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Service Bulletin

This service bulletin replaces SB25-14.

This bulletin addresses float switch grip-clips, float inspections and troubleshooting.

Subject: Float Switch Clip, Float Inspections & Troubleshooting

Models: FQG60T, FQG80T, FQG100T & FQG120T Touch Screen Fryers

7/16/2025

During startup and/or service calls of FQG60T, FQG80T, FQG100T and FQG120T fryers, perform a quick visual inspection of the float switch.

1. If the float switch has a **HEAVY-DUTY GRIP RING** supplied by the manufacturer on **TOP OF THE FLOAT AND** a **HEAVY-DUTY GRIP RING BELOW THE FLOAT** (see Figure 1), the float is good stock and **DOES NOT NEED TO BE REPLACED**.
2. If the float switch has an **INDENTED TRIANGLE ON THE TOP OF THE FLOAT** (see Figure 2)**, it MUST have GRIP RINGS on the TOP & BOTTOM OF THE FLOAT (see Figure 1).** If it has **E-clips** on **TOP & BOTTOM OF THE FLOAT** (see Figure 3), the **E-clips MUST BE REPLACED** with **GRIP RINGS!**

Figure 1 Heavy Duty Grip Ring on **Top & Bottom**.

Figure 2 Float switch showing **Indented Triangle & Grip Ring**.

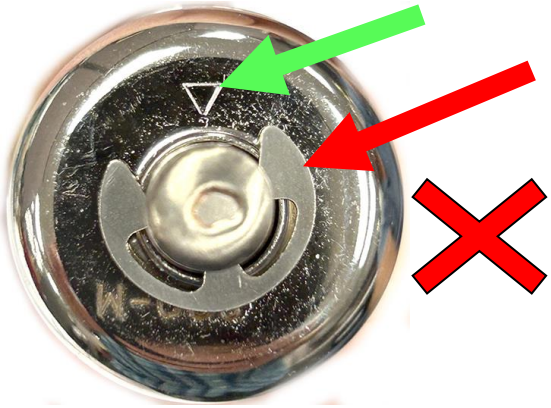

Figure 3 Float switch showing E-clip.

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3. If the float **DOES NOT HAVE A TRIANGLE** on the **TOP OF THE FLOAT** (see Figure 4) **AND** it has an **E-clip BENEATH THE FLOAT** (see Figure 5), **IT MUST BE REPLACED with kit PN 8262541!**

Figure 4 Float switch with **NO** triangle on top.

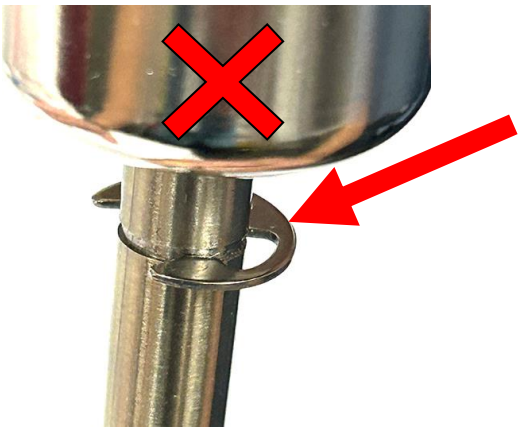

Figure 5 Float switch with E-Clip beneath the float that **DOES NOT** have a triangle on the top.

Float switches **WITH** the **INDENTED TRIANGLE** that **need** grip rings, should order kit 8263865, which contains 9 (nine) grip rings. **GOOD** external Snap Ring pliers **will be required** to install the grip rings.

When installing the bottom grip ring, a screwdriver will be needed to gently push the grip ring down into the groove while holding the grip ring with Snap Ring pliers (see Figure 6).

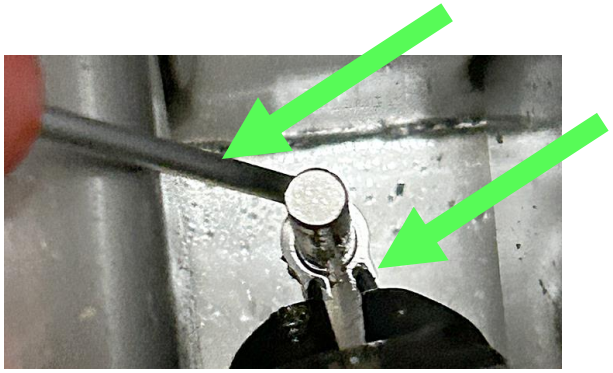

Figure 6

Ensure the grip ring is **NOT** deformed and loose on the shaft. It should fit tight into the groove. Figure 7 shows a deformed grip ring on the left and a normal grip ring on the right.

