



ALLAN HERSCHELL

CHANCE
MANUFACTURING CO., INC.

Number: 101
Date: 5-15-75

Superceeds:
Number:
Date:

Service Information

Ride: SKYDIVER

Subject: CAR BODY FRAME

Upon a recent inspection of equipment, one owner has reported to us that his cars have developed cracks in one area of the frame.

In the interest of safety and protection to the owners, all SKYDIVER Cars should be inspected immediately. If any unusual conditions are found, consult the factory for corrective action.

Inspection Procedure

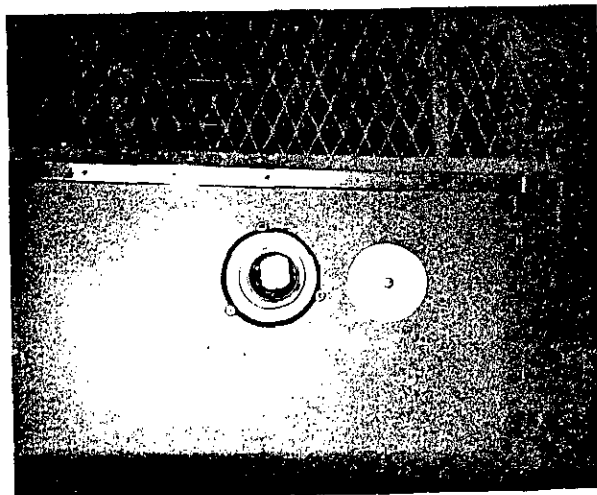
Remove the Cover Plate on the Right Rear side of the car.

Drop a small light bulb through the hole to light up the interior area for inspection.

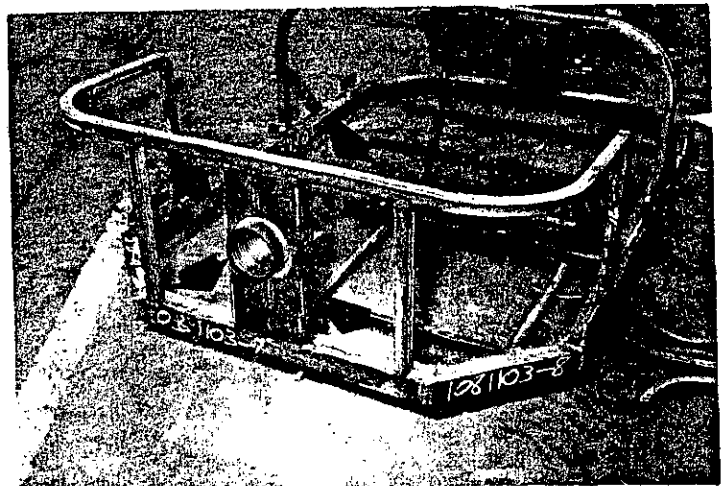
Use an Inspection Mirror if available or rig one up using a small mirror tied on to a stick, etc.

Inspect the upper and lower tubes, especially in the area where the bearing housing channel is welded to the tubes.

If any signs of cracking are present, consult the factory for corrective action.



Rear of Car showing
Inspection Plate



Inspect areas indicated
by arrows

Factory and General Office, 4219 Irving, Box 2397 Wichita, Kansas 67201

Area Code (316) 942-7411

Sales Office:

103 Ross Ave., Dallas, Texas 75202

Area Code (214) 742-3802



Number: 101A
Date: 6-12-75

Supersedes:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Numbers:

Ride: SKYDIVER

Subject: REPAIR OF CAR FRAME

The repair work on the SKYDIVER Cars can be accomplished with ordinary tools, the only exception being the need of a Pneumatic Riveting gun. These guns can be rented, but be sure you specify that it be capable of pulling 3/16 diameter blind steel rivets. This type of gun is generally classed as Heavy Duty.

Tools Required for Repair

Mat or padding to protect fiberglass
Drill motor - #11 drill bits
(#12 or 3/16 will work if #11 not available)
Set of mechanics hand tools
A furniture clamp 42" capacity, or small load binder and short piece of chain
Welder and E7014XX rod 1/8 diameter
"C" clamps

NOTE

Some older cars may use sheet metal screws in place of pop rivets. Screws may be reused or replaced with pop rivets if desired.

PARTS REQUIRED (PER CAR)

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
1	1081103-9	Doubler
2	1081103-6	Brace
1	2 x 2 x 1/4 x 26" lg.	Angle
6 oz.	#621	CSK Alum. Pop Rivet
10 oz.	#612	Steel Pop Rivet

REPAIR PROCEDURE

1. Remove the door hinge bolts and set door assembly aside.
2. Unbolt the skid channels from bottom of car.
3. Remove two of the carrying sockets from rear sides of car only. The front sockets do not have to be removed.
4. Remove trim around the rear spindle housing.
5. Drill out the rivets in the aluminum trim running around the mid-section, seat opening and rear of car. Do not remove trim around front of seat opening.

If doing several cars, keep the trim, etc., with each respective car.

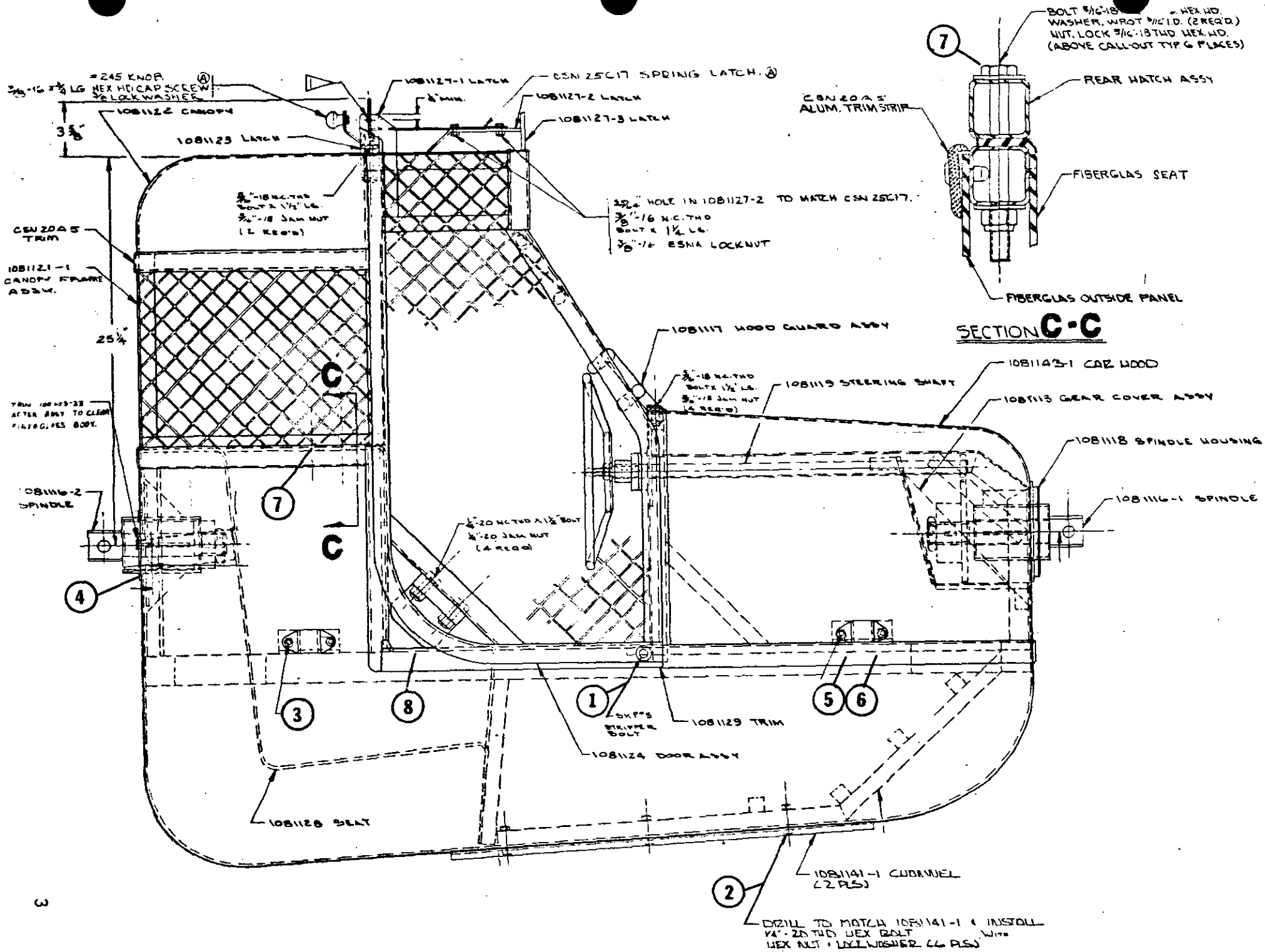
6. Drill out the rivets securing fiberglass to frame and remove glass.
7. Remove canopy hood, six bolts.
8. Drill out rivets securing seat and remove.
9. Inspect entire frame for cracks or fatiguing. If anything is found besides the area already diagnosed, consult the factory.
10. Weld all cracks and grind smooth where necessary.
11. Clamp the doubler tube and weld every three to four inches top and bottom.
12. Position side braces and weld both sides.
13. Position 2 x 2 angle and weld.
14. Paint all areas necessary and assemble in reverse order.

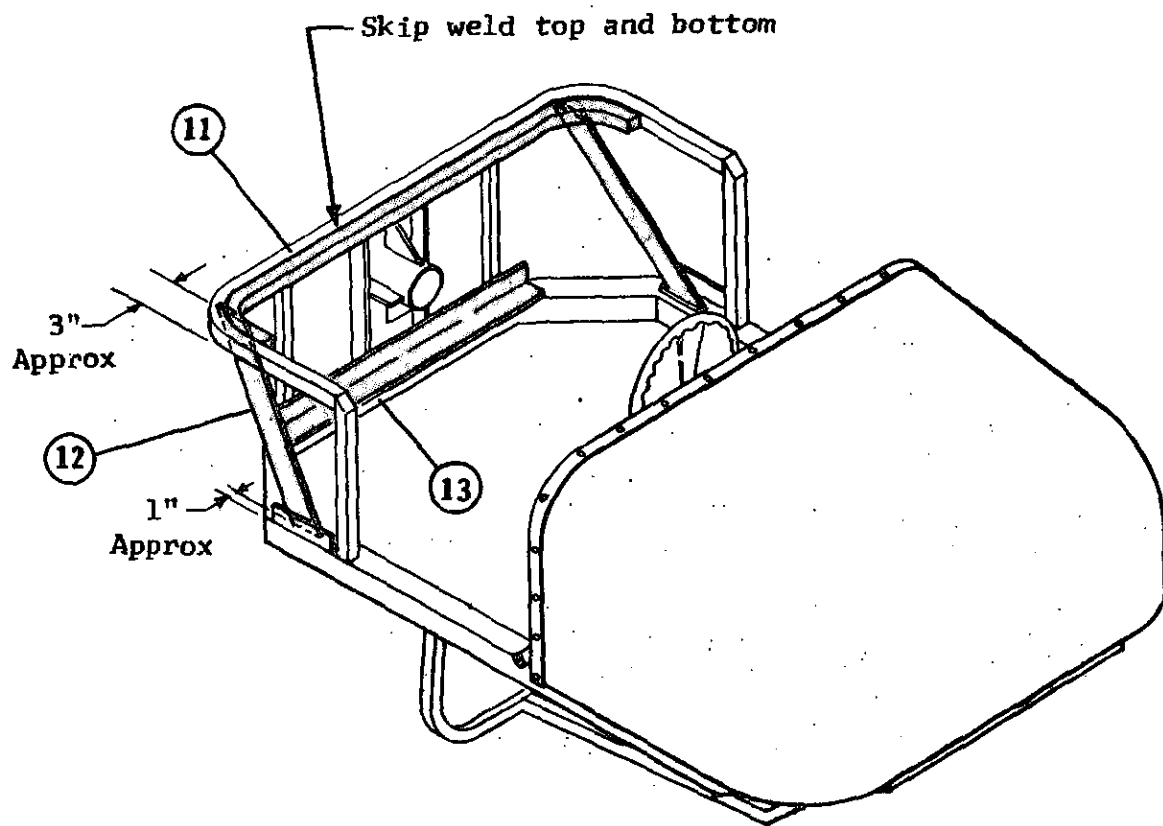
When installing Canopy, it may be necessary to use a furniture clamp to align Canopy with holes in frame.

Operation and Inspection

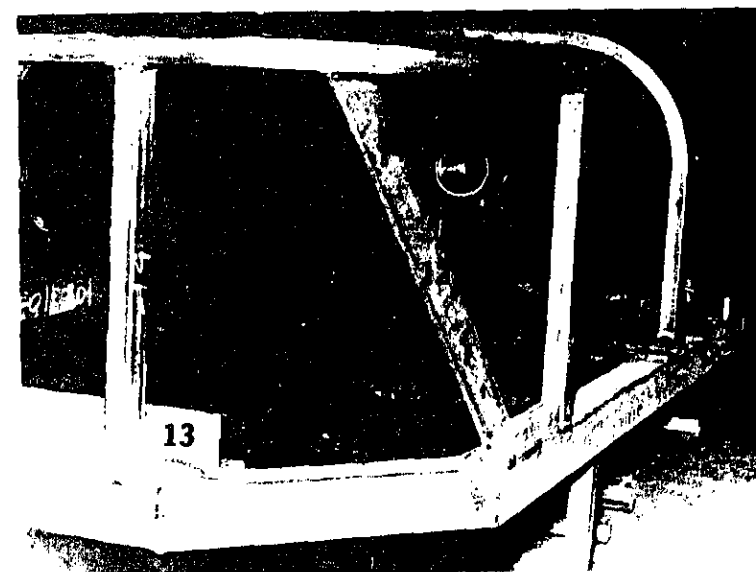
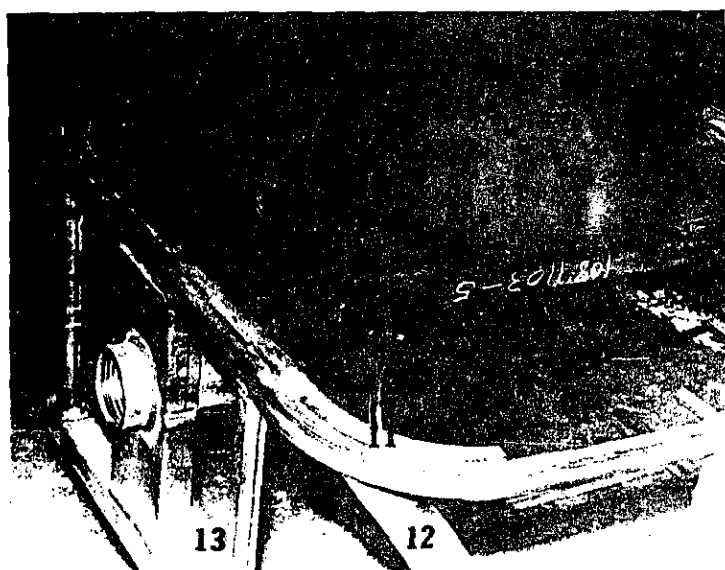
When erecting the SKYDIVER, do not tighten the guy rods between the "A" frames too tightly. All they need to be is good and snug.

Inspect all cars at least every other week as described in Service Bulletin 101.





Clamp all parts before welding





CHANCE
MANUFACTURING CO., INC.

Number: 03-163

Date: 8-8-78

Supersedes:

Number:

Date:

America's Largest Manufacturer of Amusement Rides

Service Information

Effective Serial Numbers: ALL RIDES

Ride: SKYDIVER

Subject: MAINTENANCE INSPECTION

This bulletin is being issued to point out in detail several operating and maintenance practices on the Skydiver that are necessary to maintain the safety of the ride. These items should be checked daily along with the remainder of the FIELD INSPECTION POINTS listed at the end of this bulletin.

Inspection of the ride must be performed by competent, qualified mechanics capable of understanding the function of the parts and their proper installation.

LATCH MECHANISMS

The spring latch is used as the primary latch and the hair pins are used as secondary safety pins on the latch mechanism for the seat hatch. Both the spring latch and hair pin latch must be in good working order before the ride can be operated. In no event should the ride be operated if either one of the latches is not in good working order.

SPRING LATCH

The spring latch must lie flat when the hatch is fully closed and not be forced to curve up by the height of the roller. There must be no more than 1/8" clearance between the spring latch and the roller. (See Figure A) If spring latch does not fit properly contact Chance Manufacturing Co., Inc. for proper repair procedures or replacement parts.

