

Battech Enterprises LLC issues notifications for the benefit of owners of amusement rides manufactured by Battech Enterprises LLC. As a service to the industry, and in the interest of employee and public safety, Battech Enterprises LLC also may issue notifications for the benefit of owners of amusement ride equipment for which the manufacturer no longer exists, such as Dartron Parts and Services Inc. and Dartron Industries Inc. In doing so, Battech Enterprises LLC does not assume liability for losses associated with amusement ride equipment built by manufacturers other than Battech Enterprises LLC.

Issuing Entity:
 Battech Enterprises, LLC
 dba Dartron
 P. O. Box 13114
 Salem, Oregon 97309
 Phone: 503-362-2341
 Fax: 503-362-2536
 www.dartronrides.com

Bulletin # SR-5K-1110-01
Release Date: November 9, 2010
Effective Date: November 9, 2010
Supercedes: N/A
Completion Date: December 31, 2010

Page 1 of 5

SAFETY BULLETIN

Ride Manufacturer: Dartron Industries, Inc.	Affected Production Dates: January 1998 – May 2007
Ride Name: Cliff Hanger	Affected Serial #'s: All
Model #: All	

Abstract of Issue: On August 26, 2010; a Dartron Industries, Inc. Cliff Hanger sustained a failure in the material of the lower ears of the bearing base. There were no injuries.

Reason for release: To insure that all Cliff Hanger rides install reinforcement plates in a critical area of support for the bearing base. A failure in this area could result in injuries. Installation procedures are included.

Please correct ALL "F₂, F₃, F₄" (To) "G₂, G₃ and G₄"

Action to be taken:

1. No Cliff Hanger is to be operated after December 31, 2010 until this Safety Bulletin is complied with.

Contact Battech at (503) 362-2341 to arrange purchase of the structural reinforcing plates.

3. A welding technician certified in the F₂, F₃ and F₄ positions or equivalent (see D1.1 section 4 figure 4.3) must perform the welding procedure. This certification can be issued by any State. The attached form will need to be completed by the welder and retained with the ride documentation.

4. Welding to be performed using 7018 stick electrode DC reverse polarity.

5. Prepare the Cliff Hanger for the repairs as explained on Page 2.

6. Install the plates as explained on Page 3.

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SAFETY BULLETIN

Ride Manufacturer: <u>Dartron Industries, Inc.</u>	Affected Production Dates: <u>January 1998 – May 2007</u>
Ride Name: <u>Cliff Hanger</u>	Affected Serial #'s: <u>All</u>
Model #: <u>All</u>	

Abstract of Issue: On August 26, 2010; a Dartron Industries, Inc. Cliff Hanger sustained a failure in the material of the lower ears of the bearing base. There were no injuries.

Reason for release: To insure that all Cliff Hanger rides install reinforcement plates in a critical area of support for the bearing base. A failure in this area could result in injuries. Installation procedures are included.

Action to be taken:

1. No Cliff Hanger is to be operated after December 31, 2010 until this Safety Bulletin is complied with.
2. Contact Battech at (503) 362-2341 to arrange purchase of the structural reinforcing plates.
3. A welding technician certified in the F2, F3 and F4 positions or equivalent (see D1.1 section 4 figure 4.3) must perform the welding procedure. This certification can be issued by any State. The attached form will need to be completed by the welder and retained with the ride documentation.
4. Welding to be performed using 7018 stick electrode DC reverse polarity.
5. Prepare the Cliff Hanger for the repairs as explained on Page 2.
6. Install the plates as explained on Page 3.

Detail of issue:

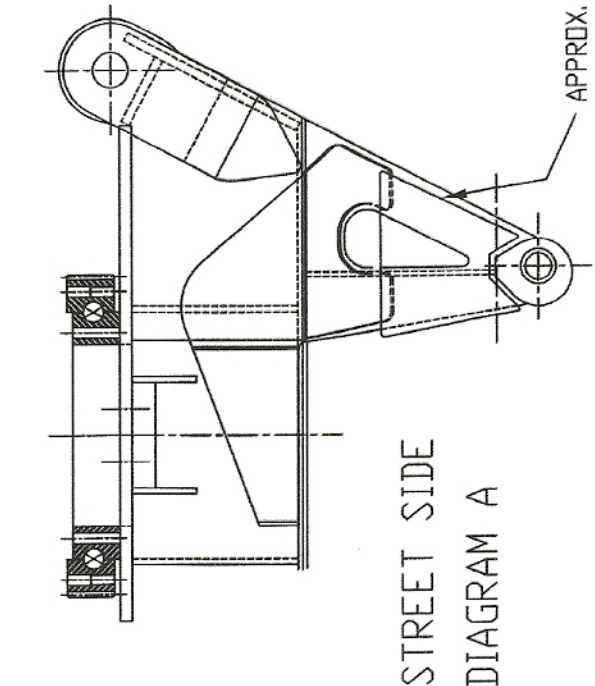
Prepare Cliff Hanger for Bearing Base Reinforcing Plate Installation

