Issuing Entity:
Battech Enterprises, LLC

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Bulletin # SR-5R-1309-02A
Release Date: September 12, 2013
Effective Date: September 12, 2013
Supercedes: N/A
Completion Date: December 31, 2013

SAFETY BULLETIN

Ride Manufacturer: Battech Enterprises, LLC	Affected Production Dates: November 2009-Present
Ride Name: Zero Gravity	Affected Serial #'s: 0911011-5R FORWARD
Model #: All	

Abstract of Issue: Early production Dartron Industries, Inc. Zero Gravity amusement rides were produced using a thinner material on the boom drum and boom reinforcement plates. Cracking has been discovered in this area. Testing has determined that ALL Zero Gravities may eventually develop cracking in the same area.

Reason for release: To notify all owners, operators and inspectors of a safety concern with the booms on the Zero Gravity. Subsequent testing has determined that a reinforcement plate is required to insure that this area will not develop cracks at a future time. Failure to add these reinforcement plates may eventually result in the boom drum (bearing base) not adequately supporting the center bearing. A failure in this area could result in injuries.

Action to be taken:

1. No Zero Gravity is to be operated after December 31, 2013 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 Zero Gravity for the repairs as explained on Page 2.

6. Install the plates as explained on Page 3.

Detail of issue:

Prepare Zero Gravity for Boom Reinforcing Plate Installation

1. The ride must be at least partially set-up to perform this operation. The outriggers should be open and the wheel must be pinned together.

2. 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 1 - 2 feet.

3. Support must be provided under the Boom to prevent the Boom from dropping during the repair process. Material required will include a support for the boom base such as blocking stacked on the ground.

4. All work must be completed by qualified personnel, capable of understating the function of the parts and the proper installation. Use only those components authorized, specified or provided by Battech Enterprises, LLC. All applicable OSHA safety standards and safe industry practices must be observed as well as all jurisdictional codes. This bulletin and the weld procedures must be provided to the entity doing the installation of the reinforcing plates.

Zero Gravity Boom 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. Remove the Hydraulic Hose Clamp that is located where the plate needs to be located and insure the hydraulic hoses are positioned where there will be no damage during the installation process.

5. The ground must be connected as close to the weld location as possible to insure that the current does not pass through any bearings

6. Tack securely in place approximately 5/8” from the bottom edge and parallel to it. See the attached illustration on page 4 of this bulletin.

7. Preheat the joint to at least 100 degrees Fahrenheit.

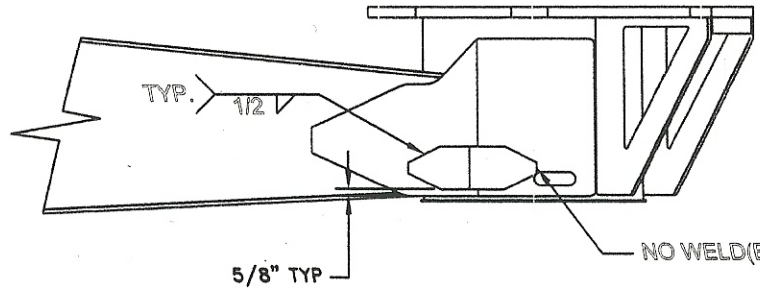
8. Weld the joint with 7018 electrode using DCEP (reverse polarity). Apply stringers in the horizontal and overhead positions. Clean between passes and continue to weld until a 1/2” fillet weld is achieved. DO NOT WELD THE VERTICAL ENDS.