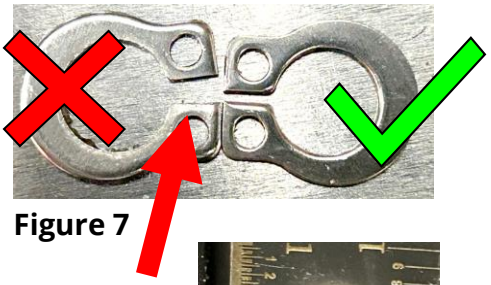

Figure 7

After ensuring the grip ring is in the groove, install the float with the **INDENTED TRIANGLE FACING UP** (see Figure 8). The float should be approximately ½" down from the top of the shaft if the bottom grip ring is in the proper place.

Install the top grip ring.

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Figure 8

When replacing float switches with kit PN 8262541, ensure that **ONLY** float switches **WITH BLACK LEADS ONLY** (see Figure 9) are used as replacements.

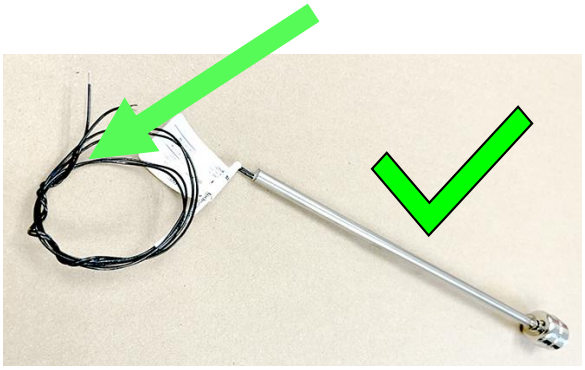

Figure 9

FAS's should order replacement kits first. Once they receive the new kits, they should return any 8262541 kits with **RED** leads (see Figure 10).

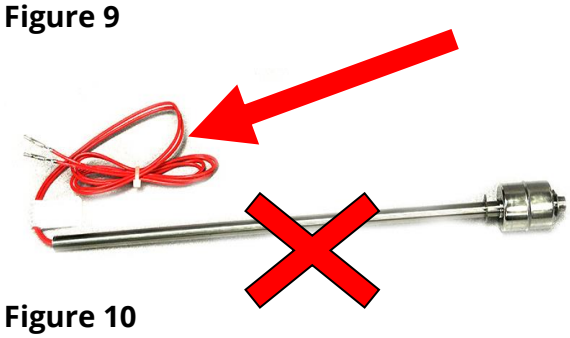

Figure 10

Standard snap rings **SHOULD NOT** be used (see snap ring on the left in Figure 11). They will not hold and will come loose.

ONLY HEAVY-DUTY GRIP RINGS from the manufacturer (see grip-ring on right in Figure 11) should be used.

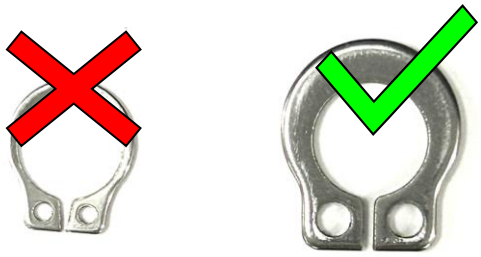

Figure 11

All float switches (ones that have been removed and any unused switches with red leads) should be returned to:
Frymaster
Attention: Jeff Jones
8700 Line Avenue
Shreveport, LA 71106
318-865-1711

If you have any questions, please call 800-551-8633.

If float switch issues exist with good float switches shown in Figures 1 and 2, use the troubleshooting below.