1. The ride must be at least partially set-up to perform this operation. The front car racks must be down and the wheel must be pinned together.
2. Material required will include a support for the bearing base such as blocking stacked on the ground.
3. Using the ride hydraulics, the boom should be raised off the Boom Rest Pad to provide a comfortable working height for the repair person. This height should be approximately 3 feet.
4. Support must be provided under the Bearing Base to prevent the Boom from dropping during the repair process. This support can be blocking or similar material stacked on the ground under the Bearing Base. The support should be provided directly under the Pivot Pin Ears where the Drag Link Pins to the Bearing Base. **Do Not Place this Support Under the 6" Square Drag-Link Tube – Damage Will Occur.**

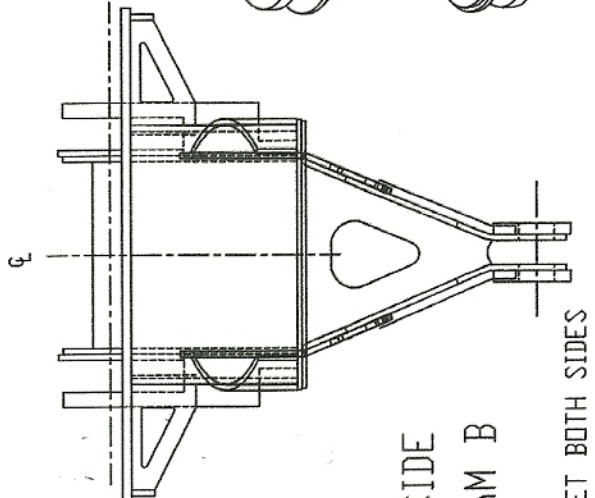
Another method of supporting the Bearing Base is to build a cross member bridge. The cross member bridge can be supported across the trailer frame behind the boom rest and will support the Bearing Base Pivot Pin Ears.

Cliff Hanger Bearing Base Ears Reinforcing Plate Installation

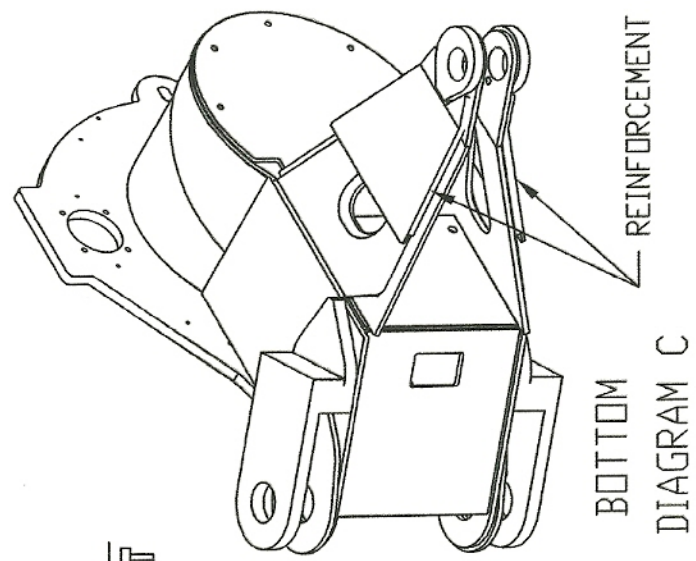
1. Welder shall be qualified to weld with 7018 electrodes in the F2, F3 and the F4 positions See D1.1 section 4 Figure 4.3.
2. Storage of Low-Hydrogen Electrodes shall be in accordance with D1.1 Section 5 paragraph 5.3.2.1. They shall be purchased in hermetically sealed containers or be baked by user in conformance with paragraph 5.3.2.4. The 7018 Electrodes **shall not** be stored outside the hermetically sealed containers or storage ovens for more than 4 hours.
3. The repair procedure shall be in accordance with AWS D1.1 Section 8 Paragraph 8.5.1 Base metal shall to be prepared and surfaces of existing base metal in contact with new base metal shall be cleaned of dirt, rust and other foreign matter. The portions of such surfaces which will be welded shall be thoroughly cleaned of all foreign matter **including paint** for at least 2 inches from the root of the weld.
4. Protectively cover the spherical bearing / pivot pin to insure no welding debris affects the performance of the pivot.
5. The ground must be connected as close the weld location as possible to insure that the current does not pass through any bearings
6. Tack securely in place, the Reinforcement Plate orientation to the Bearing Base **must remain intact**. There should be approximately 1/2" lap for welding in the vertical positions. See the attached illustration on page 4 of this bulletin.
7. Preheat the joint to at least 100 degrees Fahrenheit.
8. Weld the joint with 7018 electrode using DCEP (reverse polarity). Apply stringers in the horizontal positions. Weave beads are acceptable for vertical application. Clean between passes and continue to weld until a 3/8" fillet weld is achieved. The top of the Reinforcement Plate will receive a 1/4" fillet.
9. Complete the installation of the Reinforcing Plates.
10. Complete and **RETAIN** the form on page 5 of this bulletin.
11. Clean and prepare for painting all unpainted surfaces. Primer and paint as close to original color as possible. Original paint colors are available from any DuPont Centari paint dealer.



