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| **ECR Title: ECR: Replacement of the coil-series resistors in the HAM-Aux and Tip/Tilt coil drivers** | | | DCC No: E1201027-v1 |
| Date: November 15, 2012 |
| **Requester: David Feldbaum** | **Impacted Subsystem(s):** | | **IO, ISC, SUS** |
| **Description of Proposed Change(s):**  D1100117-v2 HAM-A coil drivers, replace the “series resistors” R11 and R33 from 100 Ohm to 1.2 kOhm  (Note: This coil driver is used for both HAM Auxiliary and Tip/Tilt suspensions.) | | | |
| **Reason for Change(s):**  The 100 Ohm resistors which are presently installed provide an actuation range that is a factor 10 larger than can be observed by the OSEMs. Such large actuation range is not useful, and only contributes to the noise. | | | |
| **Estimated Cost:** $100 for the materials (250 surface mount 3 W metal film resistors) | | | |
| **Schedule Impact Estimate:**  The full replacement job will probably take 1 to 2 days per site, but can be performed when the system in question is not used (i.e. vent). | | | |
| **Nature of Change (check all that apply):**  **Safety**  **Correct Hardware**  **Correct Documentation** | | **Improve Hardware**  **Improve/clarify Documentation**  **Change Interface**  **Change Requirement** | |
| **Importance:**  **Desirable for ease of use, maintenance, safety**  **Desirable for improved performance, reliability**  **Essential for performance, reliability**  **Essential for function**  **Essential for safety** | | **Urgency:**  **no urgency**  **desirable by the time the Recycling Cavity is being aligned**  **Essential by date/event: \_\_\_\_\_\_\_\_\_\_\_\_**  **Immediately (ASAP)** | |
| **Impacted Hardware (select all that apply):**  **Repair/modify. List part & SNs:** D1100117, all SNs  **Scrap & Replace. List part & SNs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Installed units? List IFO, part & SNs:** LLO D1100117, all SNs  **Future units to be built** | | **Impacted Documentation** (list all dwgs, design reports, test reports, specifications, etc.):  [D1100117-v2](https://dcc.ligo.org/cgi-bin/private/DocDB/ShowDocument?docid=32704) HAM-A coil driver schematics  [T1100084-v1](https://dcc.ligo.org/cgi-bin/private/DocDB/ShowDocument?docid=33281) HAM-A coil driver prototype test plan  [T1200264-v2](https://dcc.ligo.org/cgi-bin/private/DocDB/ShowDocument?docid=91908) HAM-A coil driver design study | |
| **Disposition (to be completed by Systems Engineering):**  **TRB**  **CCB**  **Approved**  **Additional information required. Define:**  *[Requester re-submits with new information with the same DCC E-number for the ECR but the next version number.]*  **Concurrence by Project Management: (Acknowledged Electronically in DCC)**   |  |  |  |  | | --- | --- | --- | --- | | **Project Systems Engineer**: Dennis Coyne |  | **Project Systems Scientist**: Peter Fritschel |  | | | | |