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| Traveler Title | Cebaf Cryomodule Dogleg Window Assembly | | | |
| Traveler Abstract | This traveler details the steps required to dimensionally inspect the Dogleg window assembly for Cebaf Reworked Cryomodule | | | |
| Traveler ID | C75-CPR-INSP-DGLG | | | |
| Traveler Revision | R6 | | | |
| Traveler Author | A. DeKerlegand | | | |
| Traveler Date | 16-Apr-2021 | | | |
| NCR Informative Emails | Macha,dreyfuss | | | |
| NCR Dispositioners | Forehand,kdavis,scott | | | |
| D3 Emails | Forehand,kdavis,scott | | | |
| Approval Names | A. DeKerlegand | S.Williams | K. Macha |  |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | 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. | | | |
| [CRM0882025-0002](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-72037/crm0882025-0002.pdf) | [CRM-088-2025-0002Rev C](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-234995/CRM0882025-0002%20REV%20C.pdf) |  |  |  |
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| Revision Note |  |
| R1 | Initial release of this Traveler. |
| R2 | Added pages 2 and 4 |
| R3 | Added user drop down, timestamp, comment box and file upload to step 3. |
| R4 | New pocket depth dimension updated, it is now .032” Also, some dimensions now noted Reference only at final inspection step. Small flange flatness dimension added to final insp. step. Step 6 added for final visual. |
| R5 | Rev C drawing added. CRM-088-2025-0002 Rev C |
| R6 | Angle of twist dimension noted measured in degrees. Small flange thickness added to cmm inspection. File Upload boxes added. |

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| Step No. | Instructions | | | | | Data Input |
| 1 | Record Serial number of Dogleg Window/FPC Extension Assembly | | | | | [[DGLGSN]] <<DGLGSN>> |
| 2 | Verify the following dimensions. Use table A when window is at the weldment stage. If necessary, bend small flange so that holes 1 and 2 meet the true position tolerance and parallelism as listed below. | | | | | [[Dim1VerifyTech]] <<SRF>>  [[Dim1VerifyDate]] <<TIMESTAMP>>  [[Dim1Comments]] <<COMMENT>>  [[CMMFile1]] <<FILEUPLOAD>> |
| **Drawing Number** | | **Description-Table A** | **Drawing Value** | **Tolerance** | **Measured Value** | |
| CRM-088-2025-0002 | | True Position of hole 1 | .015 | Max. | [[MeasValue1]] <<FLOAT>> | |
| CRM-088-2025-0002 | | True Position of hole 2 | .015 | Max. | [[MeasValue2]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Parallelism of small flange | .010 | Max. | [[MeasValue3]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole 1 (X) | .000 |  | [[MeasValue4]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole 1 (Y) | .000 |  | [[MeasValue5]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole 2 (X) | .000 |  | [[MeasValue6]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole 2 (Y) | .000 |  | [[MeasValue7]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of small flange (X) | .000 |  | [[MeasValue8]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of small flange (Y) | .000 |  | [[MeasValue9]] <<FLOAT>> | |

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| Step No. | Instructions | | | | | Data Input |
| 3 | *Post machining step.* With CMM verify the following dimensions. If necessary, bend small flange so that holes 1 and 2 meet the true position tolerance and parallelism listed below. Note: Eyelet pocket depth tolerance listed below is different from drawing to allow for lapping material removal. | | | | | [[Dim2VerifyTech]] <<SRF>>  [[Dim2VerifyDate]] <<TIMESTAMP>>  [[Dim2Comments]] <<COMMENT>>  [[CMMFile2]] <<FILEUPLOAD>> |
| **Drawing Number** | | **Description** | **Drawing Value** | **Tolerance** | **Measured Value** | |
| CRM-088-2025-0002 | | Height of wave guide assembly | 6.732 | + - .005 | [[MeasValue10]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Parallelism of small flange | .002 | Max. | [[MeasValue11]] <<FLOAT>> | |
| CRM-088-2025-0002 | | True Position of hole\_1 | .020 | Max. | [[MeasValue12]] <<FLOAT>> | |
| CRM-088-2025-0002 | | True Position of hole\_2 | .020 | Max. | [[MeasValue13]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Pocket Depth | .032 | +.005 / -.005 | [[MeasValue14]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Iris depth | .377 | + - .010 | [[MeasValue15]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole\_1 (X) | .000 |  | [[MeasValue16]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole\_1 (Y) | .000 |  | [[MeasValue17]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole\_2 (X) | .000 |  | [[MeasValue18]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of hole\_2 (Y) | .000 |  | [[MeasValue19]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of small flange (X) | .000 |  | [[MeasValue20]] <<FLOAT>> | |
| CRM-088-2025-0002 | | Location of small flange (Y) | .000 |  | [[MeasValue21]] <<FLOAT>> | |

