

DATE: 2-28-18

PROCEDURE FOR CHANGING DESICCANT IN TD-480 TO TD-2000

1 DISCONNECT ALL HIGH VOLTAGE FROM THE DRYER

2 DISCONNECT COMPRESSED AIR FROM THE DRYER

#3 REMOVE 3/8 INCH BLACK FLEX COMPRESSED AIR LINES FROM THE RIGHT SIDE OF THE SOLENOID VALVE LOCATED INSIDE THE DRYER BEHIND THE CONTROL BOX. THIS WILL RELIEVE THE COMPRESSED AIR FROM THE DRYERS MANIFOLD AIR CYLINDERS (SEE BELOW)



4 REMOVE THE MASTER LINK FROM THE INDEX MOTOR CHAIN OR IF YOU CANT REACH IT UNBOLT THE GEAR MOTOR AND REMOVE THE CHAIN SO YOU CAN ROTATE THE BEDS BY HAND.



IMPORTANT: ONLY ROTATE THE BEDS IN THE COUNTER CLOCKWISE ROTATION OR LEFT TO RIGHT. TURNING THE BEDS IN THE CLOCKWISE ROTATION WILL DAMAGE THE BED SHIFT LIMIT SWITCH LOCATED BELOW THE BEDS OR PERHAPS

REMOVING THE LIMIT SWITCH AND BRACKET WOULD BE BEST!

5 NEXT YOU WILL NEED TO USE A CROW BAR OR LARGE SCREW TO PUSH UP TO RAISE THE UPPER MANIFOLD AND AIR CYLINDER AT THE SAME TIME PLACE A SOCKET OR SOMETHING TO HOLD THE MANIFOLD UP SO YOU CAN ROTATE THE BEDS

(THIS IS THE UPPER DECK IN THE PICTURE)



6 NEXT STEP IS TO DO THE SAME AS STEP #5 TO THE LOWER AIR CYLINDER TO HOLD THE LOWER MANIFOLD AND SEALS AWAY FROM THE DESICCANT BEDS IF NEED BE (SOME OLDER DRYERS CAME WITH AN ASSIST SPRING THAT HELD THE MANIFOLD IN THE UP POSITION WHEN THERE WAS NO COMPRESSED AIR FROM THE AIR SOLENOID TO HOLD IT OPEN)

(PICTURE IS OF THE LOWER DECK)



IMPORTANT: ONLY ROTATE THE BEDS IN THE COUNTER CLOCKWISE ROTATION OR LEFT TO RIGHT. TURNING THE BEDS IN THE CLOCKWISE

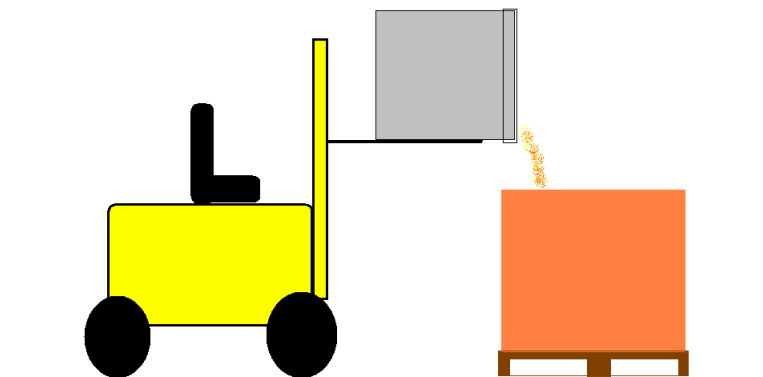
ROTATION WILL DAMAGE THE BED SHIFT LIMIT SWITCH LOCATED BELOW THE BEDS OR PERHAPS REMOVING THE LIMIT SWITCH AND BRACKET WOULD BE BEST!

#7 NOW YOU CAN REMOVE THE DESICCANT BEDS ONE AT A TIME BY UNCLAMPING THE BAND CLAMPS HOLDING THE BEDS IN PLACE. USE A FORK LIFT BEING CAREFUL NOT TO DAMAGE THE LOWER MANIFOLD BY SPREADING THE FORKS ON THE FORK LIFT TO A PROPER LOCATION.



8 AS SOON AS YOU HAVE REMOVED ALL 3 BEDS WE SUGGEST THAT YOU START DRAINING THE BEDS BY TIPPING THEM ON THEIR SIDES AND THEN PICKING THEM UP WITH A FORK LIFT. YOU WILL NEED A LARGE CONTAINER TO DUMP THE DESICCANT BEDS INTO. BE CAREFUL YOU MAY WANT TO STRAP THE BEDS TO THE FORKS TO MAKE THE DUMPING OF THE DESICCANT MORE STABLE. ALSO NOW IS THE TIME TO REPLACE THE SILICONE SEALS ON THE DRYERS MANIFOLDS. USE A RAZOR KNIFE TO REMOVE THE OLD SEALS COMPLETELY. THEN PLACE THE NEW SEALS UPSIDE DOWN ON A CLEAN TABLE. PLACE A ¼ TO 3/8 INCH BEAD OF SILICONE ON ONE SEAL AT A TIME AND INSTALL IT IN PLACE. PUSH THE SEAL IN PLACE MAKING SURE THEY ARE FLAT AND CENTERED ON THE MANIFOLD TUBE PLATE.

