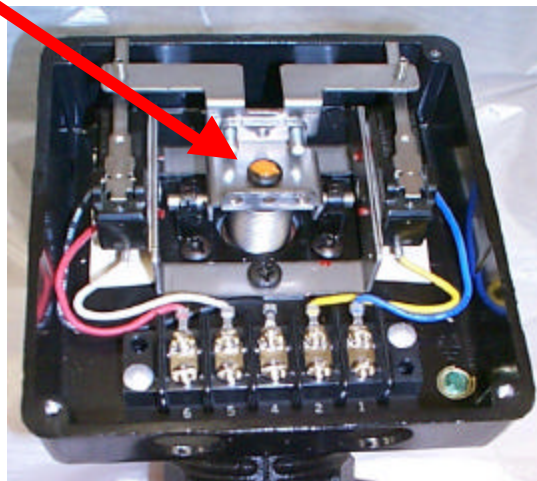


February, 2000

Series 150 Bellows and Guide-plate Improvement

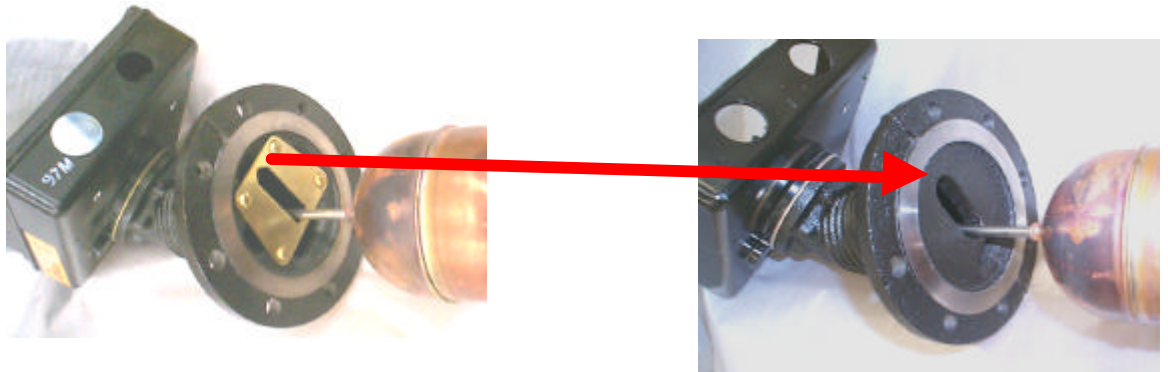
In March of 1999, McDonnell & Miller posted a service bulletin on the FSH representative web site titled "Series 150S Product Update". It explained the various changes made to the Series 150 product line to correct field problems. One of the issues discussed was "Float Rod Rubbing" which is a condition where the float rod rubs against the guide plate within the head assembly. The condition is pressure related and more predominated at pressures above 50 psi. However, it can also occur at lower pressures. Symptoms are sluggish operation of both burner and pump control. Instances of float rod rubbing although rare warranted correction. The following graphics below explain two changes McDonnell & Miller made as corrective action to all models of the Series 150.

First, to enhance bellows stability, we mechanically secured the bellows assembly directly to the bearing assembly. This improvement was implemented on all Series 150/157 and 150S/157S products in June 1999. (See graphic below).



This change prevents the bellows from deflecting due to increased operating pressure thus maintaining float rod centering in the guide-plate.

Second, we removed the guide-plate, replacing it with a cast in guide system and increased the slot width by 20%. This improvement was recently implemented on all Series 150/157 and 150S/157S products in February 2000. (See graphic below)



This change will also help prevent the float rod from rubbing against the guide-plate.

These changes will be posted on our website in March. We'll need your help in getting the word out to your key customers. Please help us in communicating these improvements.

If you have any questions please call me.

Regards,

Jerry McCallum
M&M Product Line Manager