

Dartron

Issuing Entity:
Dartron Industries, Inc

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Bulletin # SR-5K-005

Release Date: April 29, 2005

Effective Date: May 1, 2005

Supersedes: N/A

Completion Date: Annually

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SAFETY BULLETIN

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

Abstract of Issue: An incident occurred on a Cliff Hanger ride operating in Florida during 2004. The incident resulted from a failure in the Car Hanger Stem at the location of the four gussets that are welded to the Stem and the Arch Assembly. As a result of investigations into the incident Dartron Industries, Inc. is requiring that an annual inspection of the Cliff Hanger ride be conducted.

Reason for release: The requirements for the Cliff Hanger inspection that Dartron is requiring all Cliff Hanger owners to undertake annually are included in this Bulletin. Dartron Industries, Inc. does not require an MT inspection but does require a visual inspection in the four locations described below:

Action to be taken:

1. No Cliff Hanger is to be operated in a new calendar year until the requirements of steps 3 through 6 are satisfied.
2. The results of the inspection must be attested to by the owner of the Cliff Hanger Ride and recorded on the attached form. During the calendar year following the inspection the Inspection Record form must be available at the ride location and when requested shall be presented to inspecting authorities.
3. A visual inspection must be performed to ensure that the Cliff Hanger is using four Car Stabilizer Bar pins with cables attached. The cables must be attached to the car rack turnbuckles as shown on Page 3 of this Bulletin. The Cliff Hanger car racks **must not** be operated unless the Car Stabilizer Cross Bar pins are attached to the turnbuckles as shown on Page 3.
4. Car Hangers Stems must be visually inspected for damage caused by lowering the rack without removing the Car Stabilizer Cross Bar pins. See Page 4. Damaged Car Hangers **must not** be used if two or three individuals manually lifting the car cannot insert the Stem into the Lower Hanger Block.
5. All car hangers must be visually inspected for any indication of cracking or other damage. Particular attention should be paid to the welds and their heat affected zones of the four gussets that are welded between the Stem and the Arch Assembly. See Page 4.

6. Each Car Hanger Stem must be inspected to ensure that one of the two Dartron approved back-up systems is installed on each car hanger stem. Dartron approved back-up systems include; 1) a cable inserted inside the Arch Assembly and Stem and attached to both sides of the passenger carrier. The cable can be visually inspected in the Stem by looking into the top of the Stem when the Car Hanger is not attached to the Hanger Block. 2) A cable inserted inside the Arch Assembly and attached to both sides of the passenger carrier but not routed through the stem combined with a Dartron supplied formed stainless steel safety strap around the Stem and Arch Assembly. See Pages 5 and 6.
7. An Annual Inspection Form is attached. See Page 7. Contact Dartron at 800-421-5752 for additional Annual Inspection Forms.

Diagram illustrating the KIT INC. ASSEMBLY, showing the car stabilizer assembly. The diagram includes labels for the following components:

- SWEDGE
- CABLE RING
- TURNBUCKLE
- CYLINDER LUGS
- PILLOW BLOCKS
- CAR STABILIZER

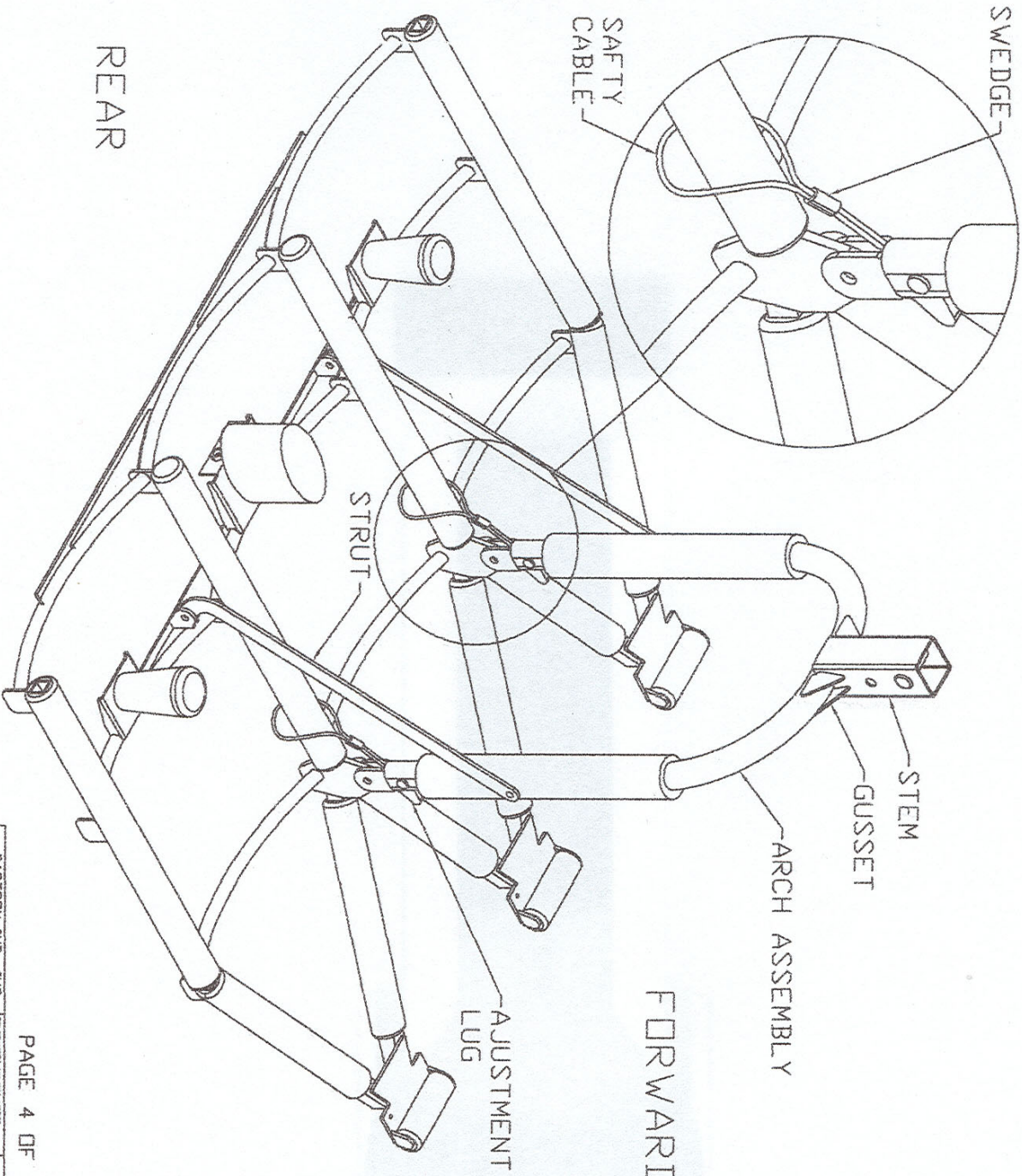
KIT INC.
ASSEMBLY

1. DISASSEMBLE TURNBUCKLE
2. INSERT TURNBUCKLE RODS THROUGH LOOPS AS SHOWN
3. REASSEMBLE TURNBUCKLE
4. INSERT NEW PINS THROUGH CAR STABILIZER CROSS BAR
5. DUPLICATE PROCEDURE ON REAR UPRIGHTS

FRONT VIEW CLIF-HANGER CAR RACK

REAR UPRIGHTS NOT SHOWN

DARTREIN INC., INC.		BUSINESS ADDRESS (FIRM)		TAG LINE ATTACHMENT		DATE		TOTAL	
PO BOX 3354		ADDRESS		TAG LINE ATTACHMENT		DATE		TOTAL	
WILSON, DE 21558		CITY		TAG LINE ATTACHMENT		DATE		TOTAL	
TEL 410-338-0000		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	
TEL 410-338-0000		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	
DARTREIN		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	
88-25-000		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	
3/7		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	
0		FAX		TAG LINE ATTACHMENT		DATE		TOTAL	