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| Step No. | Instructions | | | | Data Input | |
| 4 | *FINAL CMM INSPECTION.* Verify the following dimensions. If necessary, bend small flange so that holes 1 and 2 meet the true position tolerance and parallelism listed below. | | | | [[Dim3VerifyTech]] <<SRF>>  [[Dim3VerifyDate]] <<TIMESTAMP>>  [[Dim3Comments]] <<COMMENT>>  [[CMMFile3]] <<FILEUPLOAD>> | |
| **Drawing Number** | | **Description** | **Drawing Value** | **Tol.** | **Measured Value** | **Within Tol.** |
| CRM-088-2025-0002 | | Height of wave guide assembly | 6.722 inch | + - .005 | [[MeasValue22]] <<FLOAT>> | [[Tolerance1]] <<YESNO>> |
| CRM-088-2025-0002 | | Large flange flatness | .002 inch | Max. | [[MeasValue23]] <<FLOAT>> | [[Tolerance2]] <<YESNO>> |
| CRM-088-2025-0002 | | Small flange flatness | .002 inch | Max. | [[MeasValue24]] <<FLOAT>> | [[Tolerance3]] <<YESNO>> |
| CRM-088-2025-0002 | | Parallelism of small flange | .002 inch | Max. | [[MeasValue25]] <<FLOAT>> | [[Tolerance4]] <<YESNO>> |
| CRM-088-2025-0002 | | True Position of hole\_1 | .020 inch | Max. | [[MeasValue26]] <<FLOAT>> | [[Tolerance5]] <<YESNO>> |
| CRM-088-2025-0002 | | True Position of hole\_2 | .020 inch | Max. | [[MeasValue27]] <<FLOAT>> | [[Tolerance6]] <<YESNO>> |
| CRM-088-2025-0002 | | True Position of small flange | .020 inch | Max. | [[MeasValue28]] <<FLOAT>> | [[Tolerance7]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of small flange (X) | .000 inch |  | [[MeasValue29]] <<FLOAT>> | [[Tolerance8]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of small flange (Y) | .000 inch |  | [[MeasValue30]] <<FLOAT>> | [[Tolerance9]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of hole\_1 (X) | .000 inch |  | [[MeasValue31]] <<FLOAT>> | [[Tolerance10]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of hole\_1 (Y) | .000 inch |  | [[MeasValue32]] <<FLOAT>> | [[Tolerance11]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of hole\_2 (X) | .000 inch |  | [[MeasValue33]] <<FLOAT>> | [[Tolerance12]] <<YESNO>> |
| CRM-088-2025-0002 | | Location of hole\_2 (Y) | .000 inch |  | [[MeasValue34]] <<FLOAT>> | [[Tolerance13]] <<YESNO>> |
| CRM-088-2025-0002 | | Thickness of small flange | .530 inch | Min. | [[MeasValue35]] <<FLOAT>> | [[Tolerance14]] <<YESNO>> |
| CRM-088-2025-0002 | | Point on small flange – concave side *REFERENCE ONLY* | n/a |  | [[MeasValue36]] <<FLOAT>> |  |
| CRM-088-2025-0002 | | Point on small flange – convex side  *REFERENCE ONLY* | n/a |  | [[MeasValue37]] <<FLOAT>> |  |
| CRM-088-2025-0002 | | Angle of twist on small flange  *REFERENCE ONLY* | n/a |  | [[MeasValue38]] <<FLOAT>>  *Note - MEASUREMENT IN DEGREES* |  |
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| Step No. | Instructions | | | | | Data Input | |
| 5 | Verify the surface finish of the large and small flanges using the Mitutoyo Profilometer. **NOTE -** **AVOID INDIUM SEAL PATH WHEN SAMPLING FOUR AREAS on flange with profilometer.** | | | | | [[Dim4VerifyTech]] <<SRF>>  [[Dim4VerifyDate]] <<TIMESTAMP>>  [[Dim4Comments]] <<COMMENT>> | |
| **Drawing Number** | | **Description** | **Has Flange had BCP ?** | **Drawing Value** | **Measured Value** | | **Within Tolerance** |
| CRM-088-2025-0002 | | Large flange surface finish | [[FlangeBCP1]] <<YESNO>> | 32 | [[MeasValue38]] <<FLOAT>> | | [[Tolerance14]] <<YESNO>> |
| CRM-088-2025-0002 | | Small flange surface finish | [[FlangeBCP2]] <<YESNO>> | 32 | [[MeasValue39]] <<FLOAT>> | | [[Tolerance15]] <<YESNO>> |

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| Step No. | Instructions | | | | | Data Input | |
| 6 | Final Visual. Verify flanges are free of damage, pits and scratches. | | | | | [[Dim5VerifyTech]] <<SRF>>  [[Dim5VerifyDate]] <<TIMESTAMP>>  [[Dim5Comments]] <<COMMENT>>  [[VisualPictureFile1]] <<FILEUPLOAD>> | |
| **Drawing Number** | | **Description** | **Flange Visual** |  |  | |  |
| CRM-088-2025-0002 | | Large flange | Large flange okay? | [[Flange40]] <<YESNO>> |  | |  |
| CRM-088-2025-0002 | | Small flange | Small flange okay? | [[Flange41]] <<YESNO>> |  | |  |