

Customer Support Note 033

Changing O-rings (size 7) in the tube oven of TD100-xr and ULTRA-xr

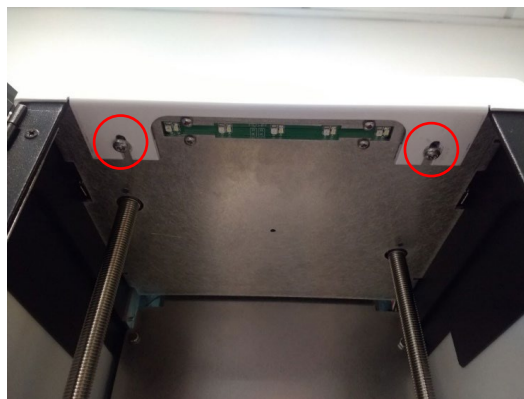
Disclaimer: It is vital that this Customer Support Note is read carefully before proceeding and that any instructions contained within the document are followed closely. Markes International will not accept responsibility for any damage done to instrumentation or personnel if any instructions within this document are not followed exactly. Any ongoing warranty or contract may be voided if failure to follow these instructions results in damage to the instrumentation. If anything is unclear, you must clarify the details with a Markes representative before proceeding.

CAUTION: Please ensure the instrument is switched off before removing any covers.

NOTE: If you are unsure about any aspects of this procedure, please contact Markes Support before proceeding.

1. Removing the covers and releasing the tube oven

1. Turn the power off to the instrument and allow to cool down.
2. Loosen (but do not remove) the two screws highlighted with red circles. Pull the cover forward and up to remove it.



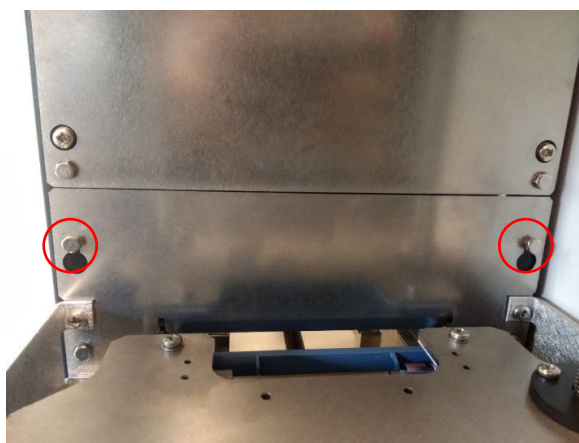
3. Remove the three silver screws (circled in red) from the top of the left-hand side-panel. Pull the panel up and out to remove it.



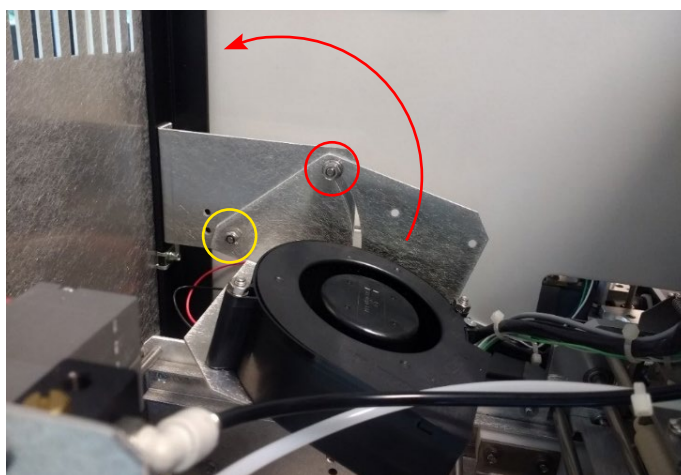
4. Remove the three silver screws (circled in red) from the top of the right-hand side-panel. Pull the panel up and out to remove it.



