|  |  |
| --- | --- |
| **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** | **[x]  Improve Hardware****[ ]  Improve/clarify Documentation****[ ]  Change Interface****[ ]  Change Requirement** |
| **Importance:****[ ]  Desirable for ease of use, maintenance, safety****[x]  Desirable for improved performance, reliability****[ ]  Essential for performance, reliability****[ ]  Essential for function****[ ]  Essential for safety** | **Urgency:****[ ]  no urgency****[x]  desirable by the time the Recycling Cavity is being aligned****[ ]  Essential by date/event: \_\_\_\_\_\_\_\_\_\_\_\_****[ ]  Immediately (ASAP)** |
| **Impacted Hardware (select all that apply):****[x]  Repair/modify. List part & SNs:** D1100117, all SNs**[ ]  Scrap & Replace. List part & SNs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****[x]  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****[x]  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 |  |

 |