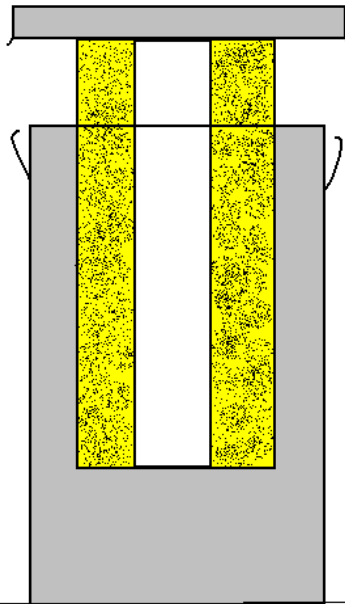
DUMP THE DESICCANT BEDS COMPLETELY AND DISPOSE OF THE OLD DESICCANT THE SAME WAY YOU WOULD YOU CONTAMINATED PLASTICS



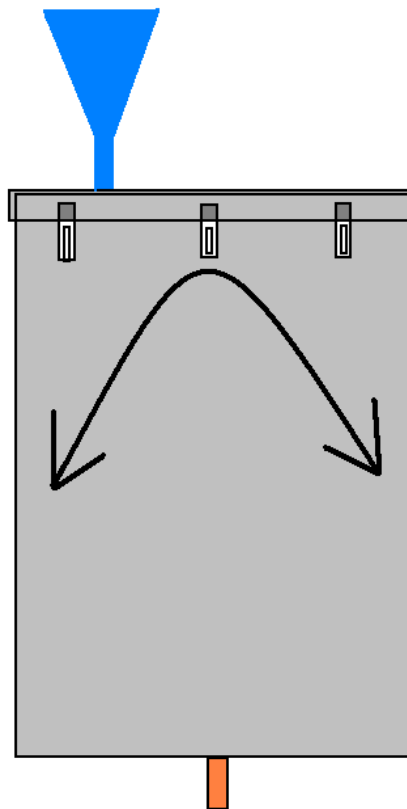
9 the picture below shows where the customer at some point ran the dryer either with no process filter, filters not installed properly or a damaged filters. This resulted in plastic melting onto the perforated screen basket that holds the desiccant material. With the desiccant bed in this condition melted plastic blocking the air flow the dryer cannot perform properly utilizing all of the desiccant material to dry the hopper of material. So it is advisable to disassemble at least one bed of the three to make sure this has not happened to the dryer. If one desiccant bed has melted plastics on it then all three beds should be disassembled and inspected.