*Supersedes
03-163A*

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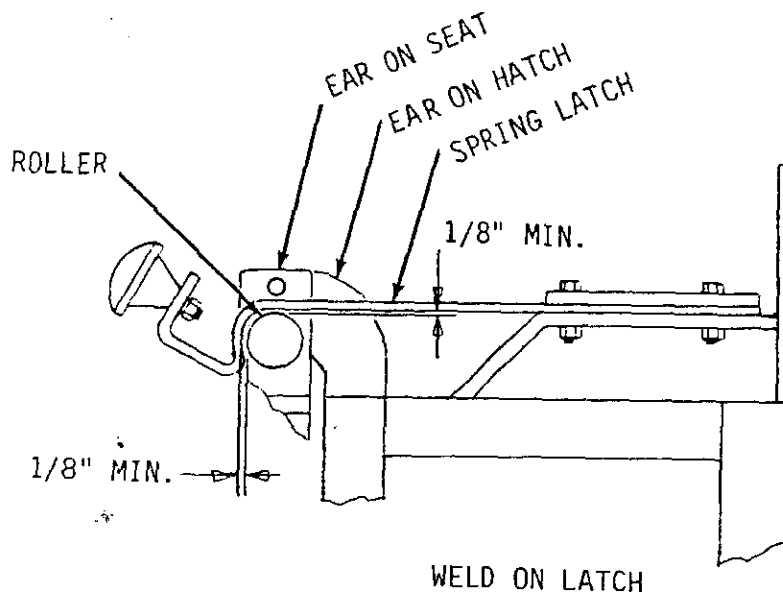
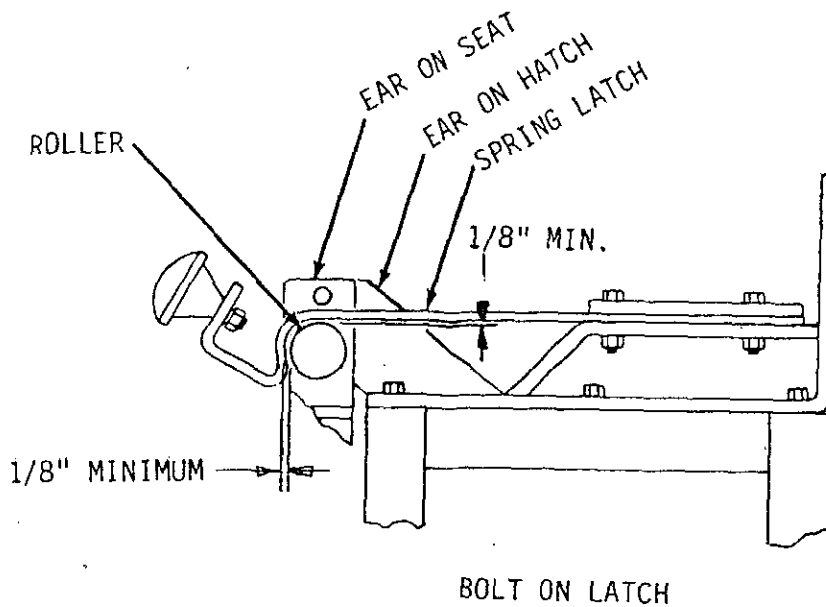


FIGURE A

Do not attempt to straighten or repair the spring latch in any way. Each spring latch must be replaced annually and on or before the expiration date (month and year) etched at the knob end. Replace all spring latches that are not dated.

HAIR PIN

Hair pins must be inserted and removed from the latch by hand only. If hair pin cannot be inserted by hand correct the misalignment condition.

New hair pins have very minute clearance or metal to metal contact at the inner and outer lobes. Hair pins must be replaced when the clearance exceeds $3/16$ " on the inner lobe and $7/16$ " on the outer lobe. (See Figure B).

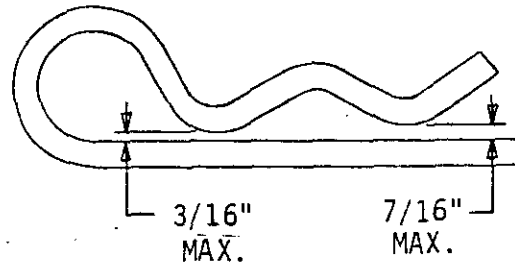


FIGURE B

Do not use a hammer to insert or remove the hair pins. Using a hammer may cause the hairpin to turn to one side and be forced over the ear in a position where the material thickness is greater than the hair pin is designed for. This can cause the hair pin to be sprung beyond its usable dimensions.

LATCH

The holes for the hair pin in the ears must match so that they are aligned when the hatch is fully closed. If the hatch has been sprung or the ears forced out of position they should be realigned.

All four ears must be the same height. Under no circumstances should the outer ears be higher than the inner ears. (See Figure C).

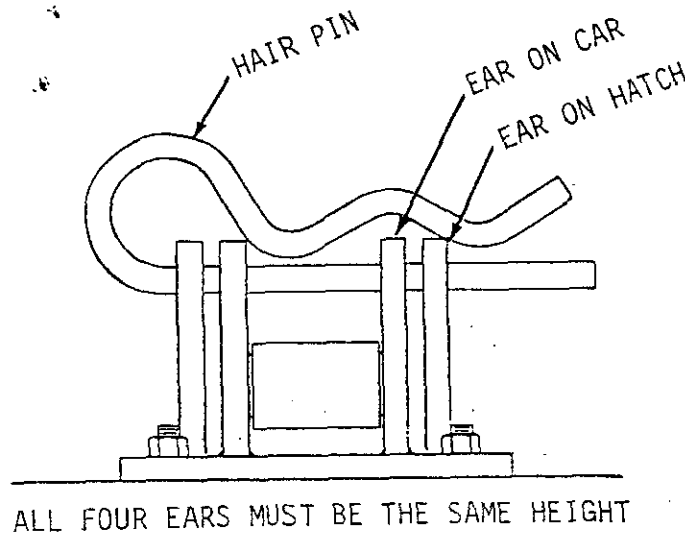


FIGURE C

The amount of material between the top of the pin hole and the top of the ear must fall within the tolerances shown in Figure D.

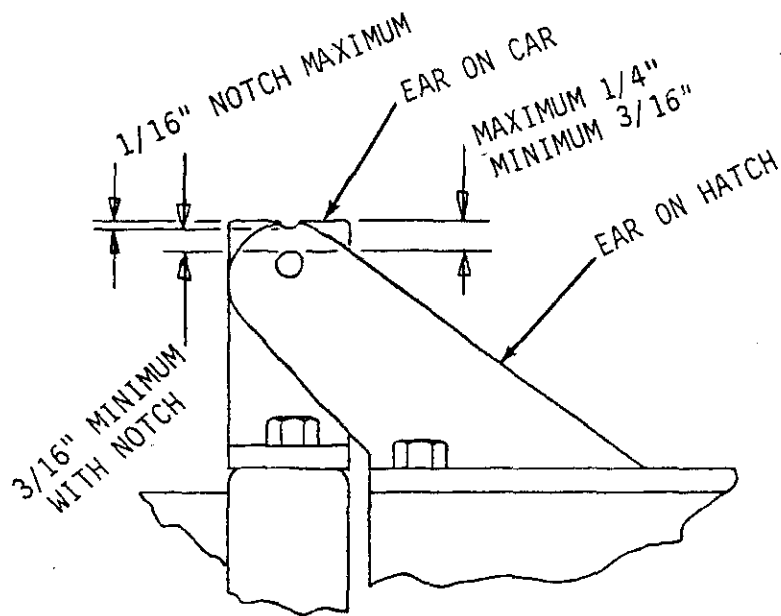


FIGURE D

If the tops of the ears become worn beyond the allowable tolerance they may be built up by welding and then ground down to the allowable tolerance.

All welding must be performed by a welder that is certified under the American Welding Society Structural Welding Code DI. 1-75 or the equivalent.

HATCH

Check to see that hinge bolts are tight and in good working order. Hatch must open and close without binding. Inspect car and hatch to see that there are no restrictions that will keep the hatch from closing properly. Do not fasten hair pin to car or hatch. Chain may fall in opening and restrict hatch from closing properly.

STEERING WHEEL

Steering wheels must be kept operable. If steering wheel continually becomes loose check steering wheel shaft and nut for wear or damage. Check steering column for worn or damaged mounting brackets or bearings. Replace any worn or damaged parts. Loctite may be used on steering wheel acorn nut. Old style spoke type steering wheels must not be used. Replace with new disc type wheel.

STEERING GEAR COVER

Check to see that the cover over the steering gears inside the front of the car is in place.

DRIVE

All four drive motors must be operable at all times. If less than four drive motors are connected to the pump, the amount of torque will be decreased and the hydraulic oil flow will increase to each motor. The loss of torque will make the ride harder to start and the increase in hydraulic oil flow to each motor will cause the ride to run faster.

The ride must never be operated faster than the maximum 8 RPM. A slight increase in speed greatly increases the centrifugal forces on the ride beyond the safety limits.

If you have any questions concerning this bulletin, please contact Chance Manufacturing for assistance.

DAILY INSPECTION

SUMMARY OF INSPECTION POINTS COVERED IN DETAIL

1. Check operation of each spring latch and see that it is not sprung.
2. Check clearance between spring latch and roller.
3. Check hair pin to see that it is not sprung.
4. Check alignment of holes in latch ears with hair pin.
5. Check material thickness on latch ears.
6. Check operation of hatch. Hinge bolts must be tight and hatch must open and close without binding.
7. Check for restrictions that would prevent hatch from closing properly.
8. Check steering wheel shaft and mounting brackets to see that they are not loose.
9. Check steering gear cover to see that it is in place.
10. Check the ride speed. Speed must not be more than 8 RPM.

THE FOLLOWING FIELD INSPECTION POINTS MUST ALSO BE CHECKED DAILY

11. Inspect blocking and leveling.
12. Inspect lock nuts on leveling jacks.
13. Inspect hydraulic valves for leveling jacks. Valves should be open to tank when lock nut is tightened.
14. Inspect for proper grounding.

15. Inspect fence and ramps for proper installation.
16. Inspect alignment of wheel relative to towers.
17. Inspect tower lock up pins.
18. Inspect outriggers and their attachments.
19. Inspect wind braces and knee brace assemblies.
20. Inspect for proper installation of spreader bars.
21. Inspect "A" frame attach pins.
22. Inspect "A" frame guy rod installation and attach points.
23. Inspect condition of fiberglass on cars.
24. Inspect condition of and attach points of car canopy assembly.
25. Inspect car hood guard assembly and attach points.
26. Inspect seat spindle bearings.
27. Inspect jack stands.
28. Inspect ride for excessive vibration.
29. Inspect structure for cracks, bad welds, etc.
30. Inspect electrical circuit for shorts, bad wires, etc.
31. Inspect for hydraulic leaks.
32. Inspect ride's overall appearance for cleanliness and general external upkeep.



CHANCE
MANUFACTURING CO., INC.

Number: 03-163A

Date: 9-19-78

Supersedes: 03-163

Number:

Date:

America's Largest Manufacturer of Amusement Rides

Service Information

Effective Serial Numbers: ALL RIDES

Ride: SKYDIVER

Subject: MAINTENANCE INSPECTION

THIS BULLETIN SUPERCEDES 03-163 WHICH MAY HAVE CONTAINED MISLEADING OR ERRONEOUS INFORMATION. DESTROY ALL COPIES OF 03-163 IMMEDIATELY.

This bulletin is being issued to point out in detail several operating and maintenance practices on the Skydiver that are necessary to maintain the safety of the ride. These items should be checked daily along with the remainder of the FIELD INSPECTION POINTS listed at the end of this bulletin.

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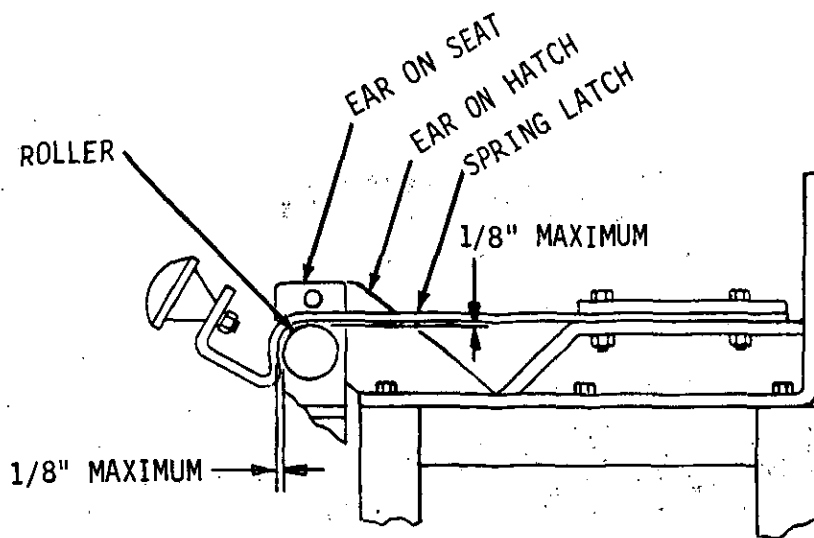
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Area Code (316) 942-7411

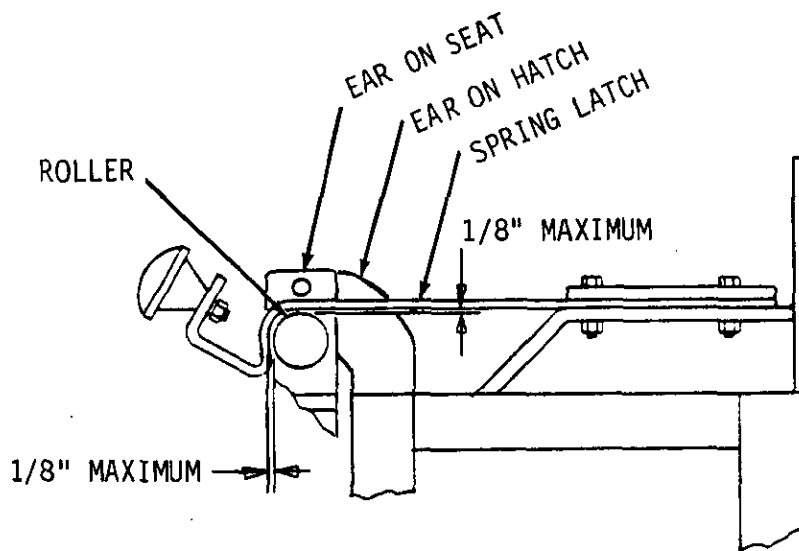
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1103 Ross Ave., Dallas, Texas 75202

Area Code (214) 742-3802



BOLT ON LATCH



WELD ON LATCH

FIGURE A

Do not attempt to straighten or repair the spring latch in any way. Each spring latch must be replaced annually and on or before the expiration date (month and year) etched at the knob end. Replace all spring latches that are not dated.

HAIR PIN

Hair pins must be inserted and removed from the latch by hand only. If hair pin cannot be inserted by hand correct the misalignment condition.

A new hairpin, inserted in a latch having maximum 1/4" edge of hole to edge of ear thickness, (See Figure C), will require the maximum force to insert and remove.

A hairpin inserted in a latch having a worn or notched condition that reduces the edge of hole to edge of ear thickness to a minimum allowable of 3/16" (See Figure C), will require less force to insert.

All hairpins are expendable items and will become sprung after repeated use. Clearance at the inner lobe of the hairpin, Figure B, must always be at least 1/16" less than the edge of hole to edge of ear thickness or be replaced. This ensures a reasonable amount of force (approximately 8 pounds or more) will be required to insert or remove the hairpin. A hairpin that is easily inserted and removed must not be used under any condition.

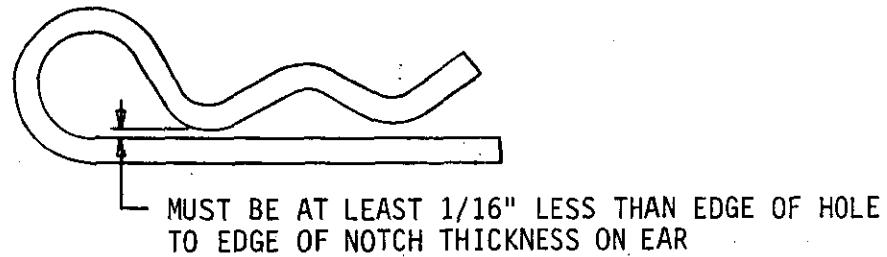


FIGURE B

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LATCH

The amount of material between the top of the pin hole and the top of the ear must fall within the tolerances shown in Figure C. Replacements should be ordered for latches that cannot be maintained or repaired.