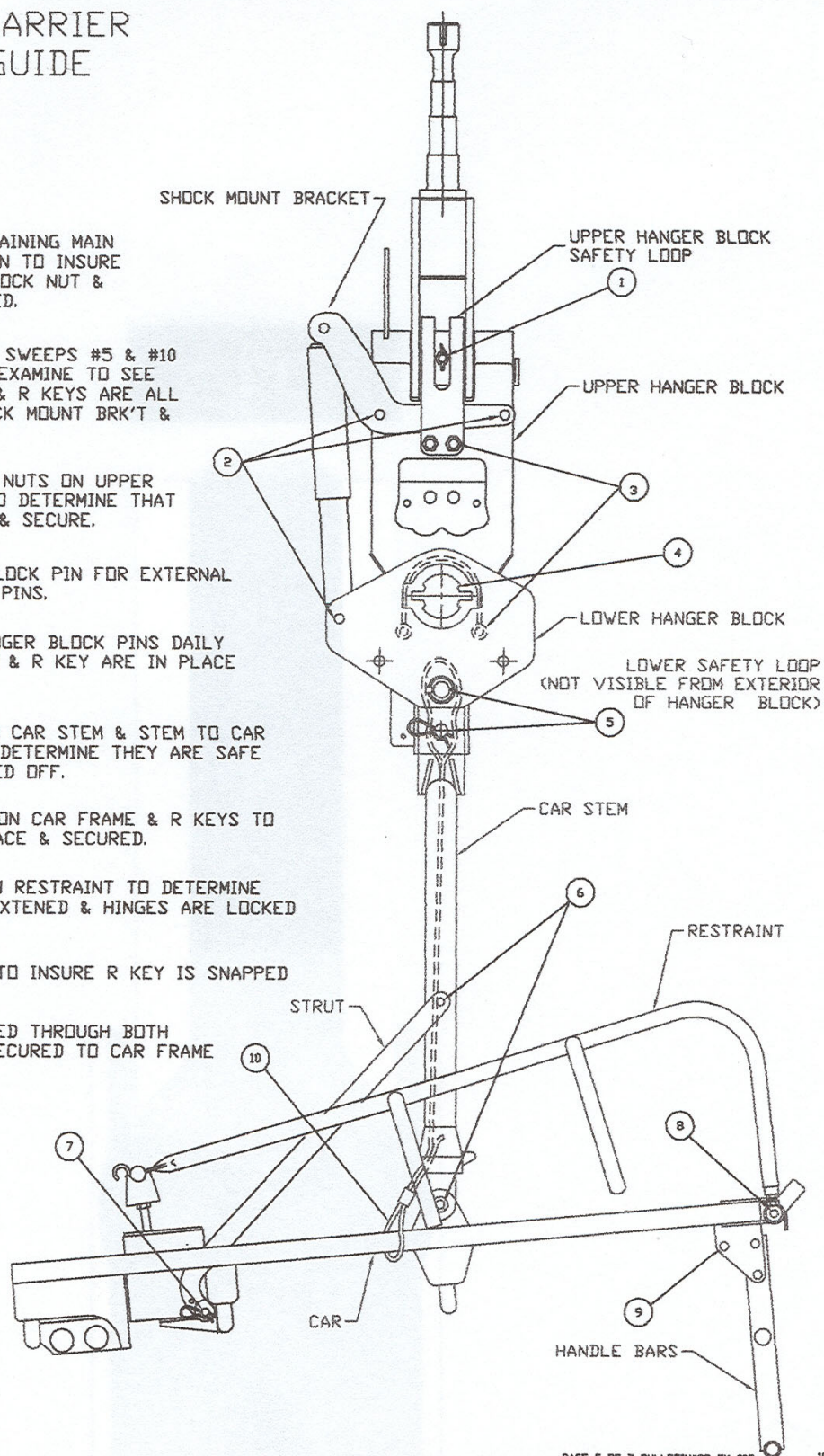


DARTRON IND., INC.				CLIFFHANGER CAR			
S.A. DIV. OF THE BARNETT CO.				SR-SK-005			
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