Troubleshooting Low Oil Level / Possible Float Switch Issues

1. Look at the error logs -
   a. On the affected vat, press → SERVICE → MANAGER → 3000 → E-LOGS
   b. If there are E56 (Float Switch stuck up) or E65 (Float Switch not made) these are float switch errors.
   c. If you have these errors, ensure that it doesn't have an incorrect float switch as seen in Figures 4 & 5. It should match one of the float

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switches approved with green checks seen in Figures 1 & 2. If the incorrect float is installed, replace the float switch.

d. If these errors occur on the vat, ensure the float is free of debris and that it moves freely up and down. Moving the float switch up and down while spinning the float should loosen the float.
e. If these errors are not present and there are intermittent low oil level alarms, the issue may be that the AIF and Temp probes may be inaccurate. See section 3 on page 5.

2. Troubleshoot the Time Delay Relay Board
   a. With the float switch in the **UP** position:
      i. Test across pins 1 (Red) & 12 (Black) (see Figures 12, 14 & 15). 24VDC should be present with the switch activated.
      ii. Test **<u>across pins</u>** 6 (Green) & 7 (White) or 2 & 3, depending which pins have Green and White wires attached (see Figures 13, 14 & 15). The voltage should be near 0VDC when activated. If the voltage is above 0.3VDC with power on and contacts closed, the time delay relay **<u>MUST</u>** be replaced.

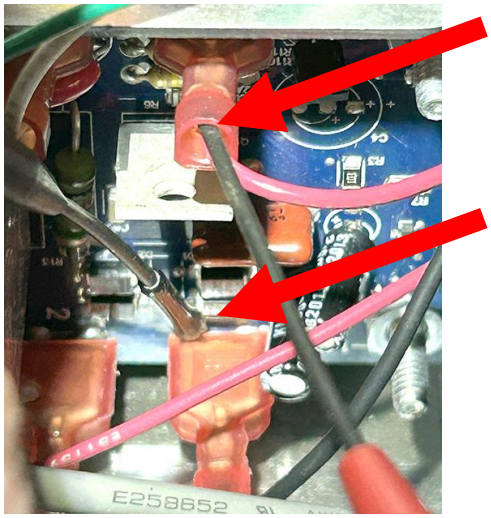

Figure 12

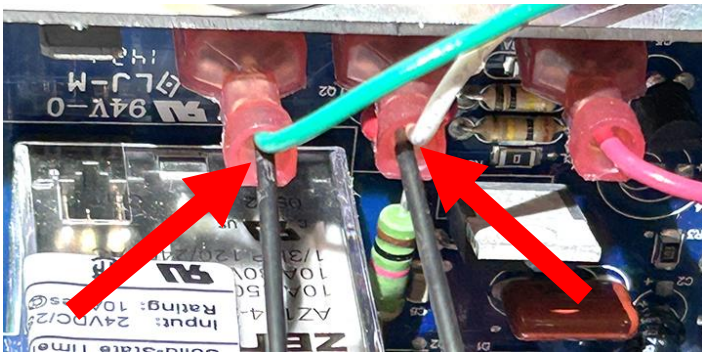

Figure 13

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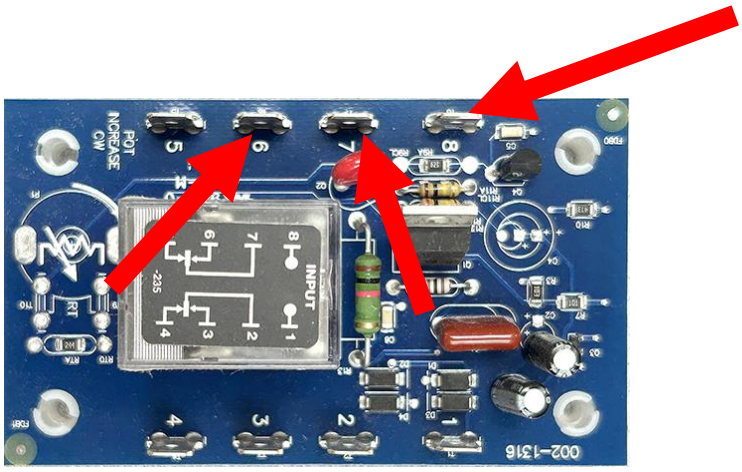