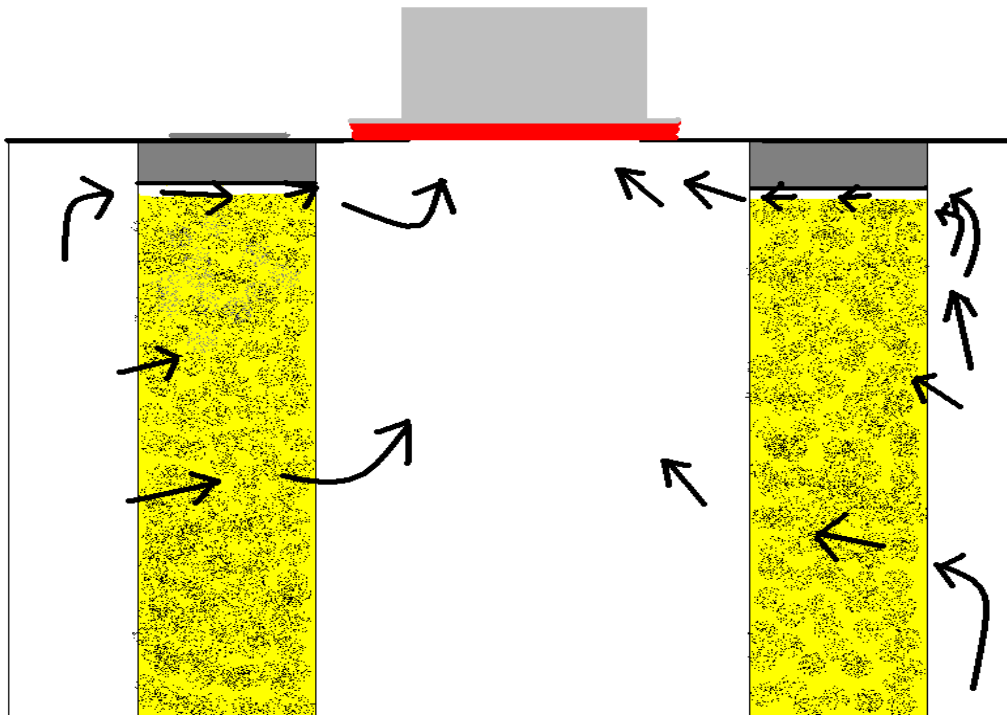


10 disassemble one of the 3 beds and inspect for melted plastics on the perforated screen. If this bed has no melted plastics on the basket holding the desiccant odds are all beds are clean. If the desiccant bed has melted plastics on the perforated screen then all of the desiccant beds will bed to be disassembled and the melted plastics will need to be removed with a powered wire brush. Be sure to mark the upper and lower section of the bed so the bed is reassembled the identical way it was assembled. Remove the old sponge tape and install new sponge using 550 degree RTV red silicone to glue in place.



#11 when you filling the desiccant beds place a 2 x 4 board so you can rock the bed back and forth while filling the bed with the new desiccant beds. Use a large funnel and fill the bed until you can't place anymore desiccant into the bed. Rock the bed back and forth continuing to fill the bed. It is most important to fill the beds completely so that the baffle inside the bed is covered. (See the picture below)



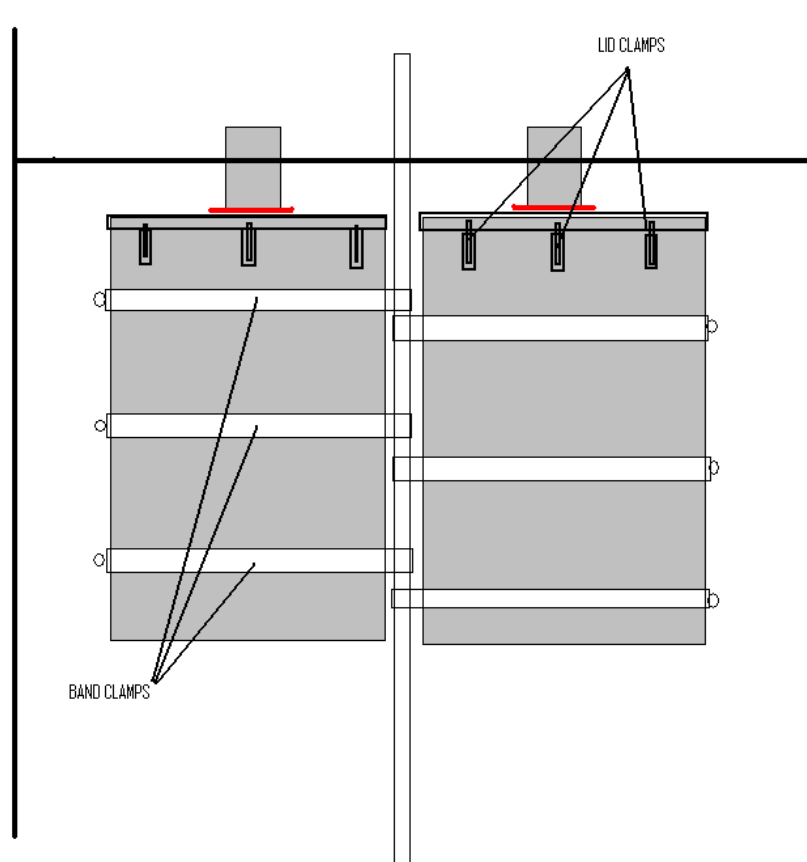


The sketch above shows what happens to the air flow through the desiccant material if the bed is not filled completely with the desiccant material. As you can see the air through flow will take the path of least resistance flowing over top of the desiccant. This will cause poor dew points or drying performance of the dryer.

While changing the desiccant we suggest checking the regeneration heater box exhaust hose located on the upper deck for wear especially on the upper side near the lid of the dryer. If the hose has holes in it or if it seems stiff or brittle we suggest replacing this hose.



Reinstall the beds one at a time making sure not to rub up against the red seals which will break free or become damaged if hit. Reinstall the band clamps that hold the bed to the center turret shaft making that the lid clamps are not hitting the center turret rod as well. After reinstalling the one bed you will need to feed all of the remaining bed 6 clamps in place around the center turret shaft. If you don't do this it is impossible to insert the last clamps in place for the last bed because you won't have the room to do so.



Once the beds are back in position make sure they are setting square on the bottom turret plate no obstructions like the lid clamps hitting the center turret shaft. Then you can install the chain making sure it's adjusted so there is no slake. Reinstall the bed index limit switch bracket leaving the bolts loose for final adjustment if needed. Remove the shims holding the air cylinder and manifold out of the way. Reconnect the 3/8 inch air hoses to the solenoid valve. Check the brass speed control mufflers on the bed shift solenoid making sure they are clean.

Now you can turn on the dryer and check that the beds are lining up with the manifolds. You may need to make some minor adjustments to the bed index limit switch bracket to line up the beds to the upper and lower manifolds. After making the bed limit switch adjustments index the beds several times making sure the beds line up during and after 3 rotations.

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