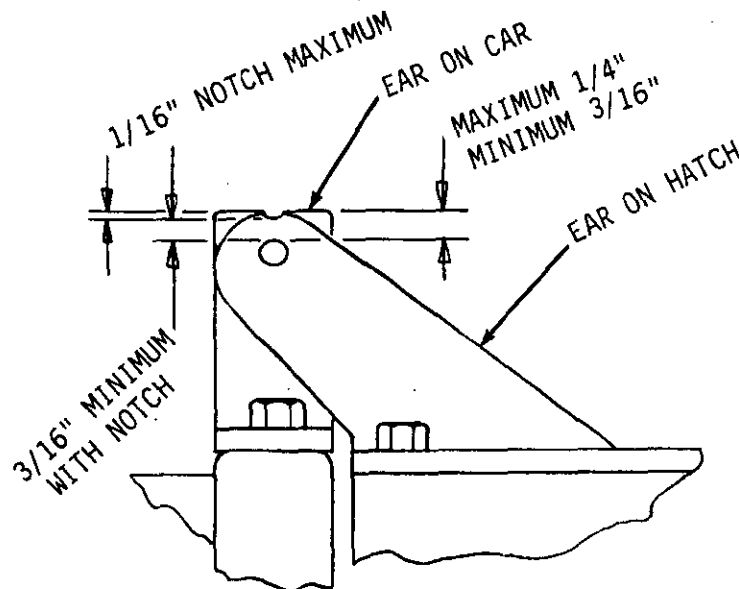


FIGURE C

If the tops of the ears become worn beyond the allowable tolerance they may be built up by welding and then ground down to the allowable tolerance.

All welding must be performed by a welder that is certified under the American Welding Society Structural Welding Code DI. 1-75 or the equivalent.

The holes for the hair pin in the ears must match so that they are aligned when the hatch is fully closed. If the hatch has been sprung or the ears forced out of position they should be realigned.

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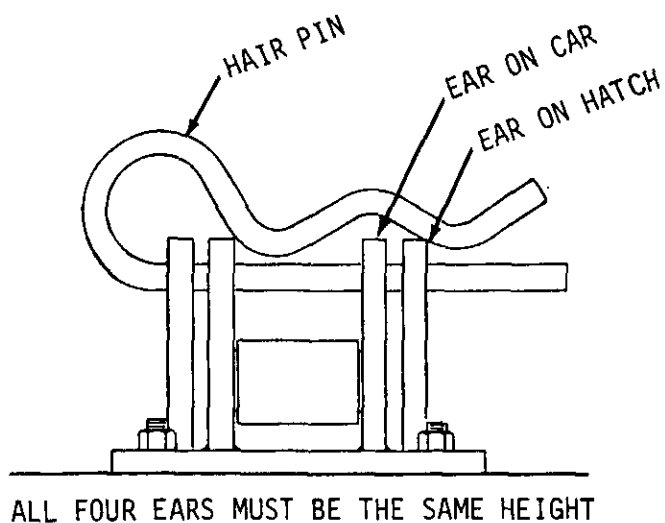


FIGURE D

HATCH

Check to see that hinge bolts are tight and in good working order. Hatch must open and close without binding. Inspect car and hatch to see that there are no restrictions that will keep the hatch from closing properly. Do not fasten hair pin to car or hatch. Chain may fall in opening and restrict hatch from closing properly.

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Steering wheels must be kept operable. If steering wheel continually becomes loose check steering wheel shaft and nut for wear or damage. Check steering column for worn or damaged mounting brackets or bearings. Replace any worn or damaged parts. Loctite may be used on steering wheel acorn nut. Old style spoke type steering wheels must not be used. Replace with new disc type wheel.

STEERING GEAR COVER

Check to see that the cover over the steering gears inside the front of the car is in place.

DRIVE

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7. Check for restrictions that would prevent hatch from closing properly.
8. Check steering wheel shaft and mounting brackets to see that they are not loose.
9. Check steering gear cover to see that it is in place.
10. Check the ride speed. Speed must not be more than 8 RPM.

THE FOLLOWING FIELD INSPECTION POINTS MUST ALSO BE CHECKED DAILY

11. Inspect blocking and leveling.
12. Inspect lock nuts on leveling jacks.
13. Inspect hydraulic valves for leveling jacks. Valves should be open to tank when lock nut is tightened.
14. Inspect for proper grounding.

15. Inspect fence and ramps for proper installation.
16. Inspect alignment of wheel relative to towers.
17. Inspect tower lock up pins.
18. Inspect outriggers and their attachments.
19. Inspect wind braces and knee brace assemblies.
20. Inspect for proper installation of spreader bars.
21. Inspect "A" frame attach pins.
22. Inspect "A" frame guy rod installation and attach points.
23. Inspect condition of fiberglass on cars.
24. Inspect condition of and attach points of car canopy assembly.
25. Inspect car hood guard assembly and attach points.
26. Inspect seat spindle bearings.
27. Inspect jack stands.
28. Inspect ride for excessive vibration.
29. Inspect structure for cracks, bad welds, etc.
30. Inspect electrical circuit for shorts, bad wires, etc.
31. Inspect for hydraulic leaks.
32. Inspect ride's overall appearance for cleanliness and general external upkeep.



CHANCE
MANUFACTURING CO., INC.

Number: B03-0182-00

Date: 3-9-79

Supersedes:

America's Largest Manufacturer of Amusement Rides

Service Bulletin

Effective Serial Numbers: 65-1201 THRU 78-1272

Ride: SKYDIVER

Subject: SEAT HATCH LATCH

If you no longer own this ride, please notify Chance Manufacturing Co. of new owners name and address and serial number of ride.

To help prevent improper maintenance and misuse of the seat hatch latch, Chance Manufacturing is making a new latch available to all Skydiver owners. Owners should order the kits from our parts department and install them on their rides immediately. Chance Manufacturing is offering these kits at bare manufacturing cost.

All work must be performed by competent, qualified mechanics capable of understanding the function of the parts and their proper installation.

Before installing this kit, read the instructions completely and familiarize yourself with the parts listed. Make certain all parts have been received. If any parts are missing, notify Chance Manufacturing Co. immediately. Do not substitute an inferior grade of material or part. Remove and discard all parts replaced by this kit.

The attached Certification of Compliance must be completed and returned to Chance Manufacturing Co. within seven (7) days of receipt of kit.

If you have any questions concerning this installation bulletin, please contact Chance Manufacturing for assistance.

Factory and General Office, 4219 Irving, P.O. Box 12328 Wichita, Kansas 67277

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QUANTITY	PART DESCRIPTION	PART NUMBER
1	COMPLETE KIT	K03-0182-00
1	SERVICE BULLETIN	B03-0182-00
1	1/2" DR. BIT (1/4" SHANK)	
1	LATCH ASSEMBLY	303-39680
2	SPACER	303-70000
1	LATCH PLATE	303-54044
1	HAIR PIN (1/4")	694-51905
1	LATCH BRACE	303-08418
10	GRADE 5 HEX HD BOLTS (1/4-20x1-3/4")	686-07080
2	GRADE 5 HEX HD BOLTS (1/4-20x1)	686-07074
14	LOCK NUTS (1/4-20)	691-47808
2	GRADE 5 HEX HD BOLTS (1/4-20x2-1/4")	686-07086
1	CERTIFICATION OF COMPLIANCE	

ITEMS SHOWN IN BRACKET IS QUANTITY REQUIRED FOR (1) CAR LATCH INSTL.
FOR FULL RIDE REWORK MULTIPLY BRACKETED QUANTITY X 16.

TOOLS YOU WILL NEED FOR THIS INSTALLATION

- 1/4" DRILL MOTOR
- HACKSAW
- 9/32" DRILL BIT
- 7/16 SOCKET OR WRENCH
- 6" C-CLAMP

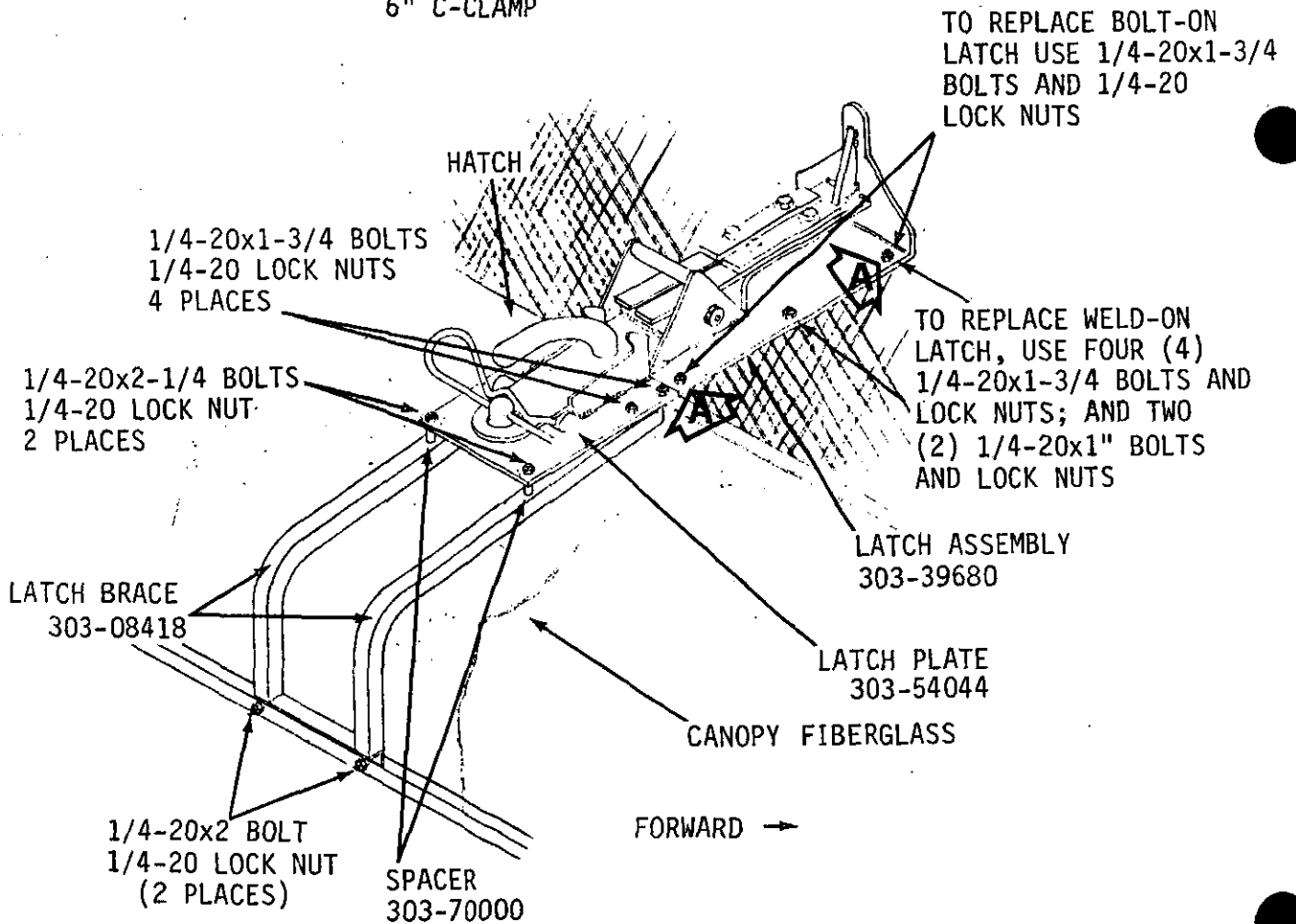


FIGURE A

INSTALLATION INSTRUCTIONS

A. To install latch assembly (303-39680) to hatch.

NOTE: There are two different models of hatch assemblies. Earlier models (Serial Numbers 65-1202 THRU 74-1259) have latch components that are welded to the hatch. Later models (Serial Numbers 65-1201, 75-1260 THRU 78-1272) have latch components that are bolted to hatch. Each type will be covered in this bulletin.

1. Weld on type (65-1202 THRU 74-1259) - Cut old latch off of hatch as shown in Figure B and grind remainder of latch level with top of screening. Position new latch assembly as shown in Figure A and drill four (4) 9/32" mounting holes through hatch frame (Arrow A): Attach latch to hatch frame using four (4) Grade 5, 1/4-20x1-3/4 bolts and 1/4-20 lock nuts. Heads of bolts must be on the inside of the car.

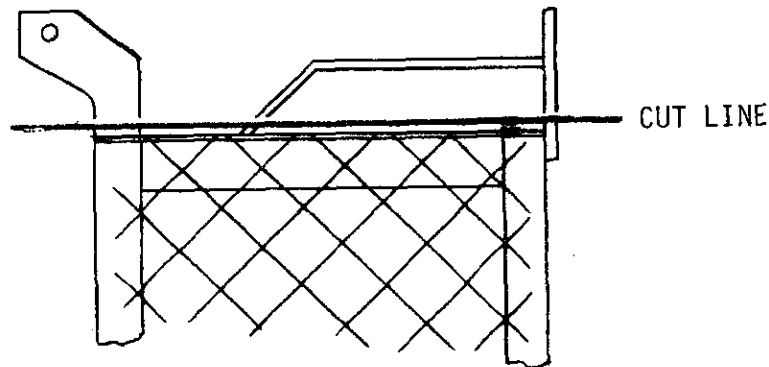


FIGURE B

2. Bolt on type (65-1201, 75-1260 THRU 78-1272) - Remove old latch. Use four (4) Grade 5, 1/4-20x1-3/4 bolts and two (2) Grade 5, 1/4-20x1" bolts and six 1/4-20 locknuts to secure new latch assembly to hatch. Heads of bolts must be inside car.

B. To install latch plate (303-54044) to canopy. (All Units)

1. Remove old latch catch from canopy. Remove approximately 5" of aluminum trim with a hack saw from the canopy to clear new latch plate. (See Figure C).

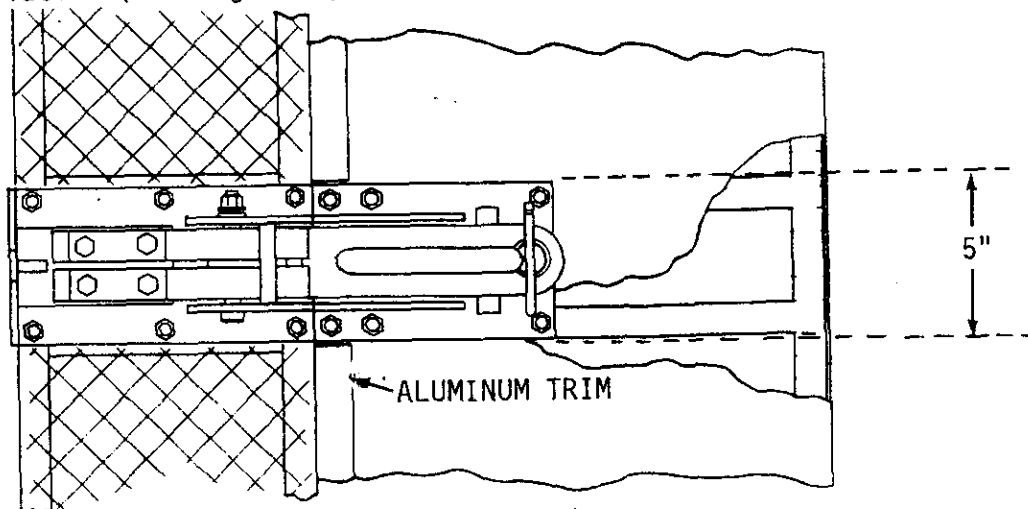


FIGURE C TOP VIEW

- Position latch plate on canopy and align with front half of latch assembly. Set edge of latch assembly flush with edge of canopy. Make sure alignment between the latch plate and latch assembly is as level as possible, allowing latch plate to be no more than 1/8" above or below plate of latch assembly. (See Figure E).

