

The information below is for use by State Amusement Ride Officials Only - It is being provided to you under section 29(e) of the Consumer Product Safety Act, 15 U.S.C. 2078(e), which allows the Commission to share certain information with state and local governmental authorities. It should not be released to the public.

The information listed below is based upon information we have obtained, including information provided to us by the Florida Bureau of Fairs and Expositions, Department of Agriculture.

AMUSEMENT RIDE SAFETY BULLETIN
Cliff Hanger Mobile Amusement Ride
March 1, 2004

The U.S. Consumer Product Safety Commission (CPSC) staff is notifying state and local authorities having jurisdiction over amusement rides that we have completed our investigation of the Dartron Cliff Hanger mobile amusement ride. CPSC staff has accepted Dartron's Corrective Action Program to inspect and correct as necessary existing Cliff Hangers, and to make prospective changes in the design of future Cliff Hangers.

On January 22, 2004, CPSC staff issued a safety bulletin alerting amusement ride officials of an incident that occurred on January 17, 2004 at the Florida Citrus Festival in Winter Haven, FL, involving a Cliff Hanger. A car was thrown from the sweep, injuring the three passengers in that car.

The cause of the failure has been determined to be a combination of design and operational factors, leading to fracture of the welded joint between the hanger stem and the hanger arch, at the point where the gussets are welded to the stem. The hanger stem can be overloaded and bent if the cars are lowered from the transport rack without removing the pins that attach the Car Stabilizer Cross Tube to the transport rack. If the hanger stem is bent and difficult to insert into its socket, and is forced into the socket by hammering, the welded joint may be damaged and subsequently fail during operation.

Dartron has developed a sequential program including magnetic particle inspection of all Cliff Hanger stems, certification of backup safety device installation, installation of a redesigned Car Stabilizer Pin assembly, and prospective design and manufacturing changes to the hanger stem assembly and backup device. Before Dartron will allow a Cliff Hanger to operate, the owner/operator must present a Dartron-approved Safe To Operate form verifying that the above measures have been taken.

Details of the Dartron program are described in Dartron Bulletin PIB-5K-0204-001, which is attached to this bulletin.

CPSC staff has accepted the Corrective Action Plan proposed by Dartron. Based upon this action, we are withdrawing our earlier recommendation that you not allow Cliff Hangers to operate, on the condition that they meet the requirements of the Dartron program. Please contact me if you have any questions or comments on this matter.

Roy W. Deppa
Associate Director
Office of Compliance
301-504-7514

Dartron

Issuing Entity:
Dartron Industries, Inc
P. O. Box 13114
Salem, Oregon 97309
Phone: 503-362-2341
Fax: 503-362-2536

www.dartronrides.com

Bulletin # PIB-5K-0204-001

Release Date: February 27, 2004

Effective Date: February 27, 2004

Supersedes: N/A

Completion Date: N/A

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PRODUCT INFORMATION BULLETIN

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

Abstract of Issue: On January 17, 2004, an incident occurred on a Cliff Hanger ride operating in Florida. As a result of the incident, Dartron required Cliff Hanger ride owners to cease operation of Cliff Hangers until they complied with the requirements of Dartron Safety Bulletin SR-5K-002. Additionally, the US Consumer Product Safety Commission recommended that Cliff Hanger rides not be operated until their investigation was complete. On February 27, 2004, CPSC accepted Dartron's Action Plan and approved Cliff Hanger rides to operate but only upon approval by Dartron of measures taken by the owners/operators in accordance with Dartron Bulletins SR-5K-002, 003, and 004 (see www.dartronrides.com).

Reason for release: To inform Cliff Hanger owners/operators, inspectors and State authorizing authorities of Dartron requirements that must be met before a Cliff Hanger ride can operate. Page 2, 3, 4 and 5 of this bulletin provide a guide for inspecting the Cliff Hanger car suspension components.

