



BEFORE



AFTER

VACUUM CHAMBER PM TECHNIQUE ALCATEL COMPTECH 2460 PROCESS CHAMBER

OBJECTIVE:

TO PM THE ALCATEL COMPTECH 2460 PROCESS CHAMBER IN AN EFFECTIVE AND TIMELY MANNER, WHILE IMPROVING TOOL RECOVERY AND PARTICLE PERFORMANCE

NOTE: THE TOOL THAT WAS PM'D HAD NEVER HAD ALL OF THE DEPOSITION REMOVED. IN ORDER TO KEEP THE CHAMBER IN OPTIMUM CONDITION A REGULARLY SCHEDULED CHAMBER PM IS RECOMMENDED

<u>Vacuum Chamber:</u>	ALCATEL COMPTECH 2460
<u>Vacuum Chamber Process Residue:</u>	PROCESS INDUCED RESIDUE (AL ₂ O ₃)
<u>Vacuum Chamber Components:</u>	PROCESS CHAMBER

Old Procedure: Scrape/vacuum out excess build-up deposition
(NOT ENTIRELY REMOVED)
Recovery time: 12 to 16 hours

New Procedure: 3 hours using 140D/280D ScrubPADS, UltraSOLV[®] Sponge, and MiraWIPES[®]
Recovery time: TBD

Vacuum Chamber Products:

Note: Products used for initial clean. Once regular PM cycle is developed, products may change

- (3) [HT4514D](#)-10-1 140 Grit Diamond ScrubPAD
- (1) [HT4528D](#)-10-1 280 Grit Diamond ScrubPAD
- (1) [HT4754](#) UltraSOLV[®] Sponge
- (3) [HT5790S](#)-5 MiraWIPES[®]

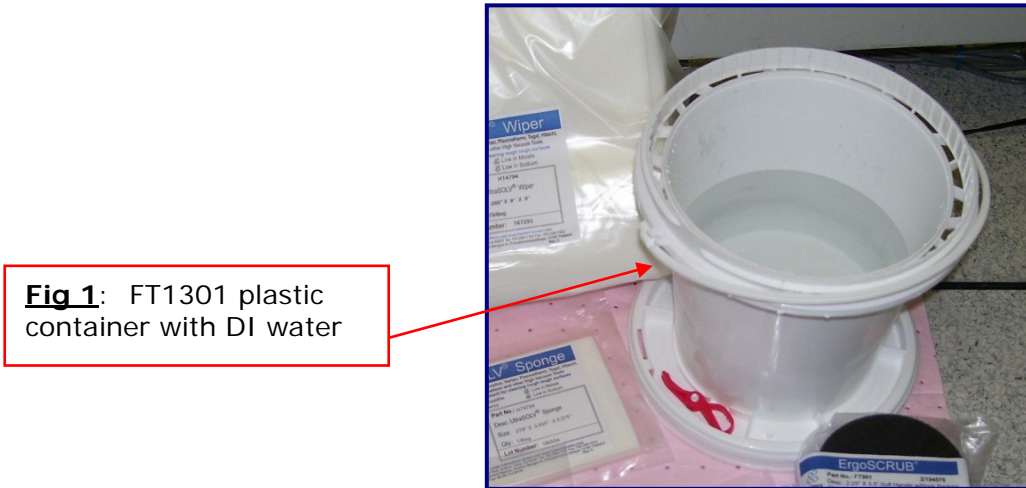


ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE:

View "How to" instructional videos on <http://www.foamtecintlwcc.com/flash/>

Step 1: Using proper procedures and **safety guidelines**, shutdown and prepare Alcatel 2460 Process Chamber for wet clean

Step 2: Fill FT1301 plastic container with approximately 12oz of DI water and place next to process chamber (See Fig 1)



Step 3: Place [HT4514D](#) 140 Grit Diamond ScrubPAD and [HT4754](#) UltraSOLV[®] Sponge in container of DI water to moisten products (See Fig 2)