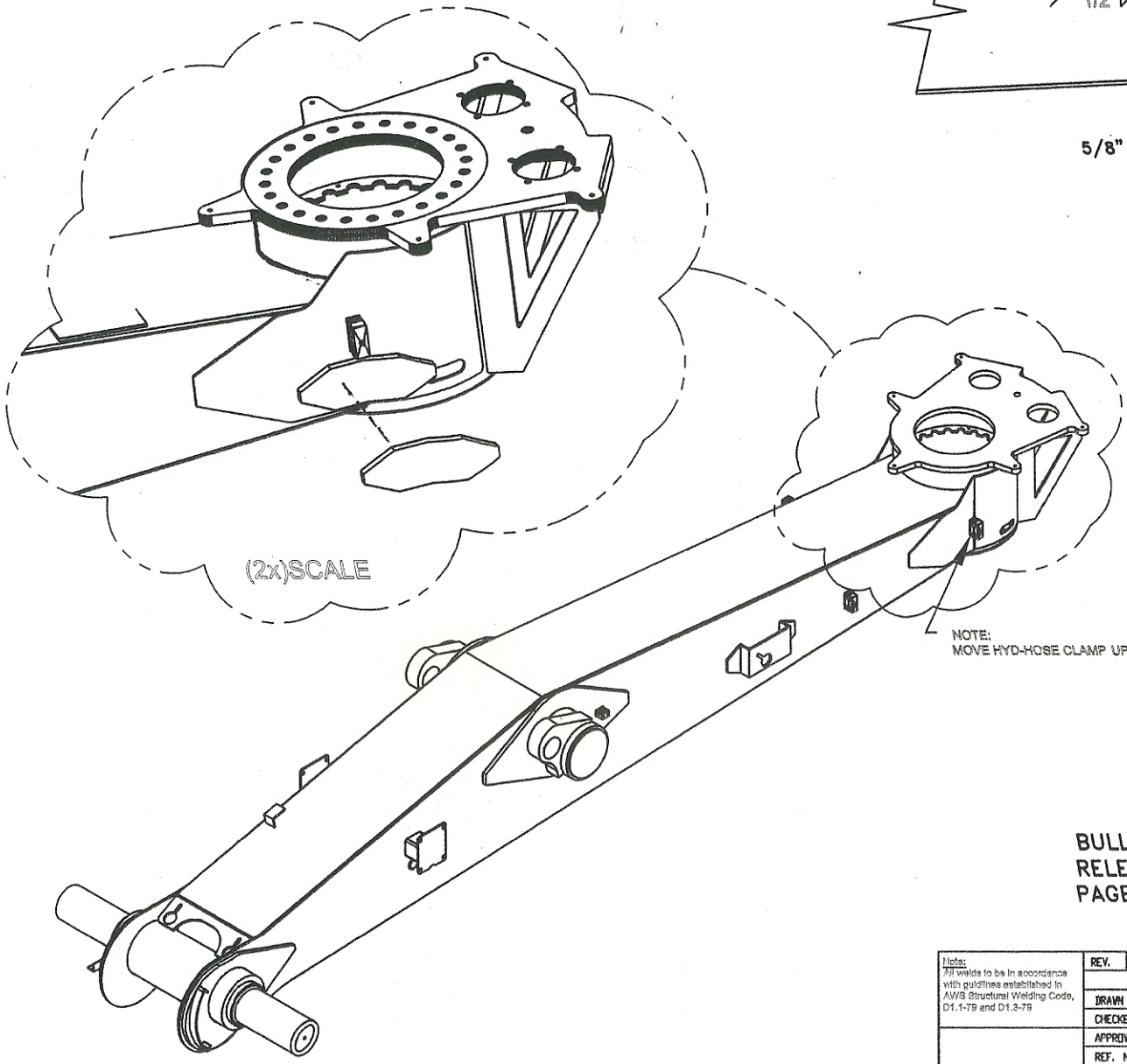
9. Weld the new provided Hydraulic Hose Clamp Base in a convenient location and clamp the hoses after the weld has cooled to a safe temperature.

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.

A	9007-IS





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Note:
All welds to be in accordance with guidlines established in AWS Structural Welding Code, D1.1-79 and D1.3-79

REV.	DATE	DESCRIPTION	BY	CHK.
		REVISIONS		

DRAWN BY	PM	7/26/2013
CHECKED BY		
APPROVED BY		
REF. No.		

BATTECH ENTERPRISES,LLC.

UNLESS OTHERWISE SPECIFIED:
TOLERANCES
DECIMAL .XX ± .06
.XXX ± .010
ANGULAR ± 1°
DIMENSIONS ARE IN INCHES (mm)
BREAK SHARP EDGES .003 - .015
SURFACE FINISH=125

TITLE DETAILS
BOOM REINFORCEMENT PLATE
-
ZERO GRAVITY

SCALE		PROJ.	SHEET	SIZE	DWG. No
NTS.	-	-	1 OF 1	A	9007-IS

Battech Enterprises, LLC

Welder Verification

Date: _____ Location: _____

Customer Name: _____

Serial Number of Zero Gravity: _____

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: _____