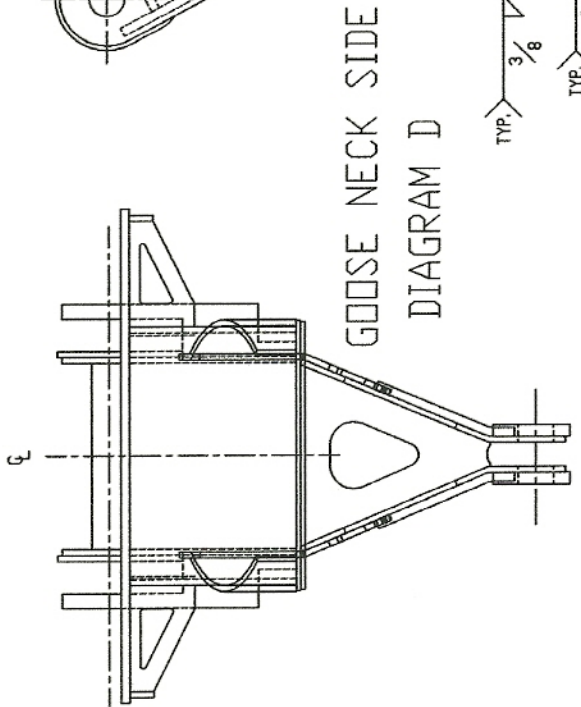
STREET SIDE
DIAGRAM A



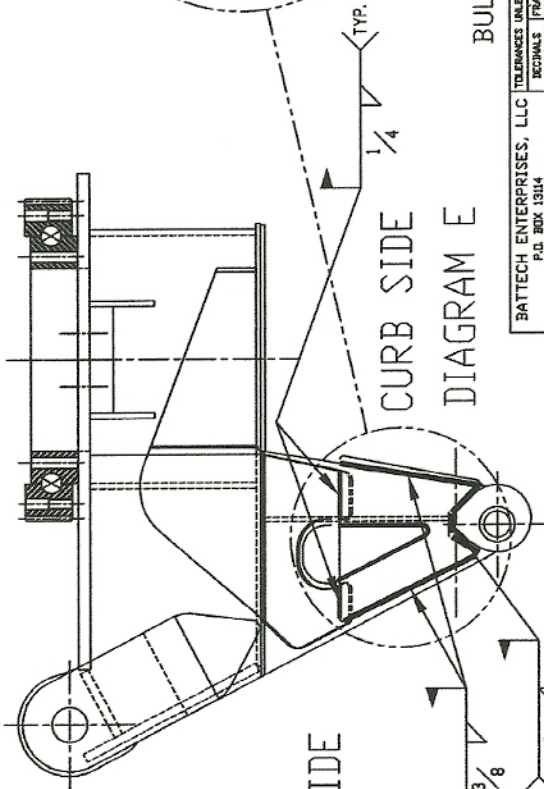
BOOM SIDE
DIAGRAM B



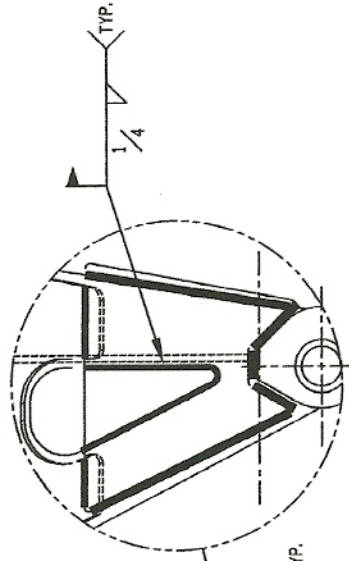
BOTTOM
DIAGRAM C



GOOSE NECK SIDE
DIAGRAM D



CURB SIDE
DIAGRAM E



BATTech ENTERPRISES, LLC P.O. BOX 13114 SALEEN, OR 97139		TELEPHONE: UNLESS NOTED DECIMALS FRACTIONS ANGLES		DATE	SCALE	DRAWN BY
USE OR REVISIONS THAT SPECIFICALLY REFER TO THIS BULLETIN SHALL BE THE PROPERTY OF BATTech ENTERPRISES, LLC.		± 1/16	± 1/4	10-14-10	N.T.S.	D.H.
		± 1/8	± 1/2	DWG NO.	SHEET	REVISION
				SB-5K-1110-01	1/1	0
				BATTECH		

**Battech Enterprises, LLC
Db a Dartron
Welder Verification**

Date: _____ **Location:** _____

Customer Name: _____

Serial Number of Cliff Hanger: _____

Date of Manufacture: _____

Welder: _____

Certification Type: _____ **Certification Date:** _____

Entity that issued certification: _____

Employer: _____ **Supervisors Name:** _____

I, Undersigned, certify that the statements in this report are correct and that the welds were in compliance with the procedures in this bulletin (_____)

Welders Signature: _____