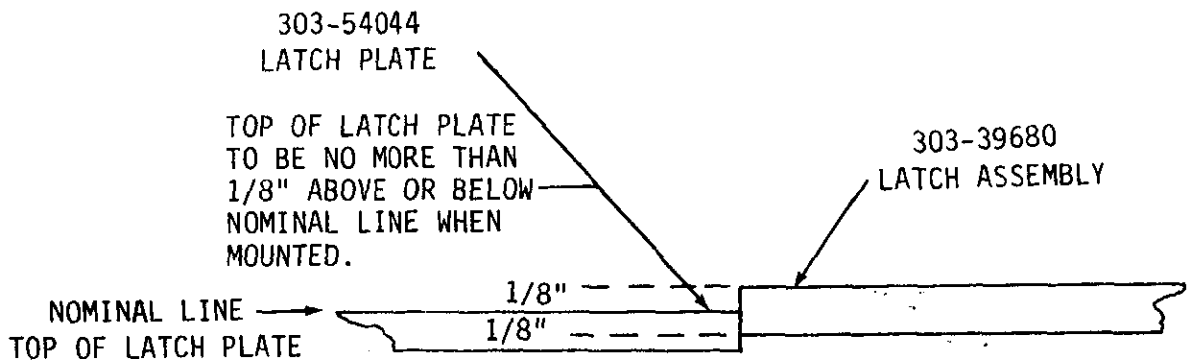
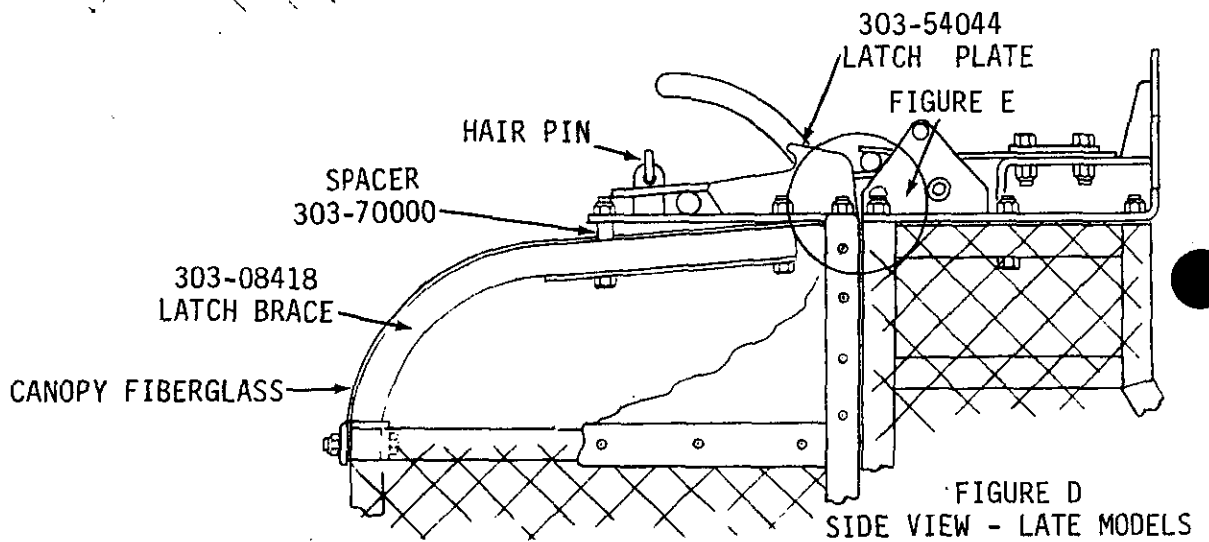
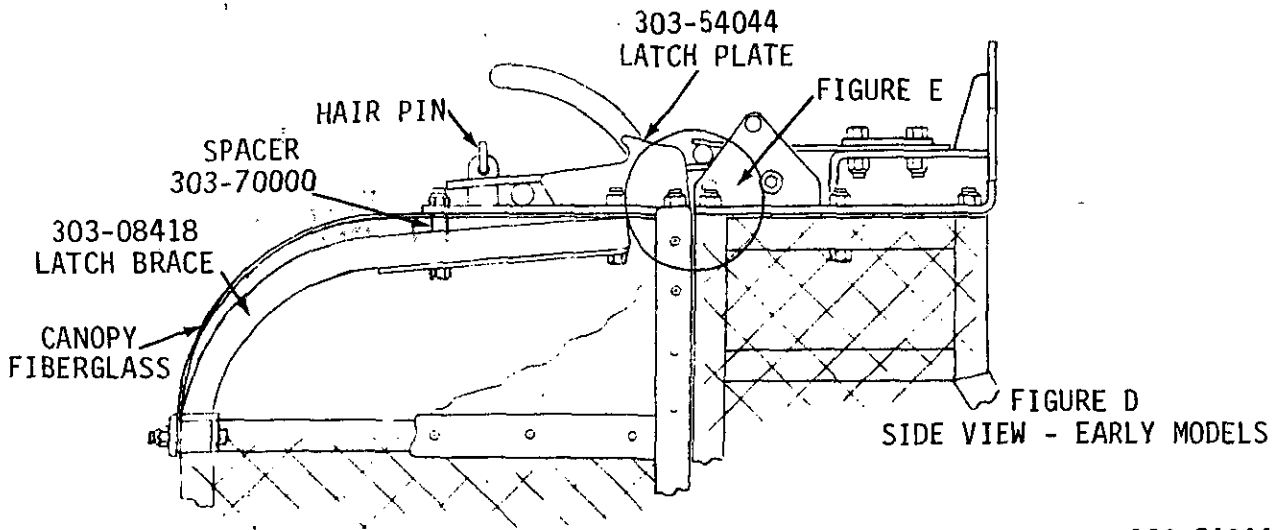


FIGURE E

3. Drill six 9/32" holes in canopy fiberglass to match holes in latch plate. Remove latch plate and using the two (2) rear holes as pilot holes and using a 1/2" drill bit, drill out holes to 1/2" diameter. (Clearance holes for spacers). Secure latch plate to canopy frame with two (2) Grade 5, 1/4-20x1-3/4" bolts and 1/4-20 lock nuts at front of canopy. Heads of bolts must be on inside of car.
4. Use holes drilled in canopy fiberglass to align latch brace on inside of canopy as shown in Figures A and C. Using C-clamp, clamp foot of latch brace to frame tube at rear of canopy. Drill four (4) 9/32" holes in latch brace to match holes in latch plate. Install two (2) spacers between latch brace and latch plate, thru fiberglass. Secure latch brace to latch plate with two (2) Grade 5, 1/4-20x1-3/4" bolts, two (2) Grade 5, 1/4-20x2-1/4" bolts and 1/4-20 lock nuts. Heads of bolts must be on inside of car.
5. Drill two 9/32" holes out through canopy frame tube to match holes in foot of latch brace. Secure latch brace to canopy frame tube with two (2) Grade 5, 1/4-20x1-3/4" bolts and 1/4-20 lock nuts. Heads of bolts must be on inside of car.

CAUTION: TORQUE ALL BOLTS TO APPROXIMATELY 54 INCH POUNDS (LUBRICATED TORQUE) BEING CAREFUL TO NOT OVER TORQUE.

OPERATION OF LATCH

After latch assemblies are completely installed, check and inspect the operation of each latch assembly.

Close hatch engaging first catch (approximately 3" before car is closed). Close hatch further engaging second catch (car completely closed) and latch assembly closes over safety knob and hair pin can be inserted.

HAIR PINS

Hair pins must be inserted and removed from the latch by hand only. If hair pin cannot be inserted by hand correct the misalignment condition.

All hairpins are expendable items and will become sprung after repeated use. Clearance at the outer lobe of the hairpin must always be at least 1/16" less than the edge of hole to edge of safety knob thickness or be replaced. This ensures a reasonable amount of force will be required to insert or remove the hairpin. A hairpin that is easily inserted and removed must not be used under any condition.



MUST BE AT LEAST 1/16" LESS THAN EDGE OF HOLE
TO EDGE OF SAFETY KNOB THICKNESS

Certification of Compliance

CHANCE MANUFACTURING COMPANY, INC.

SERVICE KIT NO. _____

We hereby certify the above-mentioned service kit has been installed on the

_____ Serial No (s) _____

_____, in accordance

with the instructions and specifications supplied by Chance Manufacturing Company, Inc.

Date Kit Received _____

Date Kit Installed _____

Name and Address of Person Making Installation

Attested:

Owner _____

Maintenance Supervisor _____

Address _____

Address _____

City _____ State _____

City _____ State _____

By: _____

Date: _____

Date: _____

This certification must be completed and returned to Chance Manufacturing Company, Inc., within seven (7) days from receipt of the kit.



Number: B03-0185-00

Date: 3-20-79

Supersedes:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Numbers: 65-1201 THRU 73-1707

Ride: SKYDIVER & ASTRO WHEEL Subject: MOTOR MOUNT INSTALLATION

If you no longer own this ride, please notify Chance Manufacturing Co. of new owners name and address and serial number of ride.

Chance Manufacturing has been made aware of the fact that drive motors used on some early models of the SKYDIVER have become obsolete or that parts for those motors are no longer available. Chance Manufacturing is making available a replacement motor conversion kit. All four motors must be changed at the time of this conversion. Kits should be ordered from our parts department and installed on rides as required.

All work must be performed by competent, qualified mechanics capable of understanding the function of the parts and their proper installation.

Before installing this kit, read the instructions completely and familiarize yourself with the parts listed. Make certain all parts have been received. If any parts are missing, notify Chance Mfg. immediately. Do not substitute an inferior grade of material or part.

If you have any questions concerning this installation bulletin, please contact Chance Manufacturing for assistance.

PARTS LIST

<u>QUANTITY</u>	<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
1	COMPLETE KIT	K03-0185-00
1	SERVICE BULLETIN	B03-0185-00
4	(PRE ASSEMBLED) MOTOR ASSEMBLIES	303-44901
	CONSISTING OF:	
	(1) 25M42A-11-C-20 MOTOR	203-44610
	(2) W43-20-20 FLANGE FITTING	290-27600
	(2) 1½" TO 1" NPT REDUCER	
	BUSHING	688-27208
	(8) 7/16-14x1¼" SOC HD	
	CAPSCREW	686-10957
	(8) 7/16 HI COLLAR LOCK	
	WASHER	686-85517

Factory and Sales Office: 4219 Irving • P.O. Box 12328 • Wichita, Kansas 67277 • (316) 942-7411

(PRE ASSEMBLED) MOTOR MOUNT ASSEMBLY 303-45180

4

CONSISTING OF:

	(1) #41286 BEARING CUP	290-05057
	(1) #50127 SEAL	290-64524
	(1) MOTOR MOUNT	303-53750
4	1/4x1/4x1-1/8 LG STD KEYSTOCK	490-90520
8	1/2-13x1 1/2 LG HEX HD CAPSCREWS	686-08278
	1/2" LOCK WASHERS	696-85378
24	3/8-16x1 1/2 LG HEX HD CAPSCREWS	686-07668
	3/8" LOCK WASHERS	696-85374
4	#41126 BEARING CONE	290-05078
16	CSN55-2, -1 GASKET	290-29909
4	#200 COUPLINGS	203-20228
1	#923446 CARTRIDGE KIT	203-38856
1	M-2300-S Vickers Service Manual	
1	M-2304-S Vickers Parts Manual	
1	M-2740-S Vickers Service Manual	
1	M-2741-S Vickers Parts Manual	
1	Cone Drive Lubrication Manual	
1	Cone Drive Assembly Manual	
8	CSN55-2, -2 GASKET	290-29910
8	CSN55-2, -3 GASKET	290-29911

TO CONVERT TO NEW DRIVE MOTORS, MAKE THE FOLLOWING CHANGES:

1. Pump Change

Replace the cover end pump cartridge of existing 3520V pump (located on end of electric motor with #923446 cartridge kit, following instructions given in Vickers Service Manual #M-2300-S. Restamp pump to 3520V35A8 (was previously 3520V35A11). (SEE FIGURE A)

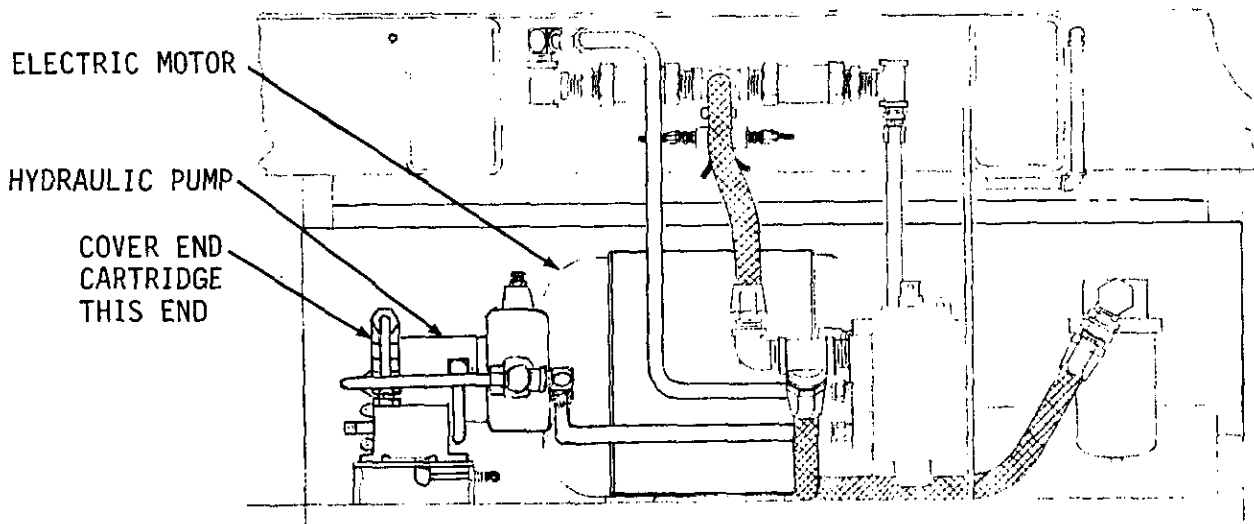


FIGURE A

2. Remove existing hydraulic motor, motor mount, couplings, bearing and gaskets from input side of drive gearbox. (SEE FIGURE B)
3. Install new bearing #41126 on input shaft and shim as required between motor mount and gearbox with CSN55-2, -1, -2 and -3 gaskets to adjust input shaft bearings. Use shim thickness of .030 for initial setting. Refer to Cone Drive Assembly Manual for proper adjustment.

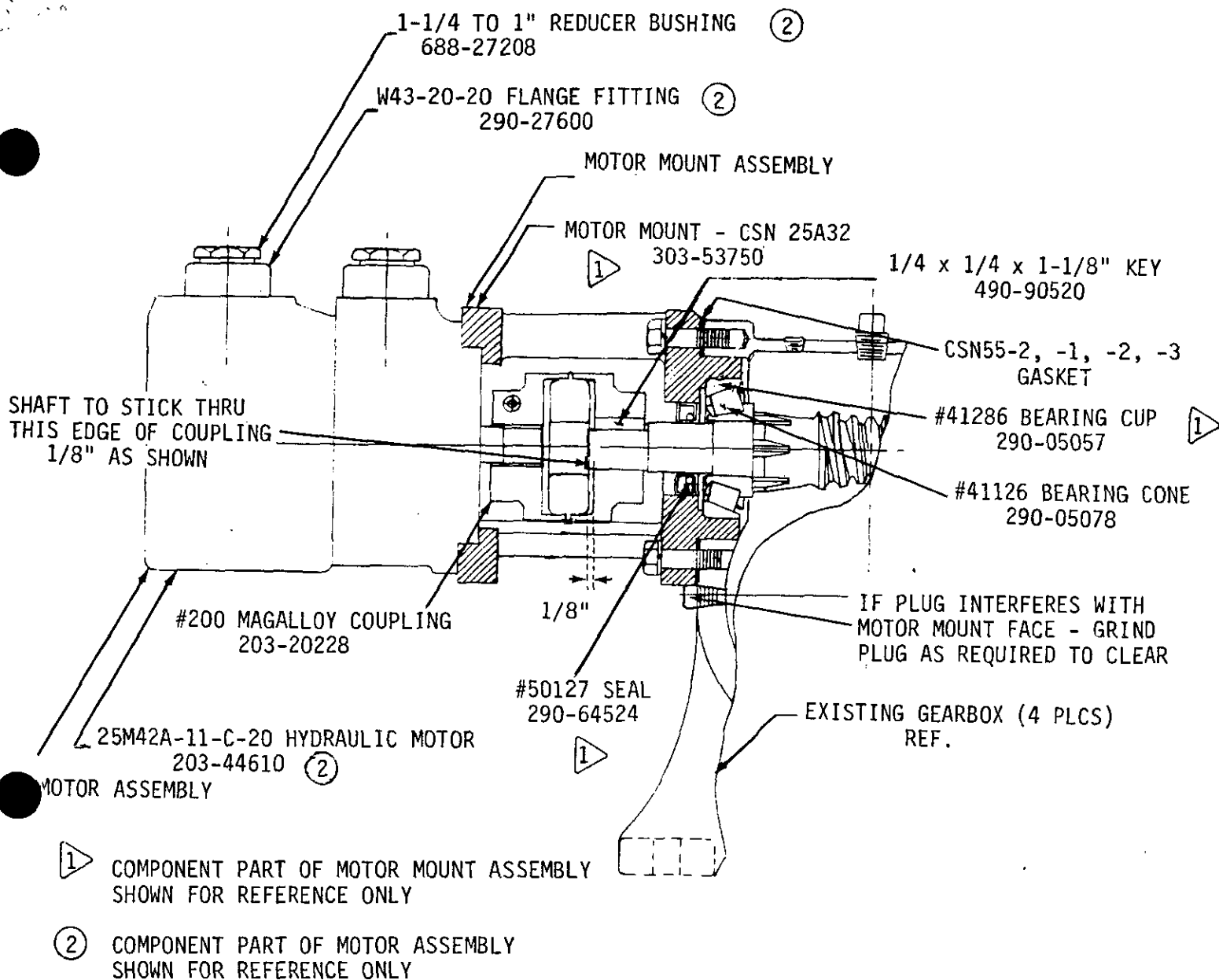


FIGURE B

NOTE: Index motor mount assembly as required to locate hydraulic motor ports in proper alignment when hydraulic motor is installed.

