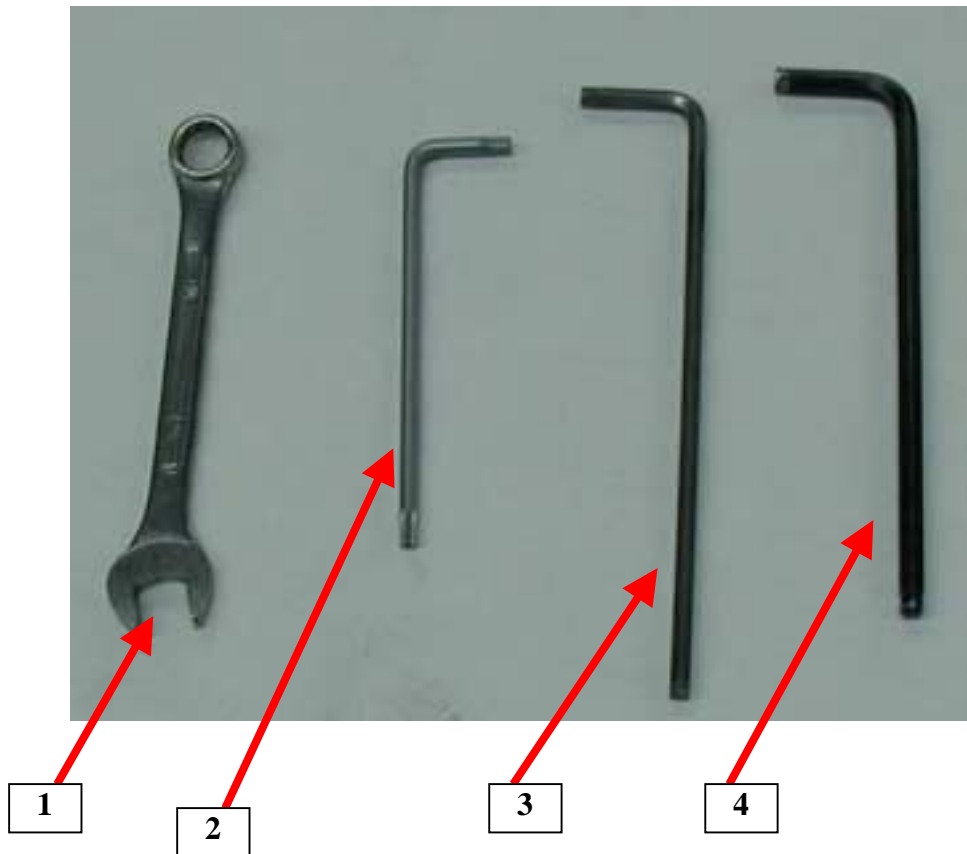

Technical Notes

<i>Date of issue:</i>	<i>Wednesday, 29 August 2001</i>
<i>By:</i>	<i>Martin Bisley and Mohammed Helal</i>
<i>Subject</i>	<i>Canisters' Replacement for Harbil Automatic Dispensers</i>

1. Required Tools:



1. 10 mm Ring Spanner
2. T.20 Torx Key
3. 4 mm Allan Key
4. 5 mm Allan Key
5. Philips head screwdriver
6. Back panel Cover Key

2. Remove Back Panel Cover:

Using the back cover key (supplied with dispenser), insert into locks at top and turn $\frac{1}{4}$ turn to unlock the cover.

