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| Traveler Title | L2HE Magnetic Hygiene |
| Traveler Abstract | This traveler contains instructions for the demagnetization of components in preparation for string assembly. |
| Traveler ID | L2RB-CLNRM-CST-DMAG |
| Traveler Revision  | R1 |
| Traveler Author | Michelle Oast |
| Traveler Date | 17-Jun-25 |
| NCR Informative Emails | Forehand,areilly |
| NCR Dispositioners | Cheng,adamg |
| D3 Emails | Cheng,forehand,adamg |
| Approval Names | M. Oast | G. Cheng | K. Davis | A. Grabowski |
| Approval Signatures |  |  |  |  |
| 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. |
| [Demagnetizing Small Parts OSP](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-212690/operational_safety_procedure_form_102532.pdf) | [Demagnetizing Components Using a Maurer Demagnetizer OSP](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-250901/operational_safety_procedure_form_103026.pdf) | [String Assembly F10127865](https://misportal.jlab.org/jlabDocs/documents/186041/download) | [DS Nextorr Pump Assembly F10143121](https://misportal.jlab.org/jlabDocs/documents/223589/download) | [RF All Metal Gate Valve F10129177](https://misportal.jlab.org/jlabDocs/documents/223590/download) |
| [Support Assembly F10170258](https://misportal.jlab.org/jlabDocs/documents/223591/download) | [Weldment Bellows Short F10023437](https://misportal.jlab.org/jlabDocs/documents/223592/download) | [Weldment Bellows PrCM F10041075](https://misportal.jlab.org/jlabDocs/documents/223593/download) | [Weldment Bellows Upstream F10075494](https://misportal.jlab.org/jlabDocs/documents/223594/download) | [BPM Housing F10030776](https://misportal.jlab.org/jlabDocs/documents/223595/download) |
| [BPM feedthrough FC0049551](https://misportal.jlab.org/jlabDocs/documents/223626/download) | [Stiffener plate F10082427](https://misportal.jlab.org/jlabDocs/documents/223627/download) | [Flange-end adapter F10023442](https://misportal.jlab.org/jlabDocs/documents/223628/download) | [List of items to be surveyed](https://jlabdoc.jlab.org/docushare/dsweb/View/Collection-53589) |  |

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| Revision Note |  |
| R1 | Initial release of this Traveler. |

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| Step No. | Instructions | Data Input |
| 1 | Enter serial number of the cavity stringEnter magnetic hygiene inspector name:Enter inspection date and timeMagnetic field survey and demagnetization do not have to be done in the cleanroom.  | [[CMSN]] <<CMSN>>[[MagCheckTech]] <<USERNAME>>[[MagCheckDate]] <<TIMESTAMP>> |
| 2 | Survey of cavity string items[List of items to be surveyed](https://jlabdoc.jlab.org/docushare/dsweb/View/Collection-53589)Remanent field measurement of LCLS-II Rebuild cavity string parts shall be conducted in a region with relatively stable ambient field, the ambient field shall not vary more than 2 mG within 5 minutes. Use a 3-axis magnetometer such as the Honeywell HMR2300, follow these steps: 1. Turn on the magnetometer. Zero it if the magnetometer is equipped with a zero field chamber.
2. Anchor the magnetometer to a fixed base.
3. Take the reading of background field.
4. Move part to be on contact with the magnetometer, rotate the part to take the highest reading.
5. If the part’s highest reading subtract ambient field level is greater than 5 mG, the part is magnetic and proceed to section 3.

Note that large and heavy components may require mechanical support or to be carried by multiple persons. | [[BackgroundField]] <<TEXT>>[[MagNotes]] <<COMMENT>> |
| 3 | Demagnetization 1. Parts that are magnetic shall be demagnetized. This can be done with a portable or DSC425-120 surface demagnetizer. Observe [JLab-PTW-2091 Demagnetizing small parts](https://urldefense.proofpoint.com/v2/url?u=https-3A__epas-2Drk95.prometheusgroup.app_Redirect.aspx-3Fitem-5Fnumber-3DJLab-2DPTW-2D2091&d=DwMFAw&c=CJqEzB1piLOyyvZjb8YUQw&r=HXSx-AF6JrbOPHtCDokxDA&m=YYHtRvogKVe3Otu94aWZ1sQBi22OLeW99dkvSkWuhxDVpoE9htptEAPSdvM9GYJ_&s=x7WMo5tEj-dqWDn71ETKxpGSsKkx86bFMgL0GUGuuYU&e=) for procedure and safety measures.
	1. To access the PTW in ePas, click the link above and press this button on the login page:
	2. Once signed in to ePas, reclick link to bring up the PTW.
2. Re-measure the demagnetized parts per steps 1-5 in section 2.

If after repeated degmagnetizations some parts still cannot meet the requirement set in step 5, generate a **NCR** to describe which parts and the peak remanent field with photo evidence. | [[DeMagNotes]] <<COMMENT>> |
| 4 | Repack/re-kit | [[Repack\_Rekit]] <<YESNO>> |