** Resetting control power on an electric.

9. After resetting the power turn on the vats and allow vat temperature to rise to at least 300F (149C).
10. With the vat sitting idle, ensure the vat tops off.
11. If the vat fails to top off, and the yellow light is illuminated again, access the ATO pump again.
12. Remove the two wires from the pressure switch. See figure 10.
13. Test the resistance of the two terminals shown in figure 11. The switch is normally closed and should read 1 ohm or less. If the circuit is open, the switch is activated and no voltage will travel thru the ATO pump.



**Figure 10** Remove the two wires from the pressure switch.



**Figure 11** Test the resistance of the two terminals.



**Figure 12** Jump out the wires.

14. Jump out the wires removed from the terminals. See figure 12.
15. Test again by resetting the power and turning on all vats. If the pump runs then the pressure switch is most likely the issue and has crystallized shortening in it.
16. Remove the switch and clean and retest.
17. If there are any questions call 1-800-551-8633.

Take the following steps to prevent clogged ATO lines:

1. If using RTI, occasionally dump all the oil out of the JIB into the vats.
2. If using standard JIB's, rotate stock to prevent old oil from separating.