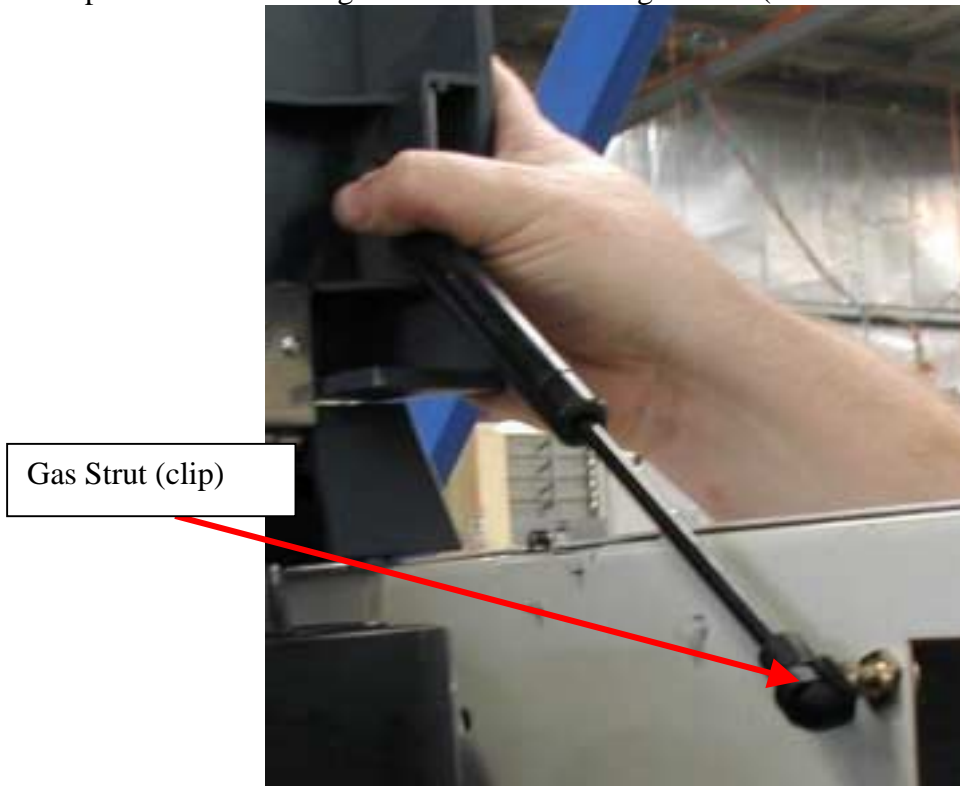
Remove the cover.



3. Remove Top Cover:

Lift and open the top cover (from front of the machine).

Un-Clip Bottom Boss of right-hand and left-hand gas strut. (Use flat head screwdriver)



Loosen two screws (one full turn). Access is from inside left-hand and right-hand side panels. (Use Philip head screwdriver)

Slide cover forward then lift and remove.



4. Remove Nozzle drip tray:

Use door key to open front stainless steel cover.

Lift the nozzle drip tray up at front to disengage from left-hand and right-hand clips. Pull tray forward and remove.



5. Remove Side Panel:

Remove two Allan cap head screws (use 5mm Allan key) from top of side panel. Pull top of side panel slightly forward, lift, then remove.



6. Remove Lower Drip Tray:

From back of dispenser, reach in with hand and lift the tray out of clips (at front) then pull out and remove.



Drip
Tray

7. Drip tray, top cover, and side panel removed.



Drip tray, top cover, and side panel removed.

8. Remove Drive Belt Tension:

Loosen lock nut (using 10 mm ring spanner).

Loosen Allan cap screw (using 5 mm Allan Key).

Un-do screw until belt has enough slack to remove from turntable.



Lock Nut

Allan Cap head screw.

9. Remove belt from turntable:

When enough slack is in belt, remove belt from turntable position.
Drop belt down to rest on turntable lower cover.

Note: Turntable is now free to turn by hand.