4. Install straight bore section of #200 Magalloy coupling onto input shaft until end of shaft sticks thru coupling inside face by 1/8". Install 1/4x1/4x1-1/8" long key and lock in place with setscrew. Slip rubber insert into place in coupling.
5. Install splined section of coupling on #25M motor shaft. Mount motor on end of mount assembly rotating properly to match existing hydraulic lines. Slip hydraulic motor half of coupling forward rotating as required to slip tangs into rubber insert until both halves are nested together. Tighten socket head capscrew, provided with coupling, on motor half of coupling on motor shaft.

NOTE: All four drive units must be altered at this time.

6. Before use, replace oil in gearbox with clean oil. See Cone Drive Lubrication Manual for correct oil type. (Recommended Gear Oil MIL-L-205B - SAE 90-140).
7. Please return old hydraulic motors to Chance Manufacturing for a credit adjustment. Credit will be issued only if motors can be rebuilt.



Number: 803-0188-00

Date: 3-29-79

Supersedes:

America's Largest Manufacturer of Amusement Rides

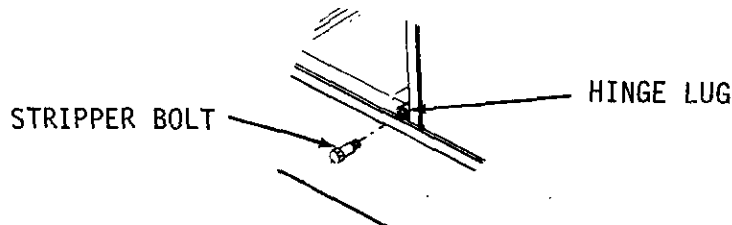
SERVICE BULLETIN

Effective Serial Numbers: ALL RIDES

Ride: SKYDIVER Subject: HATCH SAFETY CATCH

If you no longer own this ride, please advise Chance Manufacturing of the new owners name and address.

Chance Manufacturing is requiring all Skydiver owners to inspect each hatch hinge point on their ride. If any cracked hatch hinge lugs or excessively worn stripper bolts are found, the hinge must be replaced.



Chance Manufacturing has available a new bolt on hatch hinge which has a safety catch as an integral part. You must order either right or left hand hinges (looking from rear of car) as required.

If no excessively worn or cracked hinges are found, Chance Manufacturing is requiring owners to install a hatch safety catch. This will prevent the hatch from coming loose if the hatch hinge should break.

All work must be performed by competent, qualified mechanics capable of understanding the function of the parts and their proper installation.

Before installing this kit, read the instructions completely and familiarize yourself with the parts listed. Make certain all parts have been received. If any parts are missing, notify Chance Manufacturing Co. immediately. Do not substitute an inferior grade of material or part. Remove and discard all parts replaced by this kit.

The attached Certification of Compliance must be completed and returned to Chance Manufacturing Co., Inc. within seven (7) days of receipt of this bulletin.

If you have any questions concerning this installation bulletin, please contact Chance Manufacturing for assistance.

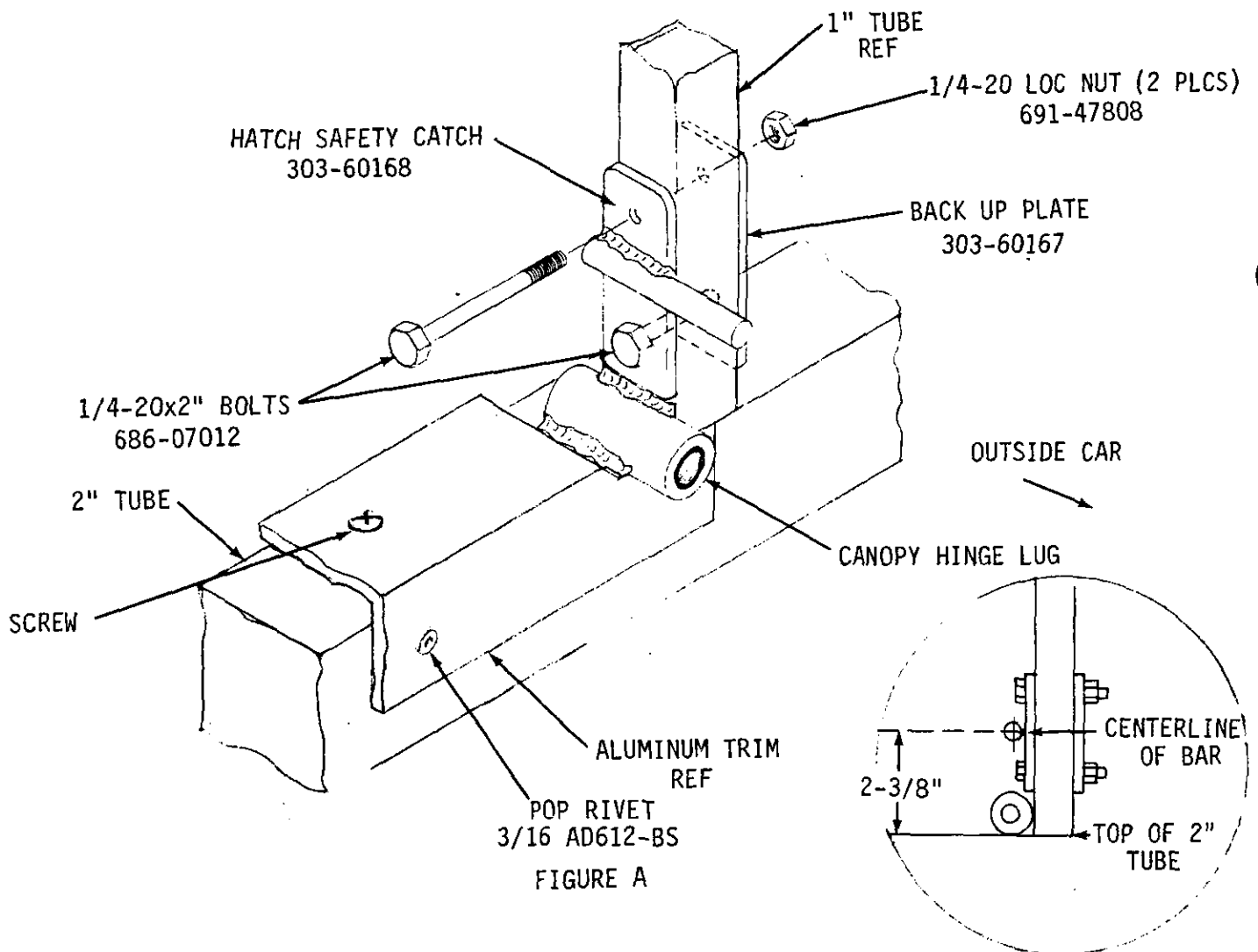
Factory and Sales Office: 4219 Irving • P.O. Box 12328 • Wichita, Kansas 67277 • (316) 942-7411

PARTS LIST

QTY.	PART DESCRIPTION	PART NUMBER
1	COMPLETE KIT	K03-0188-01
1	SERVICE BULLETIN	B03-0188-00
2	HATCH SAFETY CATCH	303-60168
2	1" BACK-UP PLATES	303-60167
4	1/4-20x2" HEX HEAD BOLTS	686-07012
4	1/4-20 LOCK NUTS	691-47808
1	CERTIFICATION OF COMPLIANCE	

INSTALLATION INSTRUCTIONS

1. Clamp hatch safety catch on 1" tube above hatch hinge with bottom of safety catch resting against the weld of the hatch hinge point and the bar pointing to the outside of the car. (See FIGURE A)



2. Using safety catch as a guide and a 9/32" drill bit, drill two (2) holes through the 1" tube. Unclamp safety catch.
3. Install safety catch to tube, and back-up plate behind tube using two (2) 1/4-20x2" bolts and 1/4-20 loc nuts. Tighten nuts using 7/16" wrench.

PARTS LIST

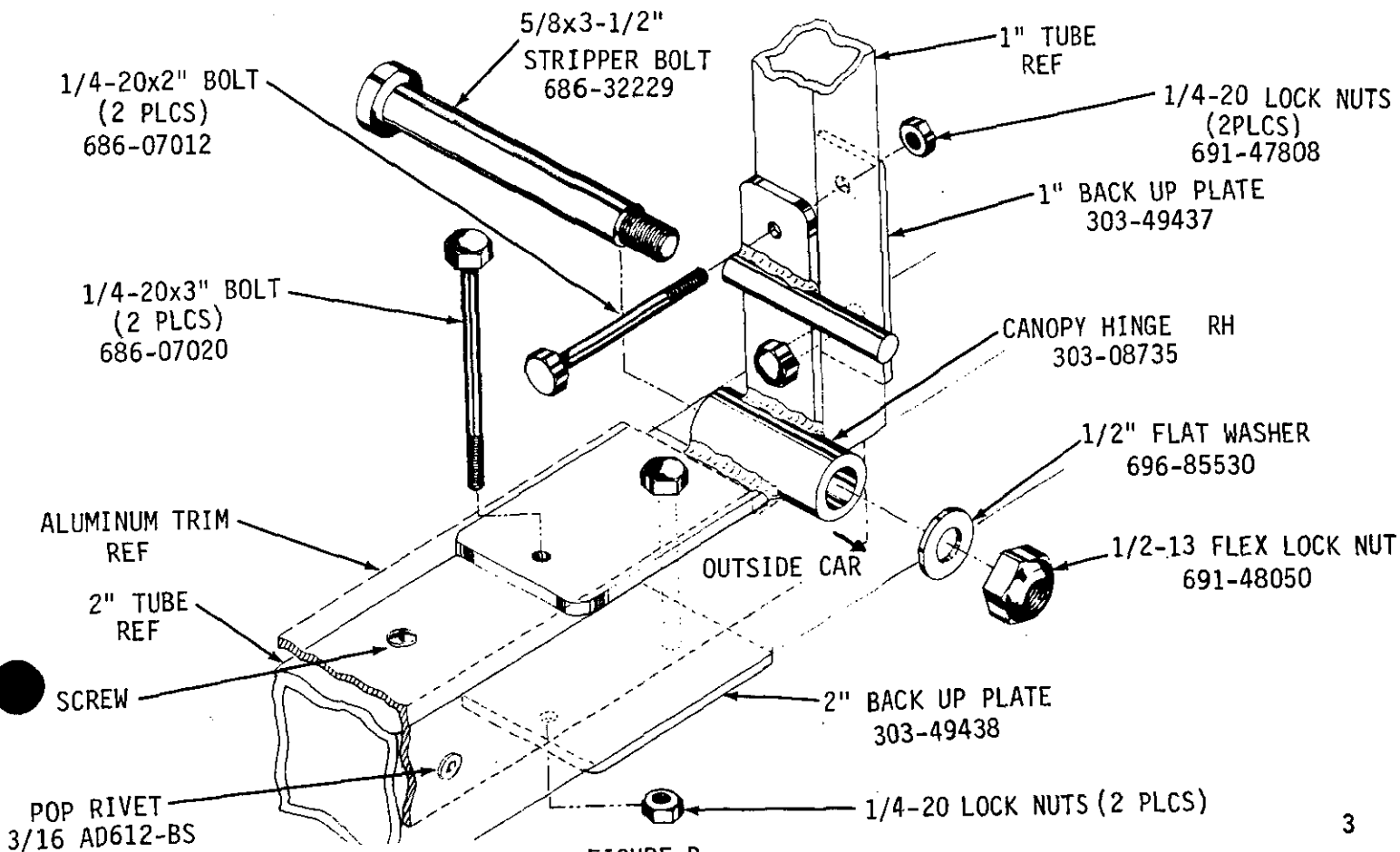
QTY.	PART DESCRIPTION	PART NUMBER
1	CANOPY HINGE (LH)	303-08736
1	CANOPY HINGE (RH)	303-08735
1	2" BACK UP PLATE	303-49438
1	1" BACK UP PLATE	303-49437
2	1/4-20x2" HEX HEAD BOLTS	686-07012
2	1/4-20x3" HEX HEAD BOLTS	686-07020
4	1/4-20 LOCK NUTS	691-47808
1	5/8x3-1/2" STRIPPER BOLT	686-32229
1	1/2" FLAT WASHER	696-85530
1	1/2-13 FLEX LOCK NUT	691-48050

INSTALLATION INSTRUCTIONS

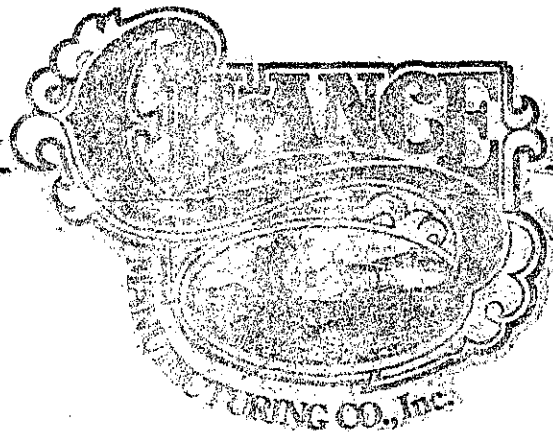
1. Remove canopy.
2. Remove screws and drill out pop rivets (using 3/16" or #11 drill bit) holding aluminum trim. Remove trim.
3. Use hack saw to remove damaged canopy hinge and grind remainder flush with steel tube.

CAUTION: DO NOT USE CUTTING TORCH TO REMOVE HINGE AS FIBERGLASS AND TUBING COULD BE DAMAGED BY THE HEAT.

4. Install new hinge to canopy using 5/8x3-1/2" Stripper bolt with flat washer and flex loc nut to the outside of the canopy. (Lubricate stripper bolt, but do not tighten at this time.) (See FIGURE B)



5. With someone inside car, set canopy in place and clamp hinge to car frame (2" plate) with canopy in closed and locked position.
6. Open canopy and using 9/32" drill bit, drill two (2) holes in 1" tube using safety catch as a guide. Install back up plate behind tube, secure safety catch and back up plate to tube using 1/4-20x2" bolts and 1/4-20 loc nuts. Tighten nuts using 7/16" wrench.
7. Remove clamp. Clamp aluminum trim in place. A small amount of the aluminum trim may have to be removed to facilitate installation.
8. Using 2" back up plate as a guide and a 9/32" drill bit, drill two (2) holes through aluminum trim and 2" steel tube.
9. Install 2" back up plate underneath tube and secure safety catch and back up plate to tube using two (2) 1/4-20x3" bolts and 1/4-20 loc nuts. Tighten nuts with 7/16" wrench.
10. Re-drill screw holes to align using a 9/32" drill bit and re-install screw to hold down aluminum trim.
11. Re-drill pop rivet holes using #11 drill bit and install pop rivets (3/16 AD612-BS).
12. Re-check tightness on all bolts.
13. Tighten stripper bolt using 5/16" hex wrench and 3/4" wrench.



May 30, 1979

Dear SKYDIVER Owner:

Enclosed is our Service Bulletin #B02-0182-00 pertaining to a newly designed Seat Hatch Latch for your SKYDIVER ride. This latch has been designed to replace the present spring latch on the seat hatch and can be easily installed in the field.

It is imperative that you order and install this kit on your ride immediately. The Consumer Product Safety Commission has been notified of this voluntary action and we feel that voluntary compliance on the part of all SKYDIVER owners is in the best interest of all parties involved.

In order to help offset the cost to you, Chance Manufacturing Company, Inc., is offering the kits at our bare manufacturing cost of \$1,256.00 per ride, less a 50% discount to those owners who voluntarily comply by ordering and installing the kits within 30 days. All orders will be shipped freight collect with Net 30 day payment terms.

Sincerely,

CHANCE MANUFACTURING COMPANY, INC.

Richard G. Chance
President

RGC:ab

Enclosure

Box 12328 • Wichita, Kansas 67277 • (316) 942-7411
Sales Office: 1103 Ross Avenue • Dallas, Texas 75202 • (214) 742-3802 • Cable - Duce Dallas - Telex 73-0300

America's Largest Manufacturer of Amusement Rides



Number: B03-0202-00

Date: 7-24-80

CHANCE
MANUFACTURING CO., INC.

America's Largest Manufacturer of Amusement Rides

Service Information

Effective Serial Numbers: 65-1201 THRU 73-1256

Ride: SKYDIVER

Subject: BRAKE KIT

This is to inform Skydiver owners that a brake replacement kit is available to change the existing air over hydraulic brakes to straight air brakes.

THIS IS NOT A MANDATORY CHANGE. The kit (#K03-0202-00) was developed due to inaccessability of parts for air over hydraulic systems.

If this kit is ordered, all brake units on the Skydiver must be changed, as air over hydraulic and straight air systems do not operate using the same system components.