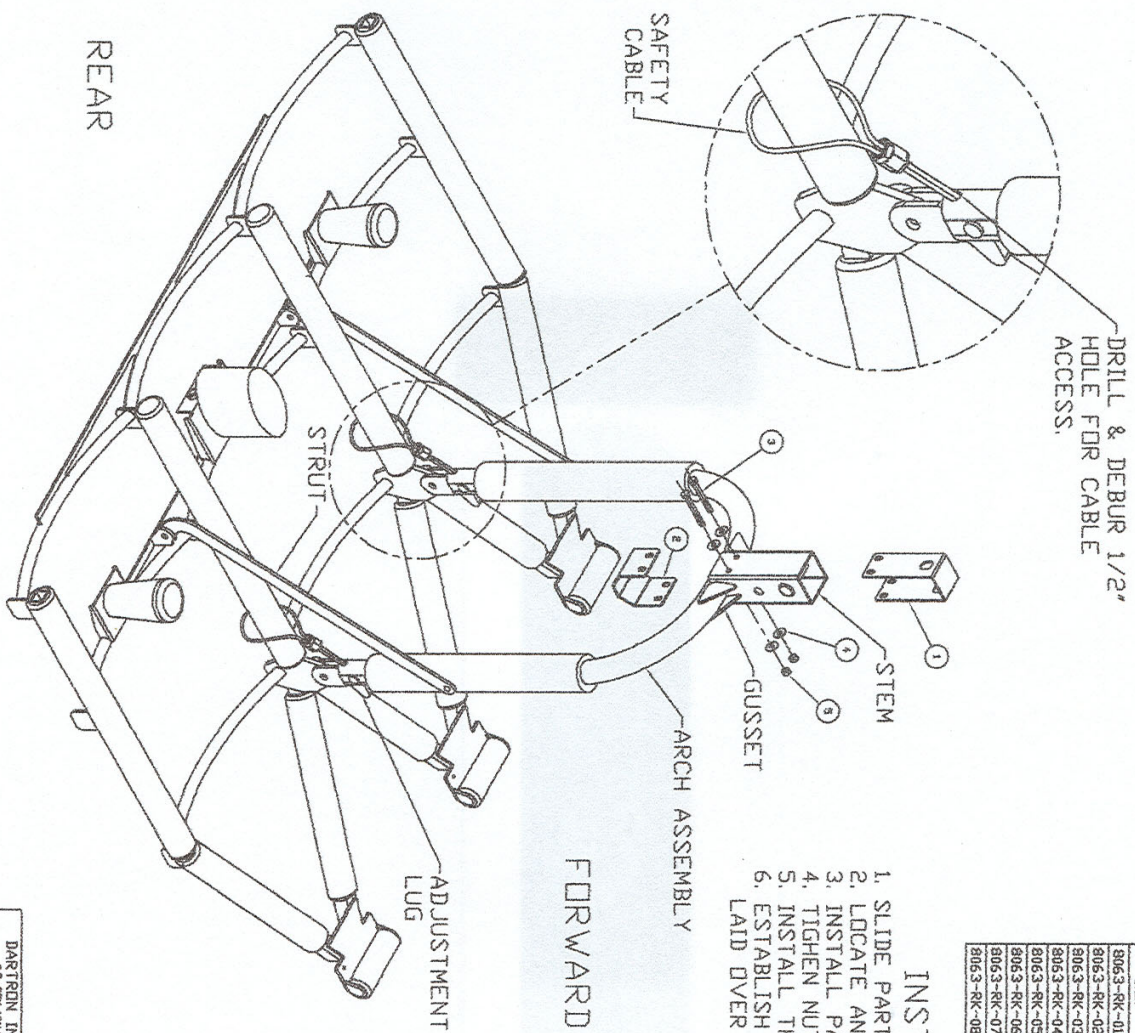
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PASSENGER CARRIER INSPECTION GUIDE