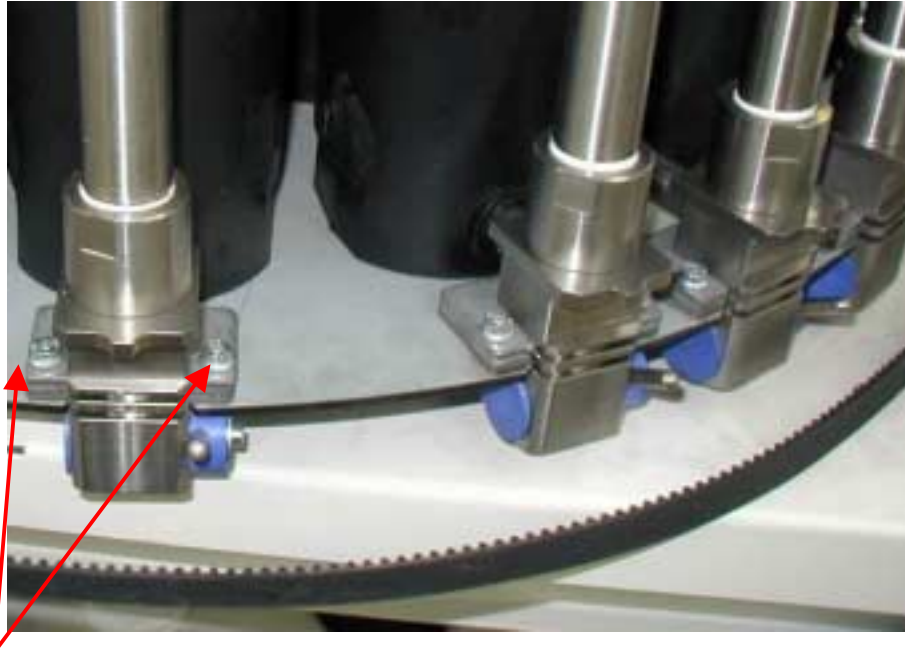


Turntable's lower cover.

10. Removing Pumps and Canisters:

The following instructions explain how to remove the pumps and canisters. You should start with pumps and canisters mounted on the outer ring followed by the ones mounted on the middle ring then the inner ring.

11. Remove Pump:

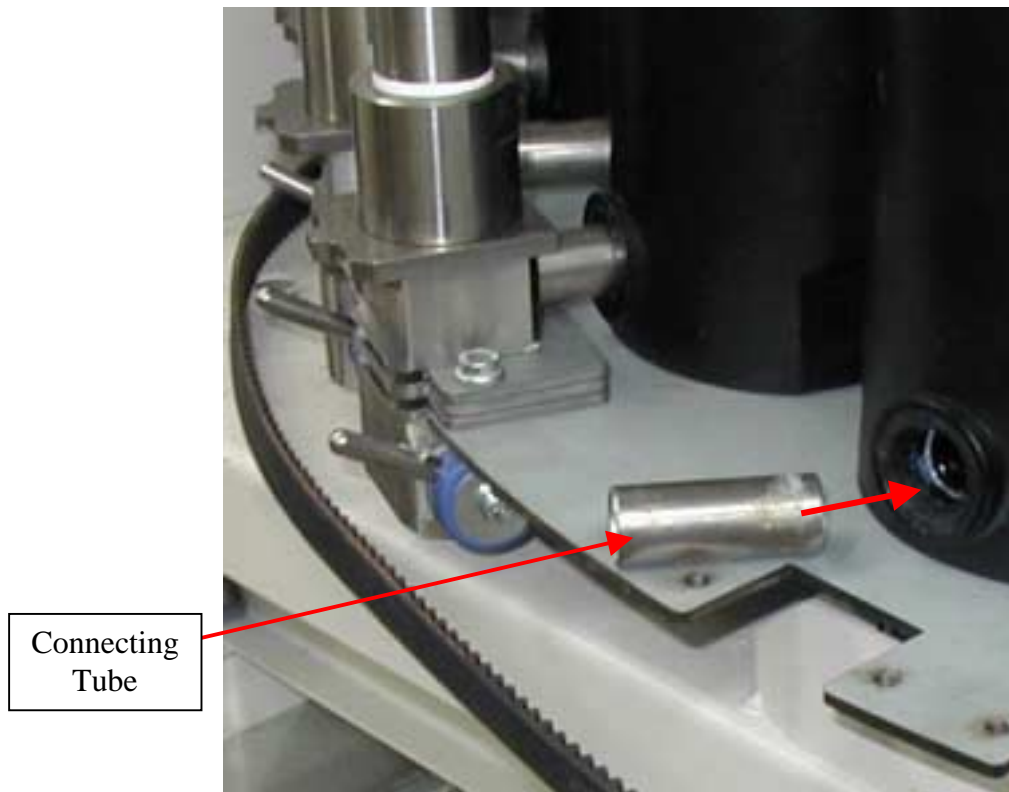


Two Allan cap screws.

Un-do and remove the two Allan cap head screws (using a 4mm Allan key).
Pull Pump forward to disengage from canister and remove from turntable.

Note: Pump can be marked with canister identification and position, so it will be able to be replaced in the same position during re-assembly.

12. Remove Connecting Tube:



If connecting tube does not come off with the pump, then grip tube by hand, pull forward and remove from the canister.

The tube can then be identified with the same marks as the pump or be inserted into the pump so they can be kept as a matching set for that position during re-assembly.

13. Remove Canisters:

Move turntable to position canister over bottom entry access hole.

Loosen the two canister's holding down screws (one full turn) using the T.20 Torx key.