If you have any questions concerning this brake kit, contact Chance Manufacturing Co., Inc. for assistance.

Factory and General Office, 4219 Irving, P.O. Box 12328 Wichita, Kansas 67277

Area Code (316) 942-7411

Sales Office:

1103 Ross Ave., Dallas, Texas 75202

Area Code (214) 742-3802

PARTS LIST

QUANTITY	DESCRIPTION	PART NUMBER
4	MOUNTING PLATES	303-55055
4	BRAKE HUBS	303-35311
1	AIR LINE MANIFOLD ASSEMBLY	303-43251
4	BRAKE ELEMENT (#8CB250)	290-24649
32	5/16-18 x 3/4" CAPSCREWS	686-07492
32	5/16 LOCKWASHERS	696-85372
4	1/4-18 NPT PIPE PLUG	688-27808
4	1/4 TO 1/8 NPT REDUCER BUSHING	688-27000
4	90° SWIVEL ADAPTER	685-00680
1	DRAWING # K03-0202-00	SHEET 1



July 28, 1981

Gilamco, Inc.
d/b/a Wonderland Pier
ATTN: Mr. Roy Gillian
6th & Boardwalk
Ocean City, NJ 08226

Dear Roy:

I have researched with our engineering department the flat spring situation on your SKYDIVER which we discussed by phone conversation today.

Our Service Bulletin #B03-0182 dated March 9, 1979, does indicate that all springs are to be dated, however, it does not indicate they are to be replaced after any given time period. This bulletin was approved by the Consumer Products Safety Commission as written. Our argument with the commission was that two springs were provided, either one capable of providing a safe operation. Certainly it is highly remote that both springs would fail at the same time.

It is therefore our recommendation that the springs need to be replaced only on a failure of same. We do urge the operators to inspect the springs regularly and, of course, replace same if any defects are noted.

I hope this will clarify your situation.

Very truly yours,

CHANCE MANUFACTURING COMPANY, INC.

R. Harold Chance,
Chairman of the Board

RHC:ab



Number:

B03-0252-00

Date:

June 20, 1984

Supersedes:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Numbers:

Ride: All Units

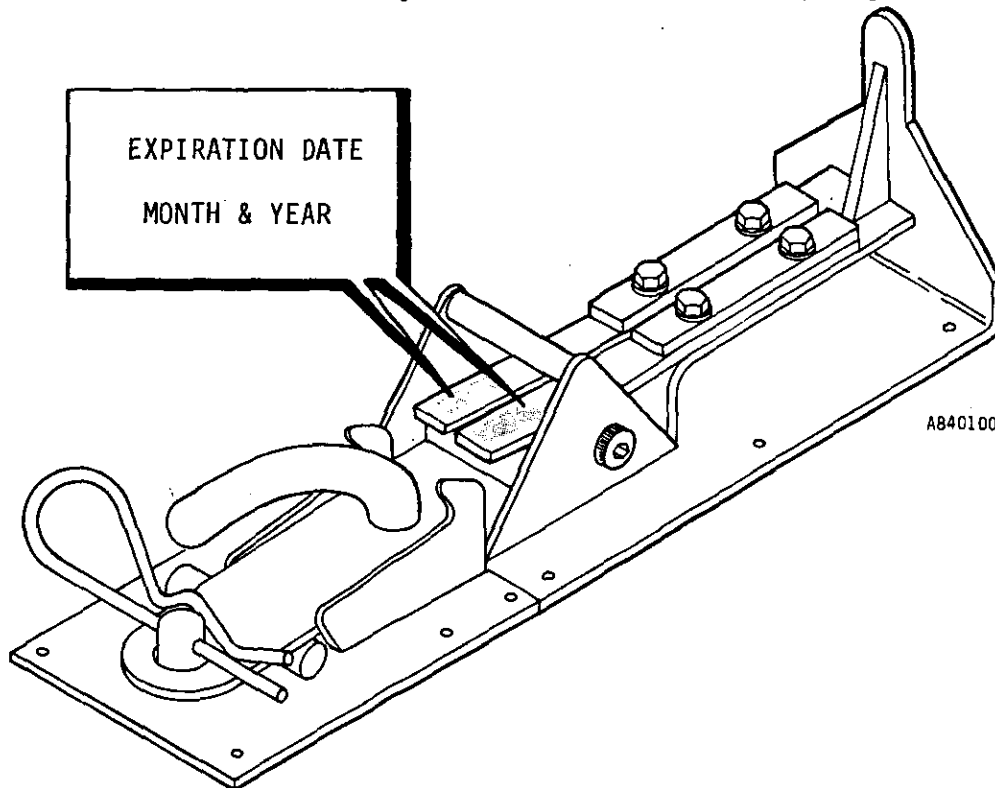
Subject:

SKY DIVER

Replacement of Leaf Springs in
Seat Hatch Latch

CHANCE MANUFACTURING CO., INC. wishes to emphasize the importance of yearly replacement of the leaf springs on all seat hatch latches.

An expiration date is electrically etched into each leaf spring in the location shown below.



The expiration date is one year from the date the leaf spring is shipped from CHANCE MANUFACTURING CO., INC. ALL LEAF SPRINGS MUST BE REPLACED ON OR BEFORE THE EXPIRATION DATE. DO NOT OPERATE THE RIDE UNTIL ALL LEAF SPRINGS HAVE BEEN REPLACED. Destroy the old leaf springs immediately after removal.

(over)

Factory and Sales Office: 4219 Irving • P.O. Box 12328 • Wichita, Kansas 67277 • (316) 942-7411

IMPORTANT: If the expiration date has been altered, painted over, or is illegible, the leaf spring must be replaced.

Order new leaf springs each year as follows:

<u>Quantity Reqd. Per Ride</u>	<u>D.P. Number</u>	<u>Description</u>
32 (2 per seat)	303-72053	Leaf Spring (1081179)

RECEIVED
TRENTON, N.J. POLICE DEPT.
JUL 23 2 11 AM '84
TRENTON, N.J. POLICE DEPT.



Number: B108R1021-0

Date: June 7, 1988

SERVICE BULLETIN

Effective Serial Number: All Units

Ride: SKY DIVER

Subject: Trailer Blocking and
Tie-Down Instructions

As a safety precaution, CHANCE RIDES,, INC. requires that the owners of all SKY DIVER amusement rides perform the modification described in this bulletin. Additionally, their employees must be instructed on the proper blocking and tie-down procedures contained in this bulletin.

The modification consists of welding links to the ride towers, to be used as anchors for tie-down cables if required by wind conditions. After the modification is performed, always follow the recommended blocking and tie-down procedures.

Order kit number K03-0321-00, which includes parts to modify one ride. Install the parts using the instructions provided on the following pages of this bulletin. Fill out the attached Certification Of Compliance for the modification within 15 days of receipt of the kit.

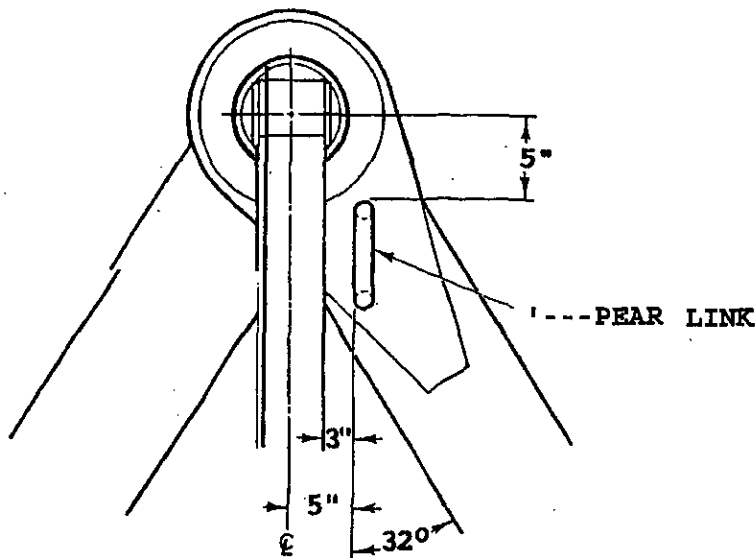
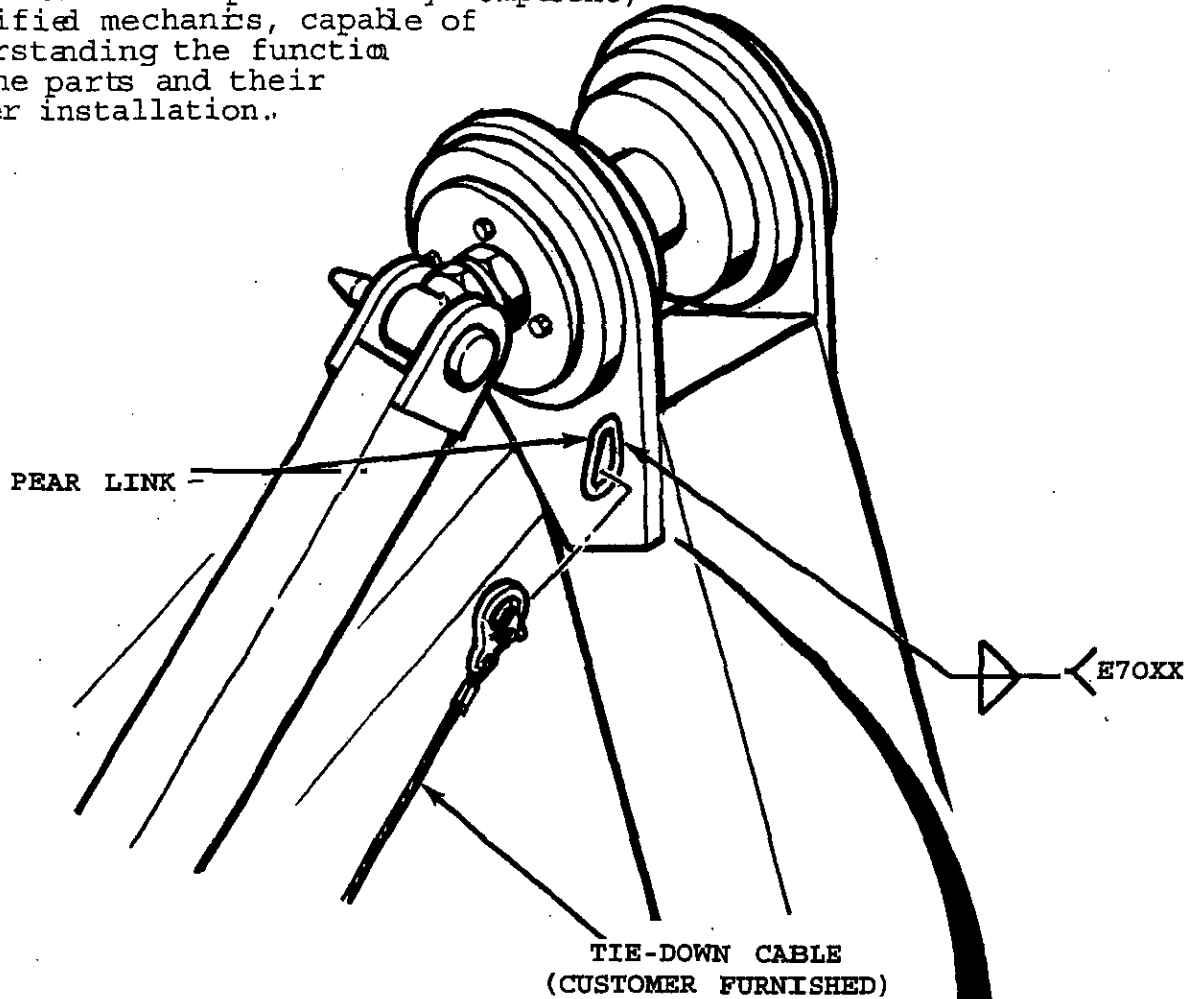
PARTS LIST

Kit No. K03-0321-00 Tie-Down Kit

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
2	290-4164600	Pear Link (3/4")

INSTALLATION INSTRUCTIONS

Locate and weld the pear links on each tower leg as shown in the following illustration. All work must be performed by competent, qualified mechanics, capable of understanding the function of the parts and their proper installation.

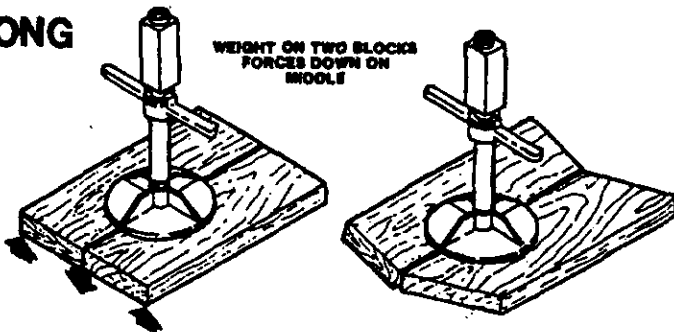


BLOCKING PROCEDURE

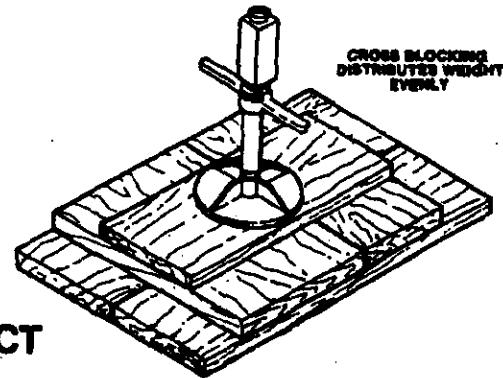
Always perform the following procedure before operating the ride.

1. Inspect the blocking under each of the four trailer leveling jacks, the four screw jacks and the two outrigger jacks. Good, solid blocking, preferably wooden 3 x 12's, must be placed under each jack point. As blocks are stacked, criss-cross each layer, ending the stack with a single block as shown in the following illustrations.

WRONG



**CROSS BLOCKING
DISTRIBUTES WEIGHT
EVENLY**



CORRECT

2. Make sure the lock rings on the leveling jacks are tight up against the bottom of the jack. All needle valves and the hand pump valve must be OPEN to relieve hydraulic pressure in the leveling jacks. This is important, because hydraulic oil in the jacks can expand when exposed to heat, such as direct sunlight, causing the jack to extend.

3. The outrigger jacks must be extended down against the blocking until snug. DO NOT OVER-TIGHTEN THE OUTRIGGER JACKS TO AVOID A PRE-LOADING CONDITION IN THE OUTRIGGERS.