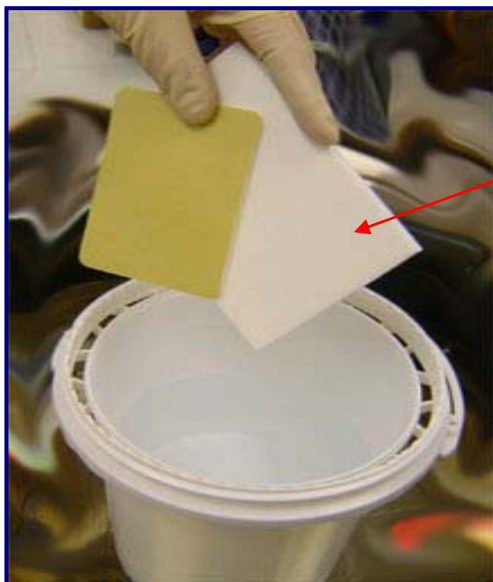


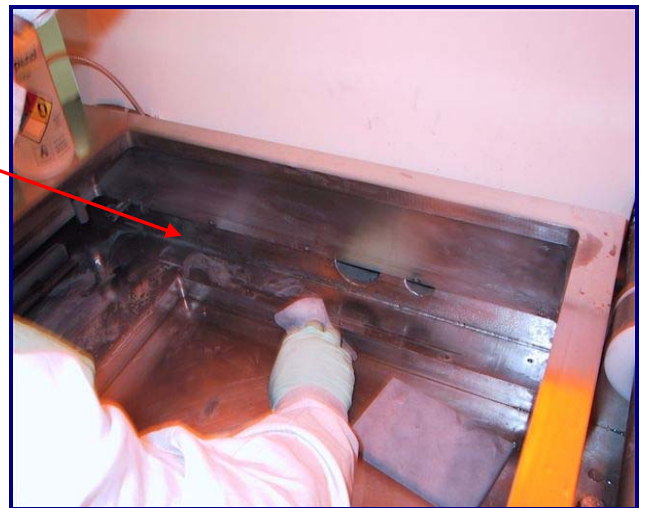
Fig 2: Place Diamond ScrubPAD and UltraSOLV[®] Sponge in container of DI water

ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

Step 4: Take **lightly dampened** UltraSOLV[®] Sponge and wipe area of process chamber that is to be cleaned in order to remove flaking deposition from chamber

Step 5: Take **lightly dampened** 140 Grit Diamond ScrubPAD and scrub a small area of the process chamber (See Fig 3)

Fig 3: Scrubbing process chamber with Diamond ScrubPAD



NOTE: REMEMBER IT IS NOT NECESSARY TO USE A LOT OF DI WATER DURING THIS SCRUB PORTION OF THE PM, ONLY ENOUGH TO KEEP DIAMOND ScrubPAD MOIST

Step 6: After scrubbing a small area with the 140 Grit Diamond ScrubPAD, take the lightly dampened UltraSOLV[®] Sponge and wipe deposition from the scrubbed area

ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

Step 7: As Diamond ScrubPAD loads-up with deposition, pull ScrubPAD across damp UltraSOLV[®] Sponge to properly unload (See Fig 4, 5 & 6)



Fig 4: ScrubPAD loaded with deposition

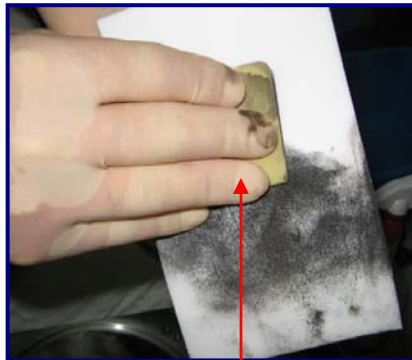


Fig 5: Pull ScrubPAD across UltraSOLV[®] Sponge



Fig 6: Unloaded ScrubPAD

Step 8: Unload UltraSOLV[®] as much as possible by placing it in container of DI water and **RINSE-OUT** thoroughly (See Fig 7 & 8)