Grip canister with hands, twist anticlockwise into keyhole of slot then lift the canister and remove.



Now proceed to remove all pumps, connecting tubes and canisters (in sets) as described above.

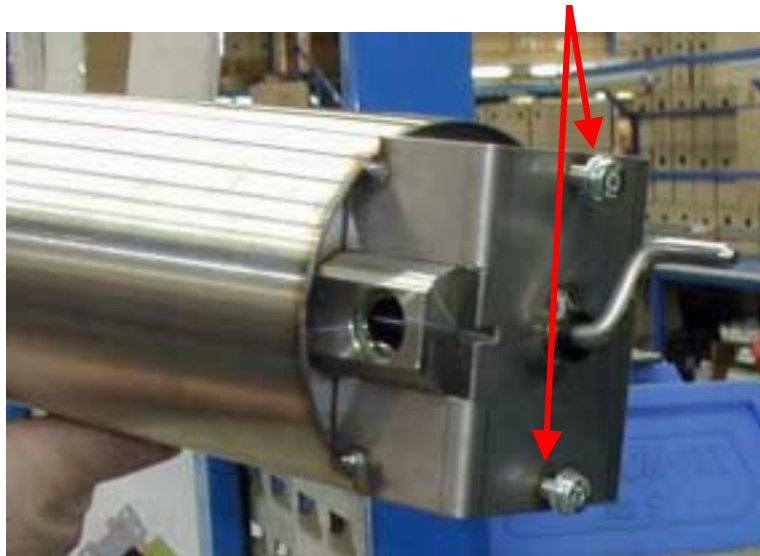
Store carefully and keep clean.

Stainless Steel Pump/Canister Assembly:

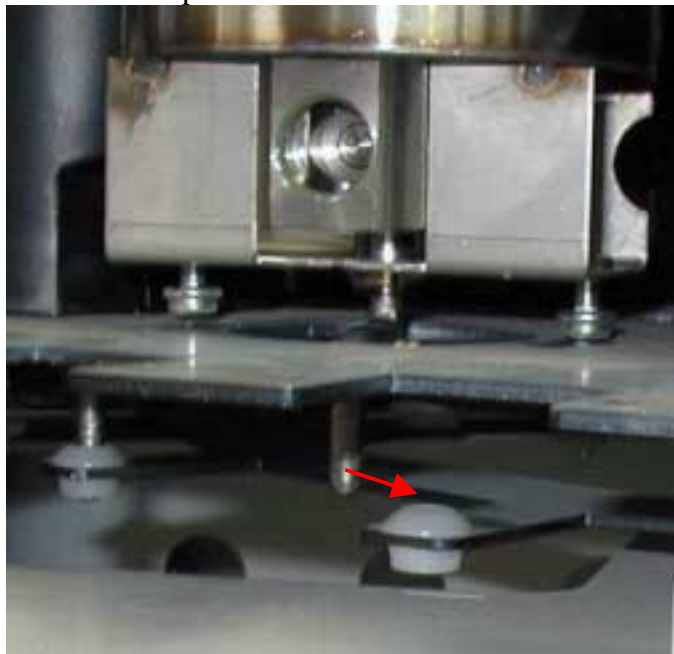
Assembly should start with the Pump/canisters assembly mounted on the inner ring, followed by the ones mounted on the middle ring and finally the ones on the outer ring.