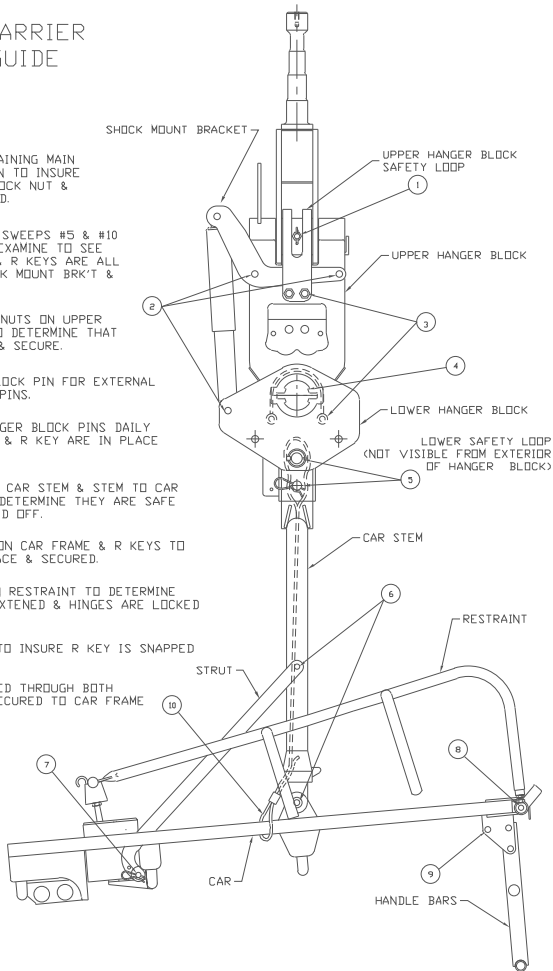
Action to be taken: Before a Cliff Hanger ride is allowed to operate, it must comply with the following:

1. The owner/operator must present a Dartron-approved Safe To Operate form (see page 6). The Dartron Safe To Operate Form verifies that the Cliff Hanger complies with Dartron requirements including NDT inspection and that the structural integrity of the gusset joint has not been compromised. It also verifies that a Dartron-approved back-up device is in place. These requirements are found in Safety Bulletins SR-5K-002 and SR-5K-003.
2. Car hangers must be capable of insertion into lower hanger blocks without force, and by April 1, 2004, all Cliff Hangers must have car rack pins cabled to rack turnbuckles (see Bulletin # SR-5K-004).
3. When the Cliff Hanger meets the requirements of numbers 1 and 2 above, it is approved to operate. The Cliff Hanger can be inspected to the drawings attached as Pages 2, 3, 4 and 5 of this bulletin. Any configuration shown is approved if installed correctly and not showing any indications of distress.

Detail of issue: Page 2, 3, 4 and 5 provide inspection guides for approved back-up devices and approved gusset joint configurations. Page 6 is a sample Dartron Safe To Operate form.

PASSENGER CARRIER INSPECTION GUIDE

- ① INSPECT FASTENERS RETAINING MAIN HANGER BLOCK PIVOT PIN TO INSURE 1/2" BOLT JAM NUT, NYLOCK NUT & COTTER PIN IS INSTALLED.
- ② SHOCK MOUNT BRK'TS ON SWEEPS #5 & #10 HAVE REMOVABLE PINS, EXAMINE TO SEE THAT PINS ARE SECURE & R KEYS ARE ALL INSTALLED IN BOTH SHOCK MOUNT BRK'T & LOWER HANGER BLOCK.
- ③ CHECK BOLTS & NYLOCK NUTS ON UPPER & LOWER SAFETY LOOP TO DETERMINE THAT FASTENERS ARE INTACT & SECURE.
- ④ CHECK LOWER HANGER BLOCK PIN FOR EXTERNAL RETAINING RING & ROLL PINS.
- ⑤ CHECK CAR STEM TO HANGER BLOCK PINS DAILY VERIFY THAT LYNCH PIN & R KEY ARE IN PLACE & PINS ARE SECURE.
- ⑥ CHECK MODIFIED BOLT IN CAR STEM & STEM TO CAR BOLT & NYLOCK NUT TO DETERMINE THEY ARE SAFE & NUTS HAVE NOT BACKED OFF.
- ⑦ CHECK CAR STRUT PINS ON CAR FRAME & R KEYS TO INSURE THEY ARE IN PLACE & SECURED.
- ⑧ EXAMINE PIVOT POINT ON RESTRAINT TO DETERMINE THAT ALL SHAFTS ARE EXTENDED & HINGES ARE LOCKED IN PLACE.
- ⑨ CHECK CAR HANDLE PIN TO INSURE R KEY IS SNAPPED IN PLACE.
- ⑩ SAFETY CABLE IS THREADED THROUGH BOTH SIDES OF CAR STEM & SECURED TO CAR FRAME

