*LIGO Laboratory / LIGO Scientific Collaboration*

E1000615-v3 *LIGO* 13 Dec. 2010

aLIGO BSC ISI Lockers Assembly Procedure

M.Hillard

Distribution of this document:

Advanced LIGO Project

This is an internal working note

of the LIGO Laboratory.

|  |  |
| --- | --- |
| **California Institute of Technology**  **LIGO Project – MS 18-34**  **1200 E. California Blvd.**  **Pasadena, CA 91125**  Phone (626) 395-2129  Fax (626) 304-9834  E-mail: info@ligo.caltech.edu | **Massachusetts Institute of Technology**  **LIGO Project – NW22-295**  **185 Albany St**  **Cambridge, MA 02139**  Phone (617) 253-4824  Fax (617) 253-7014  E-mail: info@ligo.mit.edu |
| **LIGO Hanford Observatory**  **P.O. Box 1970**  **Mail Stop S9-02**  **Richland WA 99352**  Phone 509-372-8106  Fax 509-372-8137 | **LIGO Livingston Observatory**  **P.O. Box 940**  **Livingston, LA 70754**  Phone 225-686-3100  Fax 225-686-7189 |

**Clean room standards**

For a clean assembly all LIGO standards should be followed, as presented in the latest version of the **LIGO Contamination Control Plan (E0900047).** Clean room garb including UHV gloves should be worn when working with parts.

All tools that come in contact with assembly should be cleaned to class B standards.

Assembly will be done under a portable clean room. Any time a part of the assembly is not covered by the portable clean room or not being actively worked on it should be covered with appropriate clean covers. (C3 polyester or equivalent).

**Torque Values for Bolts:**

Standard torque values according to manufacturer standards for screw material should be used.

**Parts prep work: alignment pins and helicoils**

To facilitate assembly, parts requiring helicoils and/or pins to be inserted before assembly will be listed to allow preliminary preparation of the parts, after cleaning and before starting general assembly. Reference E1000402 preparation document

Heliciols

1. D1000908

**Weight**

Approximated weights are provided in this assembly procedure as an indication for safety purpose.

Stage 1-2 Locker Assembly

**D1000908 Housing Locker Sleeve needs (4) 3/8-16 x 2D Helicoils**

1. Assembly Per Figure 1, Screw Item (2) (D1000875) Sleeve into Item (3) (D1000908)

Housing, Insert Item (1) (D047935) Pin Into Item (2) (D1000875) Sleeve as shown, Clamp

assembly into Item (5) (D1000873) Post using Item (9) (D1001806) Pin Cap and Item (10)

Vented Washer and Item (12) Screw Note Item (1) is flush with Item (5) and orientation of the

word out engraved on Item (1). Note Items (6) (7) (8) (10) and (11) are used to attach

assembly to The BSC ISI.

D1000855, Stage 1-2 Locker, pic.TIF

Figure 1

Reference D1000855

Stage 0-1 Locker Assembly

**D1000908 Housing Locker Sleeve needs (4) 3/8-16 x 2D Helicoils**

1. Assembly Per Figure 2, Screw Item (2) (D1000875) Sleeve into Item (3) (D1000908)

Housing, Insert Item (1) (D047935) Pin Into Item (2) (D1000875) Sleeve as shown, Clamp

assembly into Item (9) (D1000861) Post using Item (8) (D1000862) Pin Cap and Item (10)

Vented Washer and Item (12) Screw Note Item (1) is ,025" from outside edge of Item (9), and

note orientation of the word out engraved on Item (1). Note Items (5) (6) (7) (10) and (11) are

used to attach assembly to The BSC ISI.

D1000854 Stage 0-1 Lockers, pic.TIF

Figure 2

Reference D1000854