

HAZARDOUS

STEREO Boom Stowing Procedure - HAZARDOUS

Document # IMP-449-DOC

Revision: E

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Date: July 20, 2004

Stowing the STEREO IMPACT Boom requires manually stowing the Stacer, which is a coil spring made of sheet metal that produces consistent force over long distances. Release of a Stacer without adverse force to control the release can cause serious personal injury (See Figure 1.) from either the impact of the Stacer Can or Stacer Tip Piece or from slicing due to the moving of the sheets of metal relative to one another or to your person. Manually stowing the Stacer requires that personnel be in close proximity to the Stacer and that hands be in direct contact with the Stacer material, creating an opportunity for personal injury. The Stacer does not get fatigued and therefore presents a continuous hazard during this process. The STEREO IMPACT Boom Stacer should only be stowed by trained and experienced personnel.

Figure 1. A possible Stacer injury.



1. Check that the Boom is fully extended. If necessary, extend by hand until all sections are locked. CAUTION: If the Boom is not fully deployed, it may continue to deploy during handling.
2. Remove the Boom from the deployment fixture.
3. Insert the Boom into the Track Assembly
 - a. Insert the SWEA Instrument or Mass Dummy into the SWEA Fixturing Assembly.
 - b. Align the Boom Mounting feet with the pins in the Boom Carriage Assemblies and secure with the available Destaco clamps. Use caution to prevent damage to SWEA through extraneous motion.
 - c. Tighten thumb screws (4) on the SWEA Fixturing Assembly.
4. Remove the Flyweight Brake (FWB) Cover (6 screws) if attached.
5. Remove the Pin Puller Cover (12 screws) if attached.
6. Remove the two (2) screws attaching the STE Housing to the 210 mm Base Outer Ring.
7. Remove the two (2) nuts holding connectors X1, X2, Y1, and Y2 and demate the connectors.
8. Detach the Bobbin Housing from the 210 mm Base Outer Ring (12 screws).
9. Remove the Bobbin Housing two (2) to three (3) feet from the 210 mm Base Outer Ring along the Boom axis and secure to the Harness Mounting Box Assy on the Track Assy with the available

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Destaco clamp. Use caution pulling the Harness from the Bobbin; ensure the FWB Lanyard and the Harness do not tangle.

10. Remove the Pin Puller (2 screws) and reset per instructions.
11. Fully loosen the Pin Puller Preload Screws (3). The Pin Puller Mount should touch the base of the Stacer Can.
12. Release the Stacer Can by removing the two (2) screws that attach it to the Stacer Mounting Plate. CAUTION: The Stacer is still in a compressed state. Allow the Stacer to deploy (at a slow, controlled rate) to its end and store on the Stacer Bracing Plate on the Track Assembly.
13. Stow Deployment Assist Device (DAD) Rods and Springs; contract the rods and screw in DAD Retraction Tools. Leave approximately two (2) turns slack on each retraction tool. Do not tighten.
14. Stow the Boom sections one at a time moving the sections toward the SWEA Instrument (or Mass Dummy) without moving the Stacer Can and Bobbin Housing in its GSE.
 - a. Align the appropriate Depress Ring Assembly and Depress Ring Addition with the corresponding sections' Ring.
 - b. Screw in the Lock Pin Retraction Tools for all inward projecting pins (3) and retract inward projecting Lock Pins.
 - c. Depress outward projecting Lock Pins (3).
 - d. Compress boom sections lengthwise until tools are released.
 - e. Remove all tools.
 - f. Compress lengthwise to within approximately one (1) inch [25 mm] of the next section. Guide Magnetometer Harness when inserting the 50 mm Tube into the 90 mm Tube.
 - g. Repeat for all sections.
15. **HAZARD: EXPERIENCE REQUIRED:** Stow the Stacer. Move the Stacer Bracing Plate with the Stacer Can while stowing. Lock the Stacer Bracing Plate with the available Destaco clamp when rest is needed and as motion is completed to allow safety point for the Stacer. Move the Harness Cable and FWB Lanyard with the Stacer Tip Piece to prevent snagging the line and scraping the harness.
16. Compress the Stacer and insert the Safety Pin.
 - a. Align Stacer Can within the 50 mm Tube Assembly.
 - b. Align Stacer Tip Piece within the Stacer Can.
 - c. Align Stacer Tip Piece Hole for engagement of the Pin Puller (this is required to insert the Safety Pin).
 - d. Insert Safety Pin.
17. Attach the Stacer Can to the Stacer Mounting Plate with two (2) screws.
18. Attach the Pin Puller with two (2) screws. DO NOT TIGHTEN SCREWS.
19. Tighten the Pin Puller Preload Screws (3). Alternately tighten the screws keeping the Pin Puller Mount approximately parallel to the base of the Stacer Can.
 - a. Tighten the two screws without the large preload spring until they reach bottom.
 - b. Tighten the third screw with the large preload spring until the preload spring bushings are 14 mm apart using a gauge pin as a guide for the separation distance.
20. Tighten the Pin Puller screws (2).
21. Remove the DAD Retraction Tools.

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- 22. Stow the Harness in the Bobbin Housing while pulling the FWB Lanyard through the Bobbin Housing. Prevent winding of the Harness and the FWB Lanyard about one another. There should be the same number of winds to stow as to deploy; thus, the FWB Lanyard should enter straight into the Inner Bobbin.
- 23. Wind the FWB Lanyard onto the FWB Pulley. Leave approximately one (1) inch or one-quarter (1/4) to one-half (1/2) turn of slack Line.
- 24. Move the Bobbin Housing into position. Align the Stacer Tip Piece to the FWB Latch.
- 25. Mate the X1, X2, Y1 and Y2 connectors and secure to the Bobbin housing with two (2) nuts.
- 26. Attach the Bobbin Housing (12 screws).
- 27. Insert the STE Housing screws (2).
- 28. OPTIONAL: Remove the Safety Pin and reinsert through the Pin Puller Cover. Attach the Pin Puller Cover (12 screws).
- 29. OPTIONAL: Attach the FWB Cover (6 screws).

Checked by: _____ Date: _____
(Sign and Print Name)

Figure 2. STEREO BOOM Track Assembly GSE