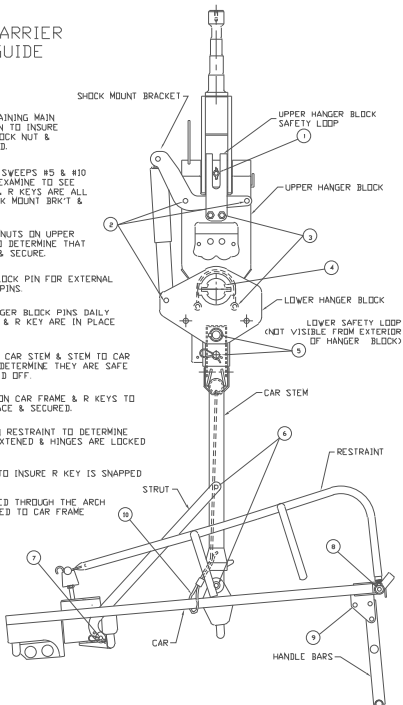


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DARTRON IND., INC. 425 10TH ST. S.W. DALLAS, TX 75201	TELEPHONE (214) 342-1111 FACSIMILE (214) 342-1111 CABLE "DARTRON"	SECRET	CLASSIFICATION	DATE	REV.	APPROVED BY
DARTRON			CARRIER INSPECTION GUIDE	03-01-84	YES	DM
DARTRON			PIB-5K-0204-001	2/6	REVISED	A

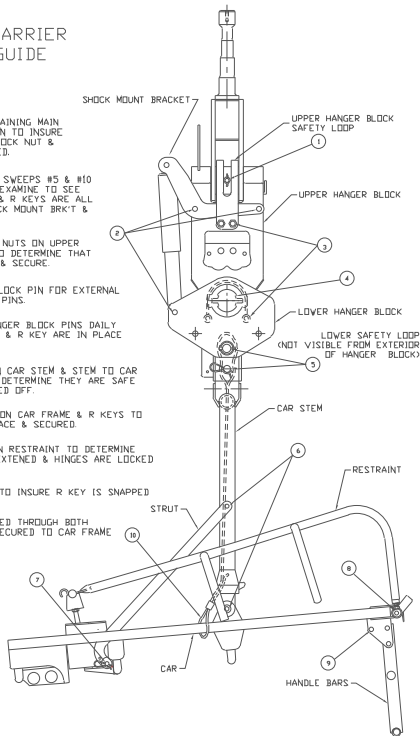
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- ⑩ SAFETY CABLE IS THREADED THROUGH THE ARCH ASSEMBLY ONLY & SECURED TO CAR FRAME.



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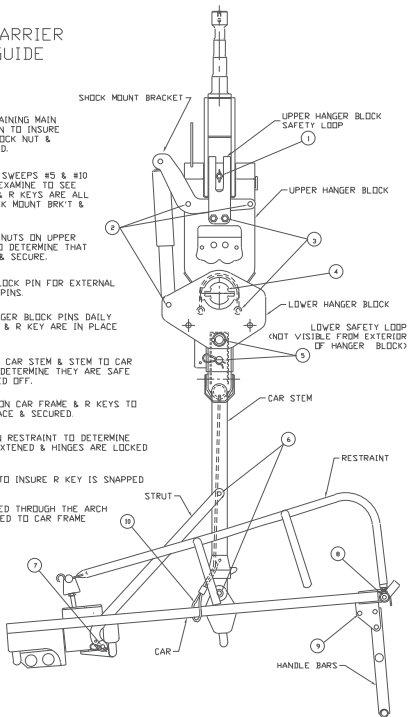


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DIFFERENTIAL INC.	ISSUED DATE	ISSUED BY	REVISION	DESCRIPTION	DATE	BY	DATE	BY
	08-20-08		1	CARRIER INSPECTION GUIDE	08-20-08			
				DARTTRON	P1B-5K-0204-001		4/6	A

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DARTRON TOOL, INC. 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	REVISIONS	DATE	BY	CHECKED	APPROVED	CARRIER INSPECTION GUIDE		REV	DATE
						DARTRON	P18-SK-0204-001	5/76	A

Dartron Industries, Inc.

In accordance with Safety Bulletin # SR-5K-002 Dartron has received a NDT Magnetic Particle and a Back Up Device Report for Cliff Hanger Serial Number _____.

The Mag Particle Report provided the below information about the gusset to Stem joint:

Gusset Joint Uncompromised on car: 1 2 3 4 5 6 7 8 9 10 none

Allowable defects were found on cars: 1 2 3 4 5 6 7 8 9 10 none

Action Required _____

Action Required _____

Action Required _____

Rejected car hanger stems were found on cars :

1 2 3 4 5 6 7 8 9 10 None

Rejected car hangers must be replaced with a new car hanger purchased from Dartron Industries.

Summary of NDT action taken:

Successfully Completed Inspection: _____

Rejected: _____ Status of Rejected Stems: _____

Summary of Back Up device installation:

Original Cable _____

Retrofit Strap _____

Information provided by: _____

Cliff Hanger S/O # _____ owned by _____ complied with the NDT and backup device requirements of Safety Bulletin # SR-5K-002 on the date of _____ and is determined by Dartron Industries, Inc. to be safe to operate.

J. Robert Coil – President
Dartron Industries, Inc.