14. Canister Assembly:

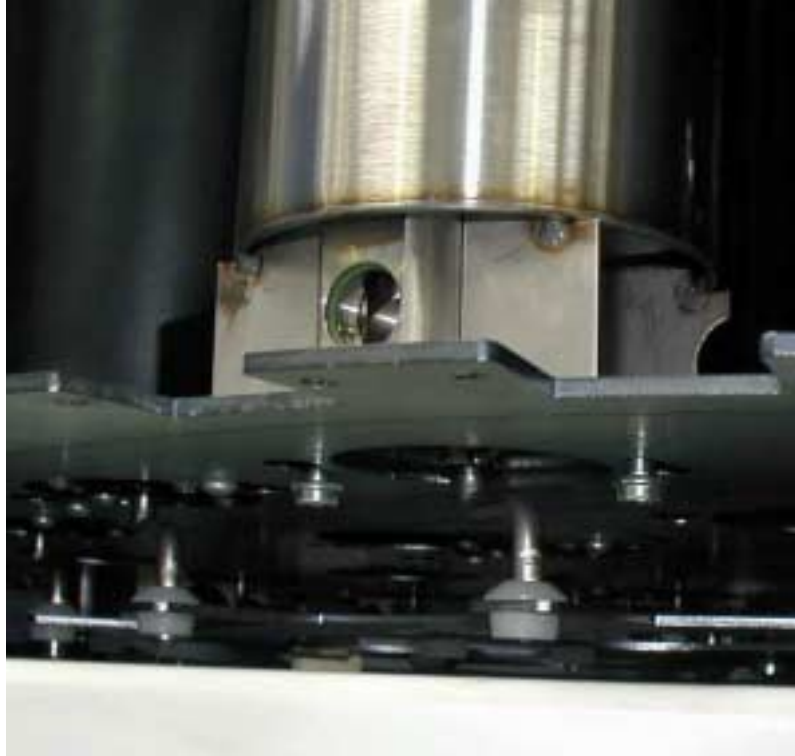
1. Select appropriate Stainless steel canister and make sure that screws already fixed



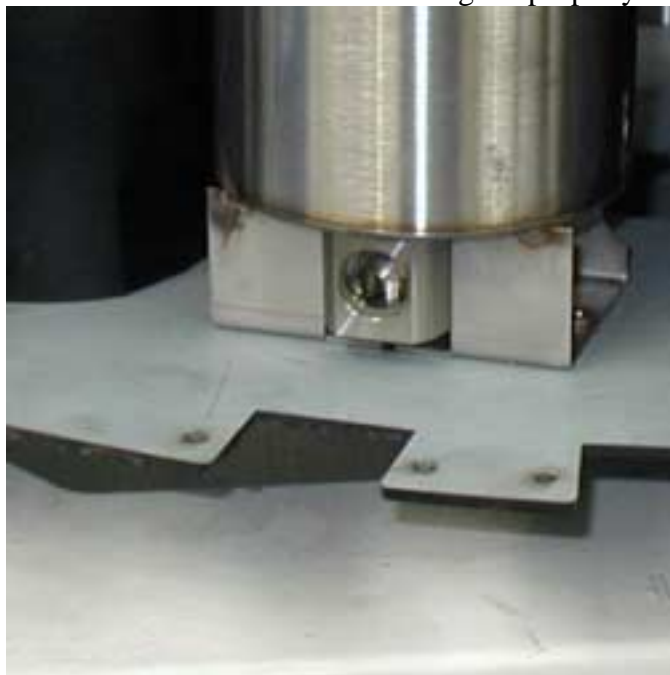
2. Position canister holding down screws over slot keyhole and at the same time position crankshaft over drive plate bush.



3. Lower into engagement, turn canister fully clockwise to lock into keyhole slot.



4. Secure canister by tightening the two screws from the bottom using the 4 mm Allan key or a suitable tool. Make sure that the canister is aligned properly.



15. Assembling Pumps and connecting tubes:

1. Select appropriate pump making sure that connecting tube is located into the back of the pump.
Note: If tube is separated from pump, then smear a light film of grease on the end of the connecting tube and gently press tube into back of pump (taking care not to damage O-Ring).

2. Grease the other end of the connecting tube as above.
3. Carefully locate the pump and connecting tube on the turntable and align with its appropriate mating canister.
4. Push the pump and connecting tube assembly into the canister hole (taking care not to damage the O-Ring).
5. Align the pump's securing screw holes with turntable holes, fit two Allan cap head screws and secure pump assembly in place. (use 4mm Allan key).

Repeat above instructions and fit all inner ring Pump/Canister assemblies.

When Inner ring assembly is finished, start with the middle ring assemblies followed by the outer ring.

16. Checking Pump/Canister Assembly

Note: Before re-fitting and tensioning the turntable drive belt make sure that all valve leavers and pump actuating disks are aligned properly.



- Valve levers must be set at the correct angle to pass through the valve holder mechanism at the front.
- Pump actuating discs should be set at the correct height to pass into and through the stepper motor gripper block.
- Move turntable one complete revolution (by hand) to make sure there are no jams.

17. Finishing the assembly:

Re-assemble the machine parts (drive belt, side panel, top cover, nozzle drip tray, etc.) in reverse order as in numbers (2) to (9) above.