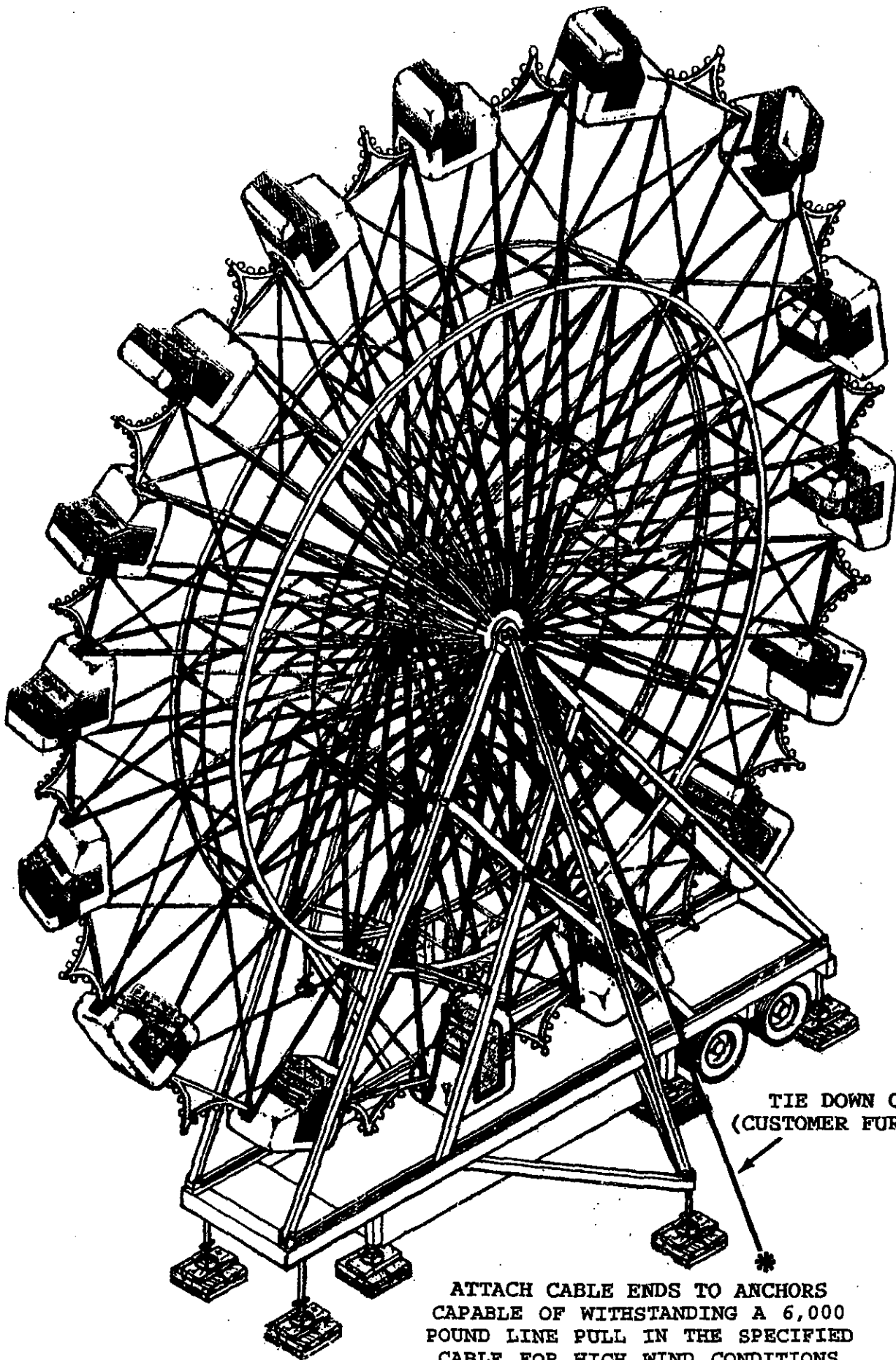
TIE-DOWN PROCEDURE

WARNING: DUE TO UNPREDICTABLE CONDITIONS GENERATED BY HIGH WINDS, SUCH AS MICRO-BURSTS, THE MANUFACTURER CANNOT GUARANTEE THE STABILITY OF THE RIDE IN HIGH WINDS. ALWAYS OBSERVE THE FOLLOWING PRECAUTIONS TO HELP PREVENT DAMAGE TO EQUIPMENT, AND INJURIES TO PASSENGERS AND/OR BYSTANDERS:

- NEVER OPERATE THE RIDE WITH PASSENGERS IN WINDS EXCEEDING 35 MPH.
- IT IS RECOMMENDED THAT THE RIDE BE TIED DOWN AS DESCRIBED IN THIS BULLETIN IF WINDS OVER 50 MPH ARE ANTICIPATED.
- TIE-DOWNS ARE REQUIRED TO ASSIST IN STABILIZING THE RIDE DURING HIGH WINDS.

When high wind conditions are anticipated, use the following procedure to tie-down the ride. Use 1/2" Extra Improved Plow Steel Cable.

1. Attach cables to the pear links on the tower legs. Attach the other end of each cable to anchors capable of withstanding a 6,000 pound line pull in the specified cable. (See illustration on next page).
2. Tighten the cables until snug.



TIE DOWN CABLE
(CUSTOMER FURNISHED)

ATTACH CABLE ENDS TO ANCHORS
CAPABLE OF WITHSTANDING A 6,000
POUND LINE PULL IN THE SPECIFIED
CABLE FOR HIGH WIND CONDITIONS



Number: B108R1032-0

Date: March 22, 1989

Supersedes:

SERVICE BULLETIN

Effective Serial Numbers: All Units

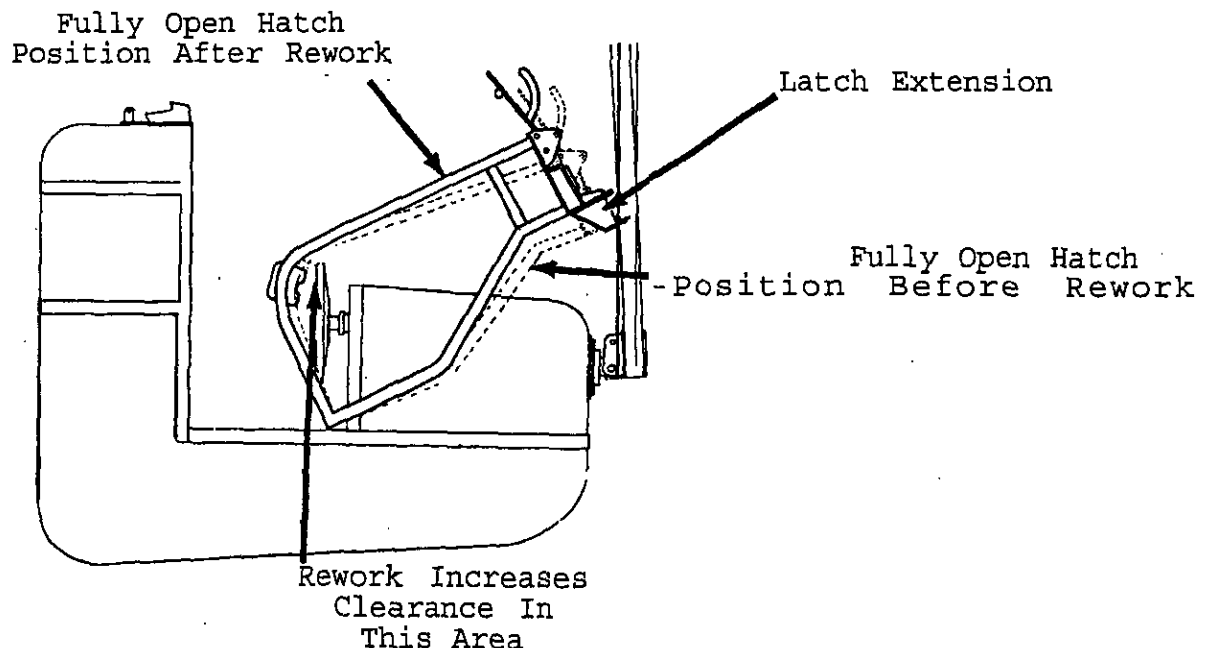
Ride: SKY DIVER

Subject: Latch Rework

The latch for the SKYDIVER vehicle hatch serves two purposes:

- When the hatch is closed, the latch securely holds it closed for safe operation.
- When the hatch is fully opened for loading, a tang on the latch engages in a slot on the A-frame, preventing rotation of the vehicle. This limits the travel of the hatch, thereby maintaining clearance between the lap bar and the control wheel.

A modification kit has been developed to increase the clearance between the lap bar and the control wheel, reducing the possibility of injuries due to pinched hands and/or fingers.



As a safety precaution, CHANCE RIDES, INC. requires that the owners of all SKY DIVER amusement rides perform the modification described in this bulletin.

Order kit number K03-0331-00, which includes the parts necessary to modify one ride. Install the parts using the instructions provided on the following pages of this bulletin. Fill out the attached Certification Of Compliance for the modification within 15 days of receipt of the kit.

PARTS LIST

LATCH REWORK KIT No. K03-0331-01
(consists of the following parts)

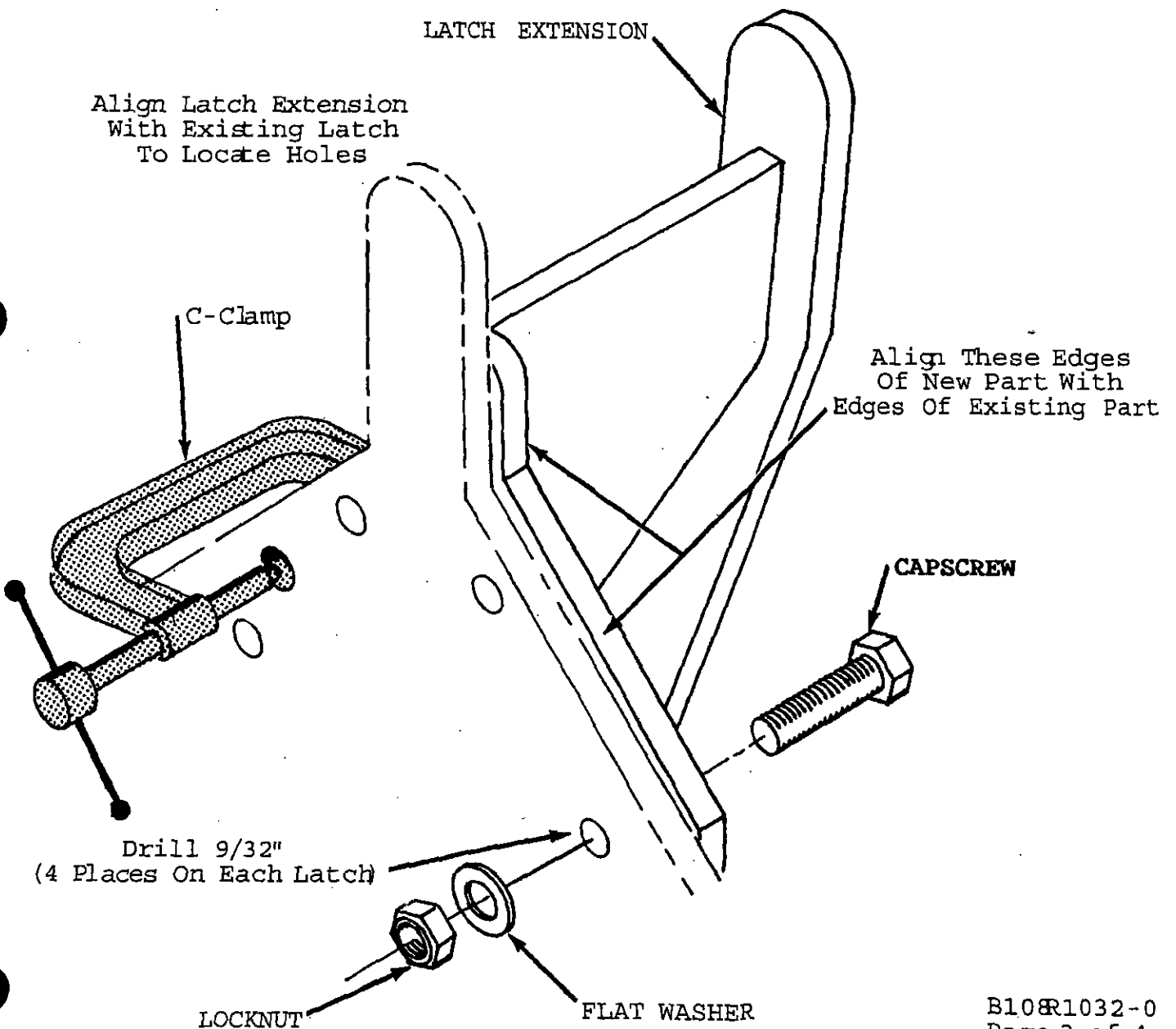
<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
1	303-7422400	LATCH EXTENSION (1081178-001)	16
2	686-0700400	CAPSCREW (1/4-20 x 1)	70*
3	696-8530200	FLAT WASHER (1/4)	70*
4	691-4780800	LOCKNUT (1/4-20)	70*

* Extra Parts Are Provided In Kit

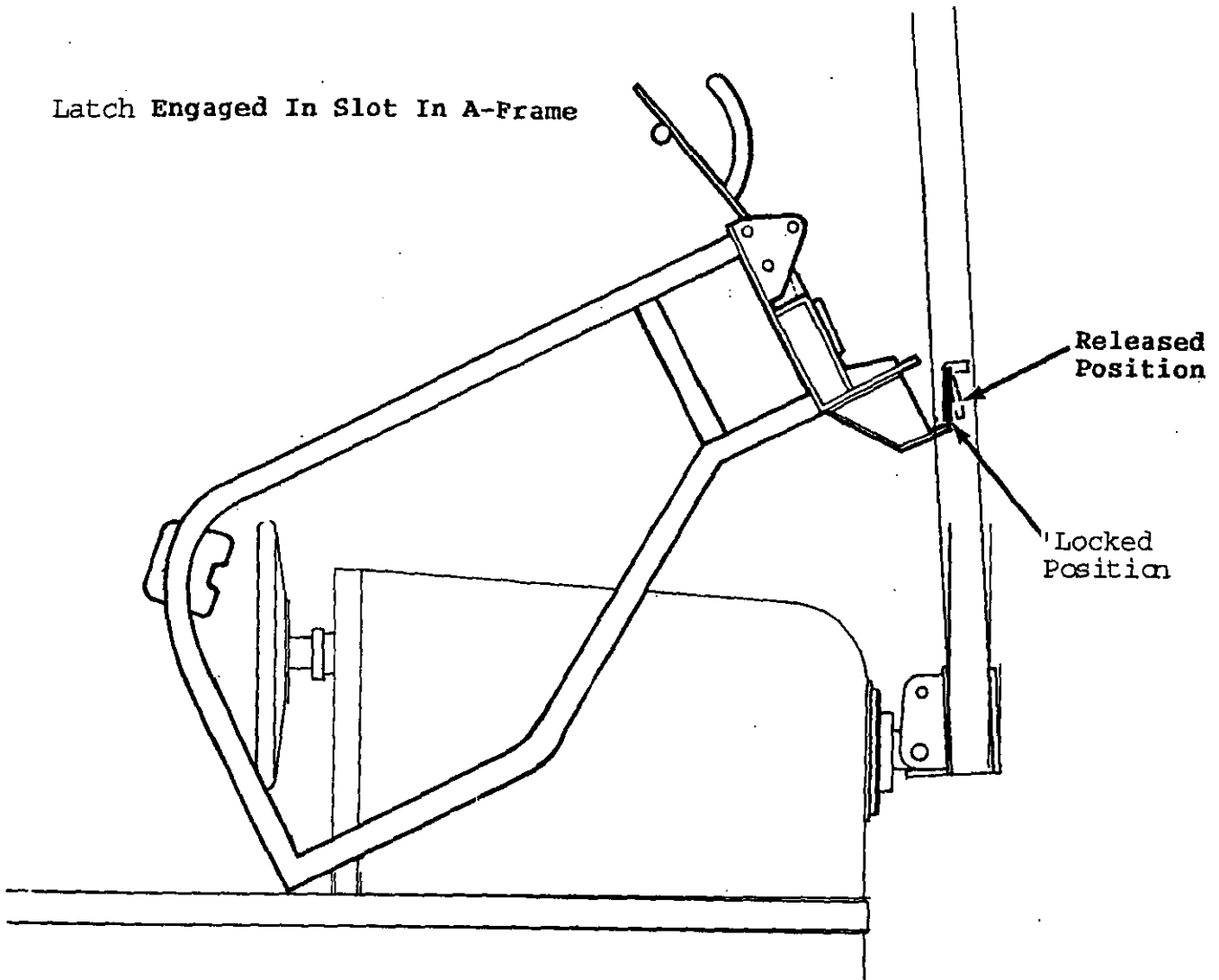
All work must be performed by competent, qualified mechanics, capable of understanding the function of the parts and their proper installation. If there are any questions regarding the instructions or this rework, contact the CHANCE CUSTOMER SERVICE DEPARTMENT,

INSTALLATION INSTRUCTIONS

1. Align the edges of latch extension (Item #1) with the edges of the existing latch as shown in the illustration below.
2. Use a C-clamp to hold the latch extension in place as shown.



Latch Engaged In Slot In A-Frame



3. Rotate the hatch to the open position as shown and check to make sure that:

- The latch securely engages in the A-frame slot for loading and unloading (Locked Position).
- The latch will release properly when the latch release is disengaged (Released Position).

NOTE: If necessary, adjust the latch extension position slightly to obtain the correct engagement into the A-frame slot. Also, the tang of the latch extension can be ground shorter to allow the correct release from the latch.

5. Use latch extension as a template to locate four holes in the existing latch as shown. Drill four 9/32" holes.

6. Attach the extension to the existing latch using the 1/4" capscrews, flat washers and locknuts (Items #2, #3 and #4) provided.

7. Repeat the procedure on the remaining 15 vehicles.



Number: B108R1037-0

Date: May 15, 1989

Supersedes:

SERVICE BULLETIN

Effective Serial Numbers: All Units

Ride: SKYDIVER

Subject: Lap Bar Inspection

Lap bars on the SKY DIVER are essential to passenger safety, and must be maintained properly. Operating the ride with worn or damaged lap bars, incorrect lap bars, wooden lap bars, or incorrectly mounted lap bars can result in injury to passengers.

CHANCE RIDES, INC. therefore requires the inspection of lap bars on all SKYDIVER amusement rides, to ensure that all rides are equipped with the specified lap bars, and that the lap bars are properly installed.

Perform the inspection, using the instructions on the following pages of this bulletin. Return the attached Certification Of Compliance for the inspection within fifteen (15) days from receipt of this bulletin.

All work must be performed by competent, qualified mechanics, capable of understanding the function of the parts and their proper installation. If there are any questions regarding the instructions or this rework, contact the CHANCE CUSTOMER SERVICE DEPARTMENT.