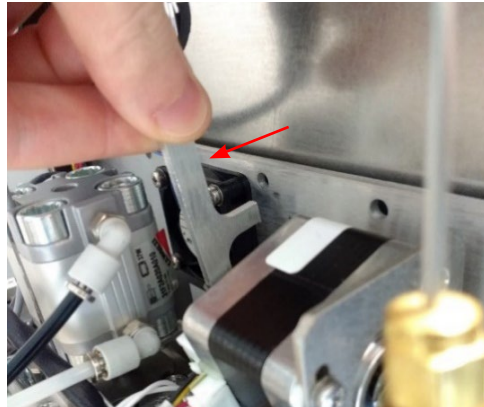
5. Loosen (but do not remove) the two silver screws (circled in red) from the bottom panel behind the autosampler. Pull the panel up and out to remove it.



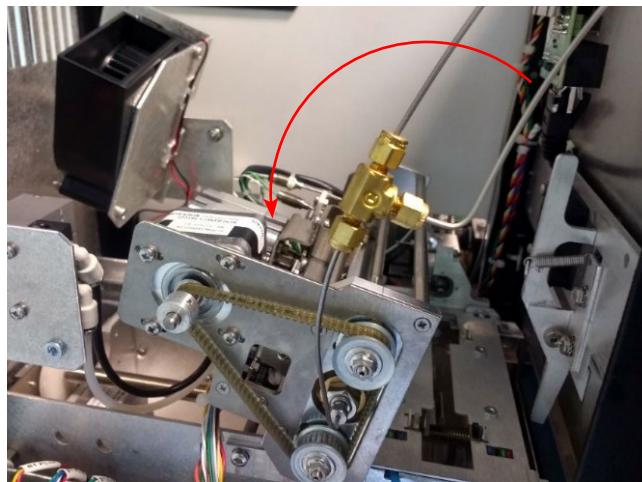
6. Loosen (but do not remove) the nut circled in red, and carefully rotate the cooling fan towards the rear. It may be necessary to tighten the nut circled in yellow, to stop the fan from falling back to its original position.



7. Pull back the oven clamp, as shown by the red arrow.

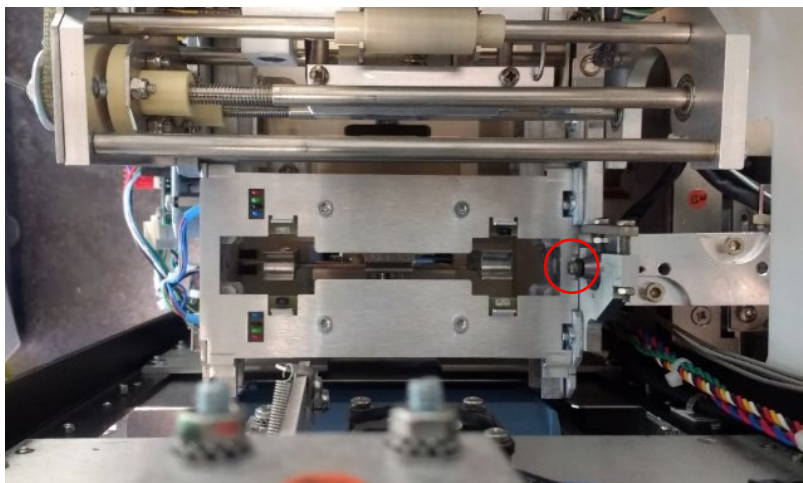


8. Pull the oven down in the direction shown by the red arrow.

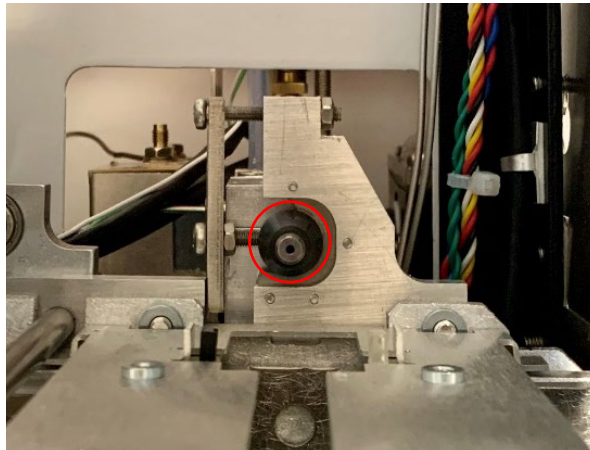


2. Changing the hot nozzle O-ring

1. Locate the hot nozzle (circled in red), either by looking down from above (shown here), or by looking through the left-hand side-panel (shown in the next step).



