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| Traveler Title | L2HE Nine Cell Cavity Transfer to Test Stand |
| Traveler Abstract | This traveler verifies proper transfer of a L2HE 9-cell cavity to test stands in preparation for VTA testing in dewar 7 or 8 |
| Traveler ID | L2HE-CLNRM-CAV-TSTD |
| Traveler Revision  | R3 |
| Traveler Author | J. Vennekate |
| Traveler Date | 23-Mar-22 |
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| NCR Dispositioners | adamg,hannesv,kdavis,reece |
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| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Reviewer | Project Manager |

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| References | List and Hyperlink all documents related to this traveler. This includes, but is not limited to: safety (THAs, SOPs, etc), drawings, procedures, and facility related documents. SLOW PUMP PROC |
| L2PRO Cavity Transfer to Test Stand Procedure (link not available) |  |  |  |  |
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| Revision Note |  |
| R1 | Initial release of this Traveler. |
| R2 | Updated title and abstract to include single cell and 9-cell Cavity; updated steps 3 & 4 to mass 1-100 scan |
| R3 | Edited title, overhauled all steps to include new closed RAV guideline, added link to slow pump procedure |

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| Step No. | Instructions | Data Input |
| 1 | Prior to transfer to the test stand, the cavity should have received incoming RF and CMM inspection as well as a cleaning in the chem room.The cavity should be on a CTV either coming from the chem room (new cavities) or from the HPR (re-work cavities).Transfer the cavity into the two-arm cavity lifting fixture in the VAA and hang it on the test stand. Secure the plates to the square blocks attached to the helium vessel.Verify that the cavity’s right angle valve (RAV) is in the fully closed position. | [[CAVSN]] <<CAVSN>>[[Technician1]] <<SRFCVP>>[[Technician2]] <<SRFCVP>>[[CavComment]] <<COMMENT>> |
| 2 | Remove four bolts from the bellows blank on the test stand down-tube.Spray the flange and holes with ionized nitrogen while watching a particle counter.Wait until the counts are below fifty at all sizes for a minimum of ten seconds. Repeat this procedure for the blank flange located on the RAV.Remove the remaining two bolts on the valve blank and spray the inside the RAV (bellows area) until the counts are less than ten at all sizes for 10s.Remove the remaining two bolts from the test stand bellows blank on the down-tube. DO NOT spray the bellows flange after the blank is removed.Place a clean copper gasket onto the joint and connect the test stand flange to the RAV.Tighten all fasteners. | [[TestStand]] <<VTATSSN>> [[HangComment]] <<COMMENT>> |
| 3 | Check if there is any tape on the RAV marking a new cavity which is already under vacuum.Check the tape field and proceed correspondingly.  | [[StandLkChkTechnician]] <<SRFCVP>>[[RAVTape]] <<YESNO>>[[StandLkChkComment]] <<COMMENT>> |
| 4 | 1. If there is tape on the RAV i.e. a new cavity is hung on the test stand, start the pumping system on the test stand top plate (no slow pump down required).Pump down the vacuum below 8e-7 mbar.Set the RGA for an analog scan looking at mass 2 thru 100.Upload scan.Perform a leak check of all down pipe flanges.There shall be no detectable leak with an MDL less than 4E-10 std cc/sec.Upload lk check file.Remove the tape from the RAV.
2. If there is no tape on the RAV i.e. a re-work cavity is hung on the test stand, isolate the turbo-pump from the test stand and and connect the slow pump down system.Carefully open the RAV at the bottom of the cavity.Perform a slow pump down until the system is below 8e-7 mbar.Set the RGA for an analog scan looking at mass 2 thru 100.Upload scan.Leak check all mechanical joints from top to bottom.There shall be no detectable leak with an MDL less than 4E-10 std cc/sec.Upload leak check file.After the leak check, close the RAV.

In the case of a leak, the files for these leak checks shall be uploaded to a D3 associated with this traveler.After the cavity has been proven to be leak tight, the test stand can be moved to the VSA for sensor attachment, HOM tuning and VTA test. | [[CavityAnlogScan]] <<FILEUPLOAD>>[[CavityLkChk]] <<FILEUPLOAD>>[[CAVLkTight]] <<YESNO>>[[CavityLkChkTechnician]] <<SRFCVP>>[[CavityLkComment]] <<COMMENT>>[[CavityLkDate]] <<TIMESTAMP>> |