- 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 SAFTY 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 SAFTY CABLE IS THREADED THROUGH BOTH SIDES OF CAR STEM & SECURED TO CAR FRAME



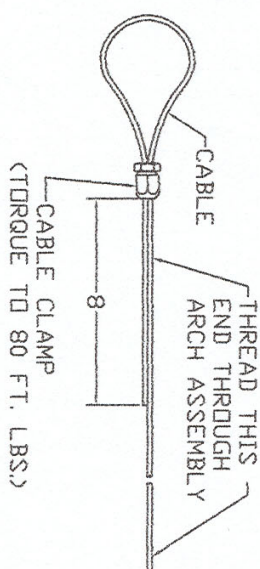
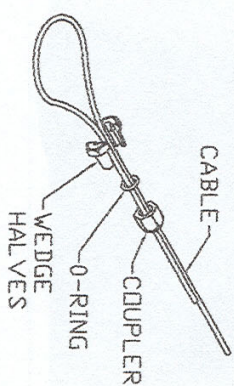
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ITEM	QTY	DESCRIPTION	LENGTH	UPPER	COMMENTS	USED
8063-RK-01	1	10 GA. SHEET X 2 1/2"	15 5/8"	.	FORM	.
8063-RK-02	1	10 GA. SHEET X 3"	8 7/8"	.	FORM	.
8063-RK-03	2	3/8 NC.-16 GRADE 8 BOLLTS	.	.	.	.
8063-RK-04	4	3/8" STAINLESS STEEL FLATE WASHER	.	.	.	.
8063-RK-05	2	3/8 NC.-16 NUT	.	.	.	.
8063-RK-06	2	3/16 STAINLESS STEEL AIRCRAFT CABLE	.	.	.	.
8063-RK-07	2	3/16 WIRE ROPE CLAMP	.	.	.	.
8063-RK-08	.	.	.	.	.	.

INSTALLATION INSTRUCTIONS

1. SLIDE PART # 2 UP UNTIL IT TOUCHES THE ROUND TUBE.
2. LOCATE AND DRILL HOLES IN THE STEM, 13/32 DIA THRU.
3. INSTALL PARTS #1 THROUGH #5 AS SHOWN.
4. TIGHTEN NUTS #5 180 DEGREES PAST SNUG.
5. INSTALL THE CABLE THROUGH THE ARCHED TUBE AS SHOWN.
6. ESTABLISH THE FINAL LENGTH OF THE CABLE WITH THE ARCH LAID OVER FLAT. (CRACKED POSITION).



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DARTRON IND., INC.		TOLERANCES UNLESS NOTED		DATE		DRAWN BY	
P.O. BOX 10414	MEMPHIS, TENN. 38110	MATERIALS	FUNCTIONAL DIMENSIONS	04-10-00	INTS	6/77	0
USE OR MODIFICATION OF THIS DRAWING	WITHOUT WRITTEN PERMISSION OF DARTRON IND. INC.	2 ± .04	1/16	1/32			
FOR THE PASSENGER CARRIER	DARTRON	SR-5K-005					

Cliff Hanger Annual Inspection Form

	1	2	3	4	5	6	7	8	9	10
No Cracking										
No Impact Damage										
No Other Damage										
Safety Backup Intact										
Easily Inserted Into Lower Hanger Block										

Car Rack Stabilizer Bar Pins With Cables Are Installed and Intact ☐

Cliff Hanger S/O # _____

Date Of Inspection _____

Inspectors Name
(Print) _____

Inspectors Signature _____

Inspectors Title _____