- Carefully remove the O-ring from the hot nozzle (circled in red), using the O-ring removal tool supplied with the installation kit (shown).



- Pierce the O-ring with the O-ring removal tool, taking care not to pierce through and scratch the hot nozzle.

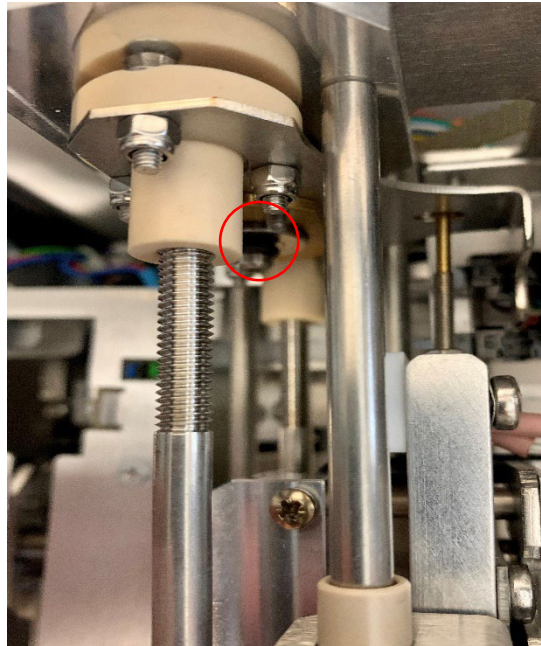


4. Replace the O-ring with a new size 7 O-ring (part no. U-COV07).
- This can be done by pushing the new O-ring onto the hot nozzle manually. Ensure the nozzle is cool and you are wearing gloves. With one hand hold the O-ring flush to the tip of the nozzle, and with the other hand roll the O-ring over the tip and into the groove.
 - Alternatively, an O-ring insertion tool can be purchased (part no. SERMTD-1382). Place a new O-ring over the inner metal tube. Place the tube over the nozzle and push the outer collar upwards, transferring the O-ring from the tool onto the nozzle.

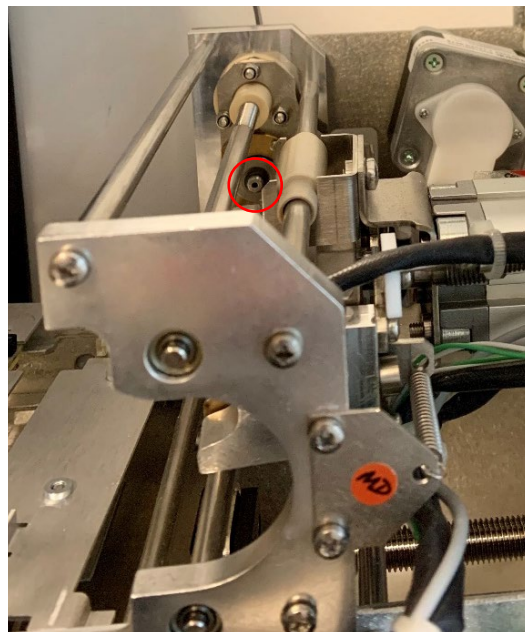


3. Changing the cold nozzle O-ring

1. Locate the cold nozzle (circled in red), either by looking down from above (as shown here), or by looking through the left-hand side-panel (shown in the next step).



2. Carefully remove the O-ring from the cold nozzle (circled in red), using the O-ring removal tool supplied with the installation kit.



3. Pierce the O-ring with the O-ring removal tool, taking care not to pierce through and scratch the cold nozzle.
4. Replace the O-ring with a new size 7 O-ring (part no. U-COV07).
 - As before, this can be done by pushing the new O-ring on manually onto the cold nozzle.
 - Alternatively, and as before, an O-ring insertion tool can be purchased.

4. Replacing the covers

1. Reverse the earlier procedure to move the oven and cooling fan back into their correct position.
2. Re-attach all panels and the top cover of the instrument.

For all technical support queries, please contact Markes International.

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