Fig 7: Loaded-up UltraSOLV[®] Sponge

Fig 8: UltraSOLV[®] Sponge AFTER rinse



ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

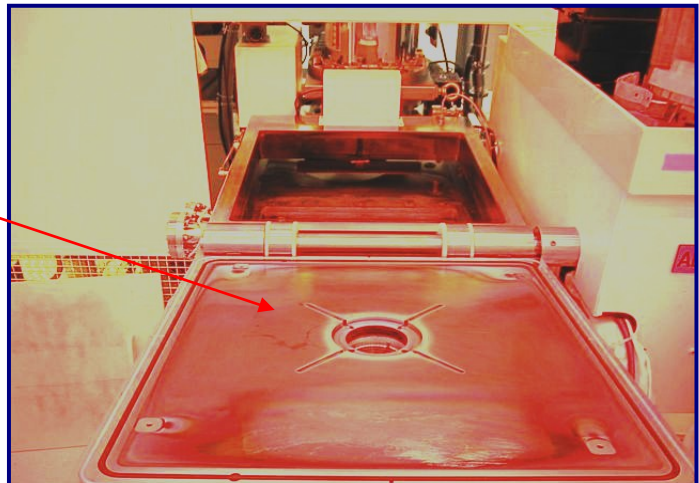
- Step 9:** As the [HT4514D](#) 140 Grit Diamond ScrubPAD becomes worn, replace with a second 140 Grit Diamond ScrubPAD
- Step 10:** Repeat steps 4 – 9 for all remaining areas throughout process chamber. Remember to unload ScrubPAD and UltraSOLV[®] Sponge as necessary
- Step 11:** Carefully clean chamber wall area near electrode with ScrubPAD (See Fig 9)

Fig 9: Area on chamber wall near electrode



- Step 12:** Place [HT4528D](#) 280 Grit Diamond ScrubPAD in container of DI water to moisten product
- Step 13:** Take **lightly dampened** 280 Grit Diamond ScrubPAD and scrub a small area of the chamber lid (See Fig 10)

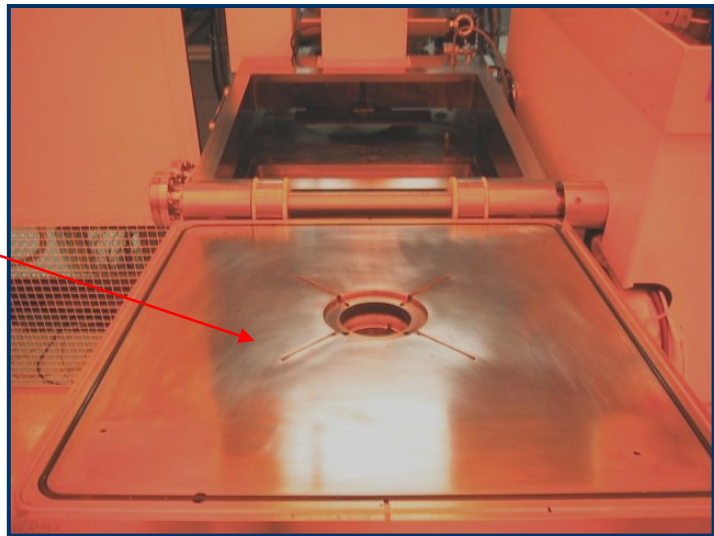
Fig 10: Scrub chamber lid with 280 Grit Diamond ScrubPAD



ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

- Step 14:** After scrubbing a small area with the 280 Grit Diamond ScrubPAD use the lightly dampened UltraSOLV[®] Sponge to wipe deposition from the scrubbed area
- Step 15:** As ScrubPAD loads-up with deposition, pull ScrubPAD across damp UltraSOLV[®] Sponge to properly unload (See Step 7 and Step 8)
- Step 16:** Continue scrub-wipe-unload procedure until all process residue is removed from chamber lid (See Fig 11)

Fig 11: Clean chamber lid



- Step 17:** When scrub portion of wet clean is complete, prepare chamber for FINAL WIPE PROCEDURE by rinsing out UltraSOLV[®] Sponge with fresh DI water and performing a complete final process chamber wipe using the dampened UltraSOLV[®] Sponge

ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

FINAL WIPE PROCEDURE:

IMPORTANT NOTE

THE USE OF HT5790S MIRAWIPES[®] DURING FINAL WIPE PORTION OF PROCEDURE IS A CRITICAL STEP TO EFFECTIVELY REMOVING PARTICLE DEFECTS FROM ALCATEL COMPTech 2460 PROCESS CHAMBER

NOTE: Figure below shows how much more deposition the Foamtec International MiraWIPE[®] can remove from a critical surface compared to the standard fab wiper, making the MiraWIPE[®] FINAL WIPE PROCEDURE the most **CRITICAL STEP** of the PM procedure (See Fig 12a & 12b)

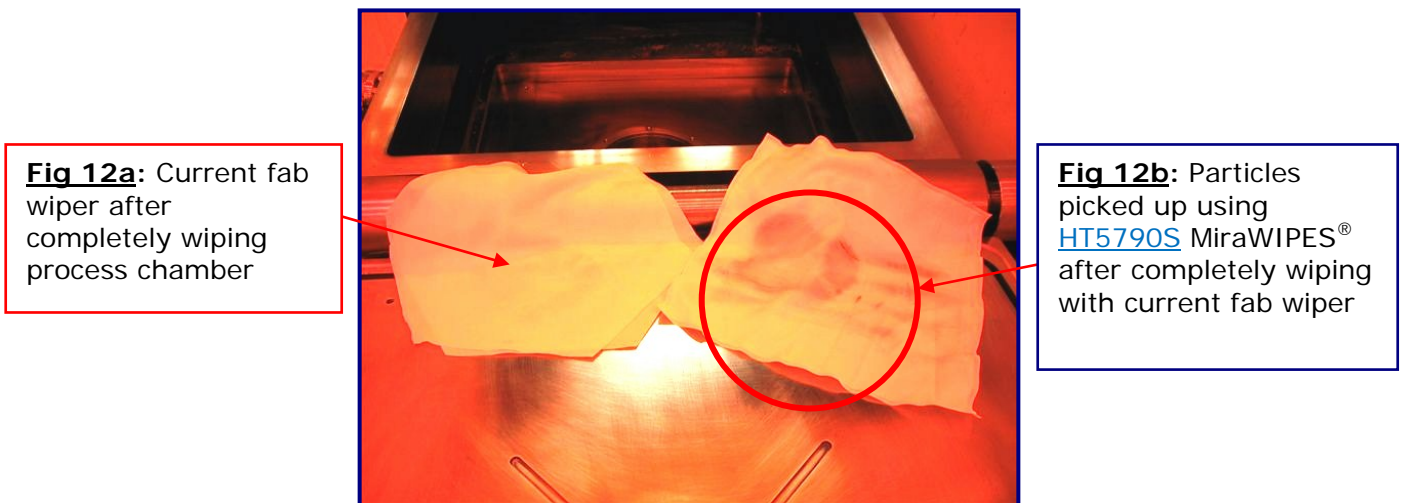


Fig 12a: Current fab wiper after completely wiping process chamber

Fig 12b: Particles picked up using HT5790S MiraWIPES[®] after completely wiping with current fab wiper

MiraWIPES[®] are the KEY STEP for DEFECT REDUCTION and IMPROVED TOOL RECOVERY

Step 18: After scrubbing Alcatel 2460 Process Chamber remove and replace your gloves with a clean pair

Step 19: If available, use clean dry N₂ to blow out the small areas and tight corners where DI water may have accumulated during the wet clean

ALCATEL 2460 PROCESS CHAMBER PM PROCEDURE (CONT'D):

Step 20: Fold the [HT5790S](#) MiraWIPE[®] into quarters and dampen with IPA

Step 21: With the dampened MiraWIPE[®] wipe down all areas of the process chamber, ensuring to refold the MiraWIPE[®] as necessary to expose a clean side of the MiraWIPE[®] as you wipe all areas within the chamber

NOTE: **Replace with a new IPA dampened MiraWIPE[®] as necessary**

Step 22: Repeat above MiraWIPE[®] FINAL WIPE PROCEDURE on all remaining areas of the process chamber and associated parts

Step 23: Using proper procedures and **safety guidelines** and return Alcatel 2460 Process Chamber back to production