Figure 14

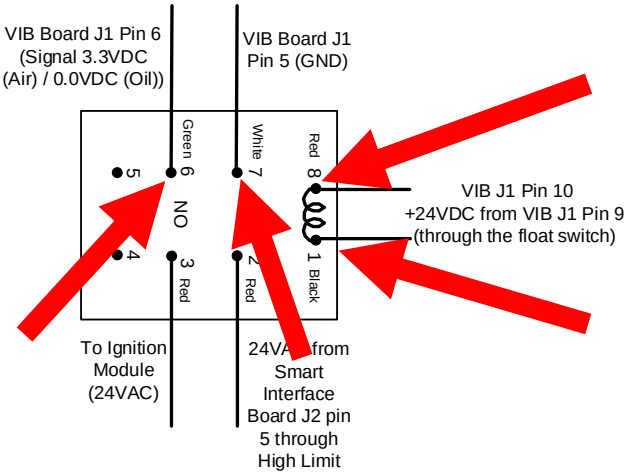
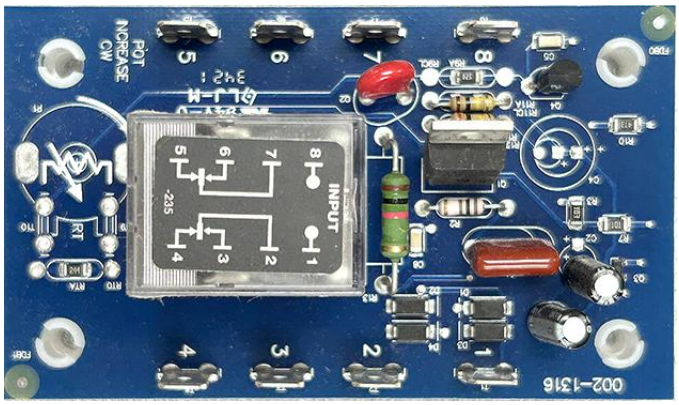


Figure 15



3. If there are intermittent low oil level messages and no errors in the error log and the fryer won't filter.
    a. Ensure the AIF and ATO probe cavities are clean and free of debris around the probes (see Figure 16).
    b. On the affected vat, press → ? → → 1.1 SOFTWARE VERSION
        i. With the vat full of oil and all the probes under oil look at all the RTD values (Temp, AIF & ATO). They should be within +/- 20˚F of each other.
        ii. If the actual temp probe or the AIF probe **<u>DOES NOT</u>** read within +/- 20˚F, there is an issue in the probe circuit.
        iii. Check to ensure that the probes are fully seated into the connectors.
        iv. Back out of RTD readings screen, then go back up to step b and take another reading of the RTD's to see if within range.

Figure 16

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v. If the readings are still not within +/- 20˚F, disconnect the probes and take a resistance reading of the probes and compare with the chart below. The resistance value should be within +/- 20 ohms of the value shown in the chart below.

vi. If the probe checks good, the issue could be a VIB or SIB board issue.

Probe Resistance Chart

Probe Resistance Chart

For use with FQG80T/100T/120T fryers manufactured with Minco RTD probes only.

F	OHMS	C	F	OHMS	C	F	OHMS	C	F	OHMS	C	F	OHMS	C
60	1059	16	130	1204	54	200	1350	93	270	1493	132	340	1634	171
65	1070	18	135	1216	57	205	1361	96	275	1503	135	345	1644	174
70	1080	21	140	1226	60	210	1371	99	280	1514	138	350	1654	177
75	1091	24	145	1237	63	215	1381	102	285	1524	141	355	1664	179
80	1101	27	150	1247	66	220	1391	104	290	1534	143	360	1674	182
85	1112	29	155	1258	68	225	1402	107	295	1544	146	365	1684	185
90	1122	32	160	1268	71	230	1412	110	300	1554	149	370	1694	188
95	1133	35	165	1278	74	235	1422	113	305	1564	152	375	1704	191
100	1143	38	170	1289	77	240	1432	116	310	1574	154	380	1714	193
105	1154	41	175	1299	79	245	1442	118	315	1584	157	385	1724	196
110	1164	43	180	1309	82	250	1453	121	320	1594	160	390	1734	199
115	1174	46	185	1320	85	255	1463	124	325	1604	163	395	1744	202
120	1185	49	190	1330	88	260	1473	127	330	1614	166	400	1754	204
125	1195	52	195	1340	91	265	1483	129	335	1624	168	405	1764	207