NOTE: Insert this bulletin into your Operation & Maintenance Manual for future reference.

PARTS LIST

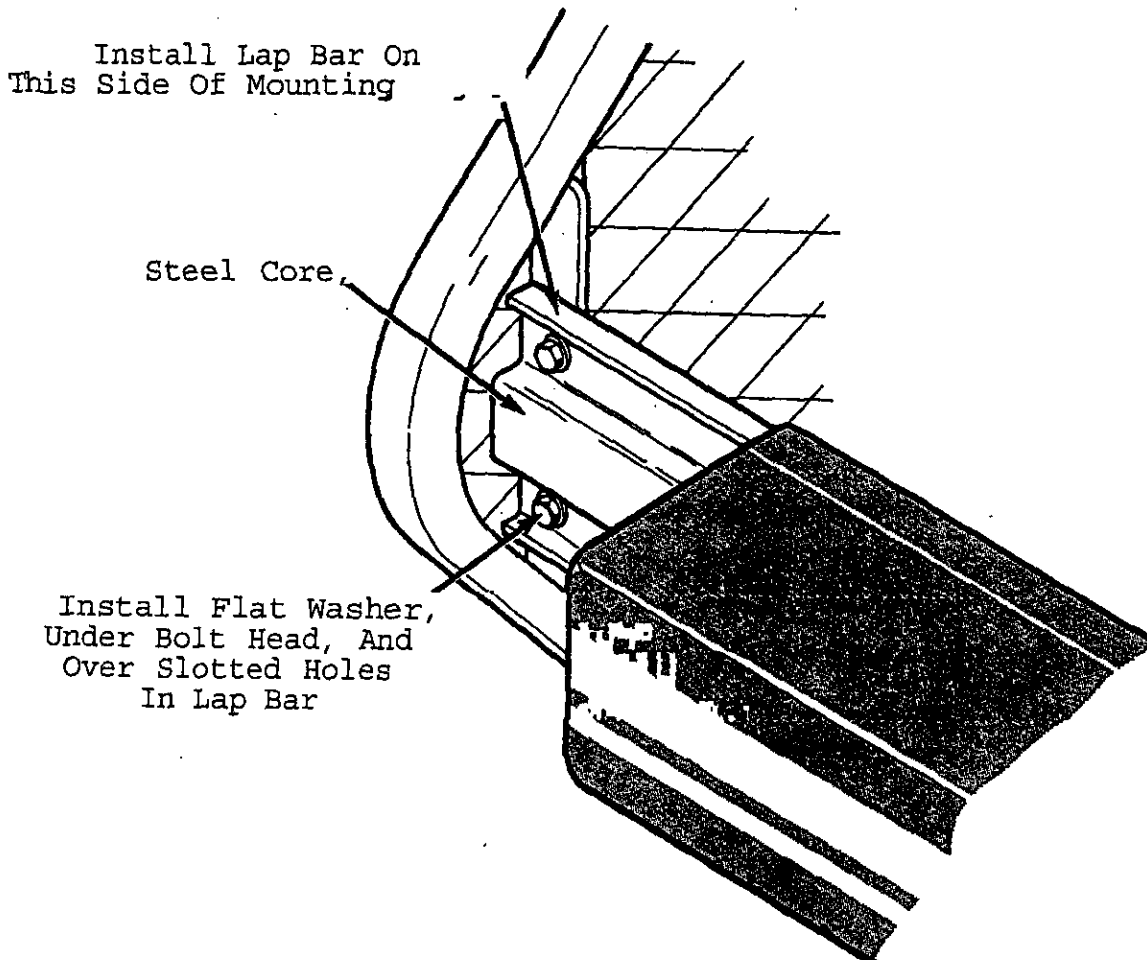
(Use this parts list to order any necessary parts)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty. Reqd.</u> <u>Per Seat</u>
1	303-0387800	LAP BAR ASSEMBLY-Complete (1081152-001)	.. 1
	203-2079000	..REPLACEMENT PAD ONLY (1081153-001) 1
2	686-0700200	CAPSCREW - Hex Head (1/4-20 x 3/4) 4
3	691-4780800	LOCK NUT (1/4-20) 4
4	696-8530200	FLAT WASHER (1/4) 4

INSPECTION INSTRUCTIONS

Inspect the lap bar on every vehicle for the following:

1. The lap bar must be identical to the lap bar shown below. The core must be formed steel. WOOD LAP BARS ARE NOT ALLOWED.
2. The lap bar must be installed exactly as shown. Tighten the mounting bolts to 5-6 ft-lbs.
3. Lap bar padding must be in good repair. Minor repairs to the factory padding are permissible, if its original size and shape are not altered.





Number: B108R1050-0

Date: Oct. 25, 1989

Supersedes:

SERVICE BULLETIN

Effective Serial Numbers: All Units

Ride: SKY DIVER

Subject: Floor Retainer Pins

Recent field inspections have found SKY DIVER amusement rides with platforms improperly installed. The platforms must be properly secured to maintain the safety of the ride and avoid personal injury.

CHANCE RIDES, INC. requires that the owners of SKY DIVER amusement rides inspect the platform retainer pins using the instructions on the reverse side of this bulletin. Return the Certification Of Compliance within 15 days from receipt of this bulletin.

The inspection must be performed by qualified personnel, capable of understanding the function of the parts and their proper installation. If there are any questions regarding this inspection or these instructions, contact the CHANCE CUSTOMER SERVICE DEPARTMENT immediately.

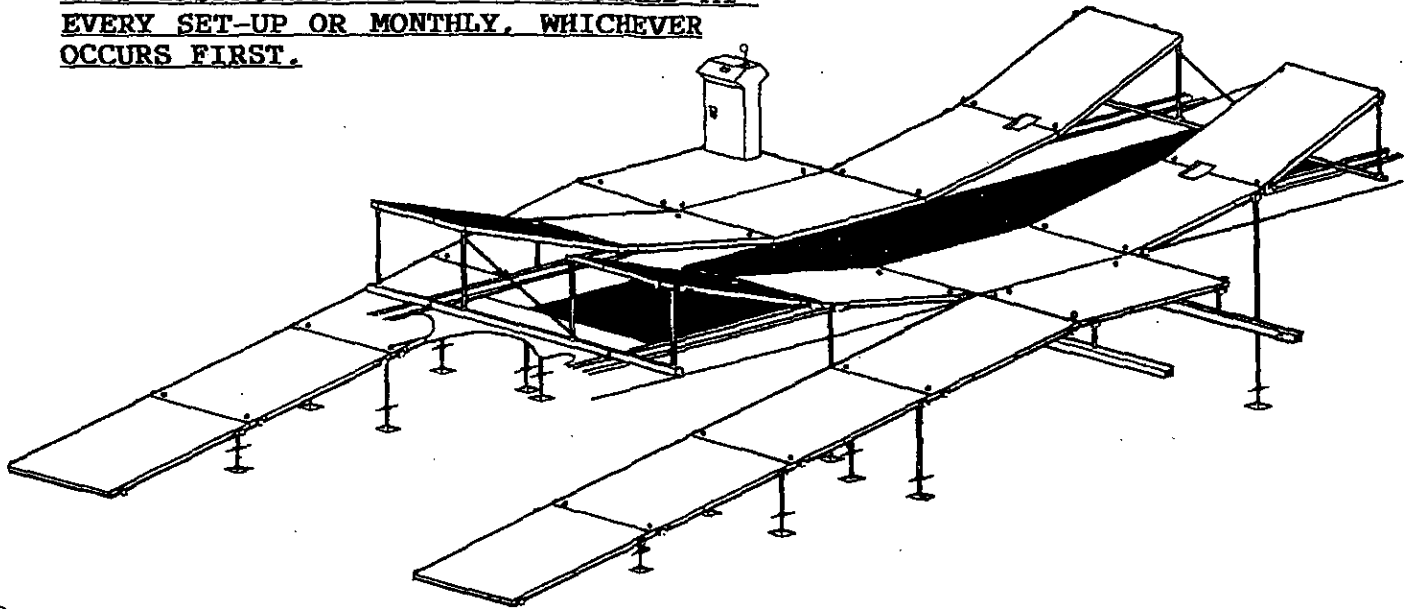
NOTICE

USE ONLY THOSE COMPONENTS AUTHORIZED, SPECIFIED OR PROVIDED BY THE MANUFACTURER. IF ANY ALTERATIONS AND/OR MODIFICATIONS OR ADDITIONS AND INSTALLATION OF UNAUTHORIZED COMPONENTS ARE MADE TO THE ORIGINAL DESIGN WITHOUT THE MANUFACTURER'S EXPLICIT WRITTEN CONSENT OR WITHOUT DIRECT SUPERVISION BY A MANUFACTURER'S REPRESENTATIVE, CHANCE RIDES, INC. MAKES NO CLAIMS AS TO THE INTEGRITY OF THE ALTERED OR MODIFIED RIDE.

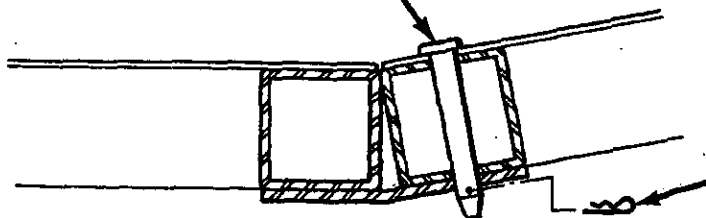
INSPECTION PROCEDURE

Inspect for proper installation of platforms and retainer pins as shown in the following illustrations. Each platform must be attached to the adjoining platforms with the taper pins and hair pins as originally provided from the factory. Never allow the platforms to simply lie in place. Likewise, do not use fasteners other than the pins originally specified.

THIS INSPECTION MUST BE PERFORMED AT EVERY SET-UP OR MONTHLY, WHICHEVER OCCURS FIRST.



TAPER PIN - 3/8 x 3-1/8 Grip Length
(Part No. 390-5228500)



HAIR PIN - 3/32
(Part No. 694-51899)

DETAIL OF TYPICAL PLATFORM
WITH TAPER PIN AND HAIR PIN
CORRECTLY INSTALLED

NOTE: IF HOLES HAVE WORN TO A DIMENSION OF 7/16" OR GREATER AT ANY POINT, DRILL OVERSIZE TO 17/32" AND USE THE TAPER PINS AND HAIR PINS SHOWN IN THE FOLLOWING CHART:

TAPER PIN
1/2 x 2-1/2 Grip Length
(Part No. 390-5228800)

HAIR PIN - 1/8
(Part No. 694-5190000)



Number: B108R1052-0

Date: March 23, 1990

SERVICE BULLETIN

Effective Serial Numbers: All Units - Chance Rides Inc.

All Units - Chance Manufacturing Co. Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with rides produced by Chance Manufacturing Company, Inc.

Ride: SKY DIVER

Subject: Steering Wheel Guard and
Grab Rail Replacement

A modification kit has been developed to increase the clearance between the steering wheel and the grab rail, reducing the possibility of injuries due to pinched hands and/or fingers. Additionally, a guard plate installed behind the steering wheel eliminates a potential pinch point at the steering wheel bearing mount.

As a safety precaution, CHANCE RIDES, INC. requires that the owners of all SKY DIVER amusement rides perform the modification described in this bulletin.

Order kit number K108R1052-0, which includes the parts necessary to modify one ride. Install the parts using the instructions provided on the following pages of this bulletin. Fill out the attached Certification Of Compliance for the modification within 15 days of receipt of the kit.

All work must be performed by competent, qualified mechanics, capable of understanding the function of the parts and their proper installation. If there are any questions regarding the instructions or this rework, contact the CHANCE CUSTOMER SERVICE DEPARTMENT.

NOTICE

USE ONLY THOSE COMPONENTS AUTHORIZED, SPECIFIED OR PROVIDED BY Chance Rides, Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with any unauthorized alterations and/or modifications or additions and installations of unauthorized components.

PARTS LIST

STEERING WHEEL GUARD AND GRAB RAIL REPLACEMENT KIT
(Kit Number K108R1052-0 consists of the following parts)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
1	3-3163100	GRAB RAIL (108-1124-001)	16
2	6-0750200	CAPSCREW - Hex Head (5/16-18 x 2)	64
3	6-4781200	LOCK NUT (5/16-18)	64
4	6-8530600	FLAT WASHER (5/16)	64
5	3-5358547	GUARD PLATE (108-1183-001)	16
6	6-1144600	SCREW - Round Head (1/4-20 x 1-314)	32
7	6-1119400	SCREW - Round Head (1/4-20 x 3/4)	32
8	6-8530200	FLAT WASHER (1/4)	64
9	6-4780800	LOCK NUT (1/4-20)	64
10		DRILL BIT 9/32	1
11		DRILL BIT 11/32	1

INSTALLATION INSTRUCTIONS

1. With vehicle hatch in the open position, remove and discard the existing grab rail (Illustration A) and fasteners. Do not install the new grab rail at this time.
2. Remove the steering wheel from the shaft (Illustration B). Save the acorn nut and key.
3. Place the guard plate (Item #5) over the steering wheel bearing. Use the plate as a pattern to locate and drill mounting holes. See Illustration B for hole sizes and locations.
4. Install the guard plate using the fasteners provided (Items #6, #7, #8 and #9).
5. Install the steering wheel using the existing key and acorn nut. The acorn nut should be secured with a liquid locking material.
6. Install the new grab rail (Item #1) using the fasteners provided (Items #2, #3 and #4). Install the capscrews going down through grab rail.

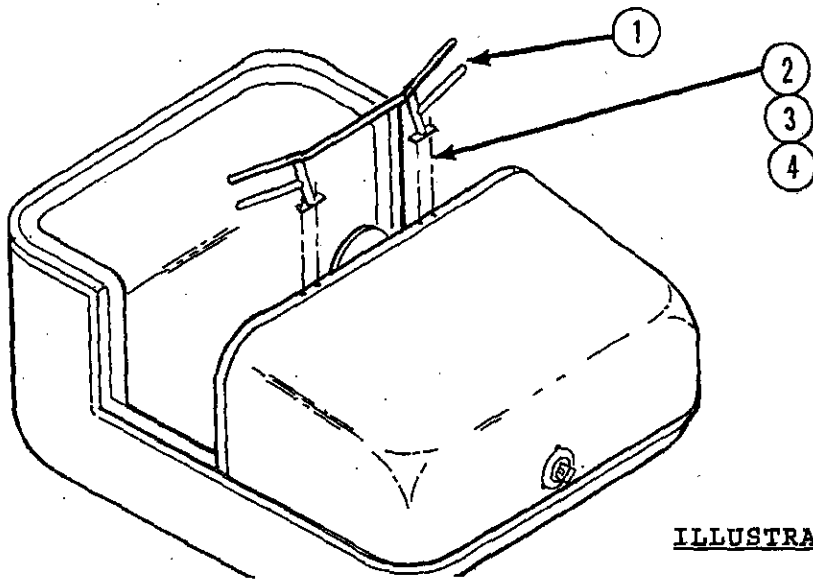


ILLUSTRATION A

CAUTION

AFTER HOLES HAVE BEEN DRILLED, USING A VACUUM,
 CLEAN INSIDE FLOOR OF CAR TO REMOVE METAL FILINGS.
 FAILURE TO DO THIS COULD RESULT IN INJURY TO PASSENGERS.

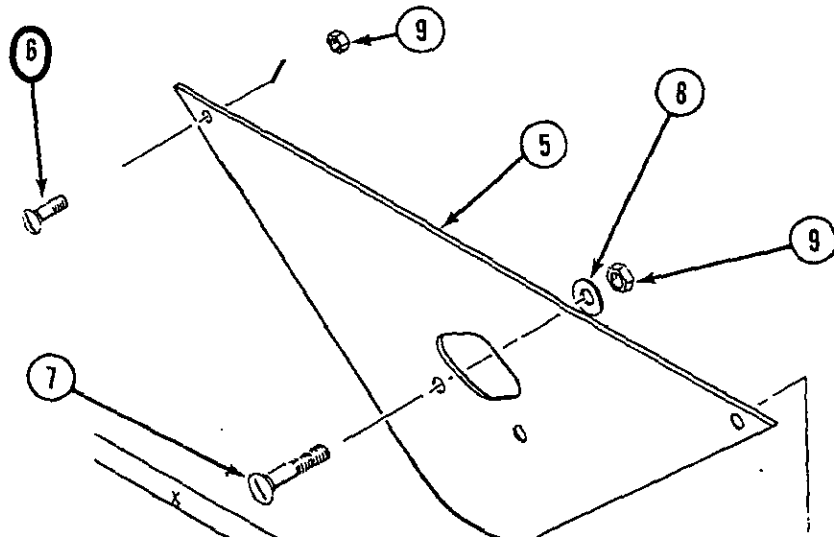


ILLUSTRATION B

STEERING WHEEL BEARING MOUNT

SHAFT

EXISTING KEY
 6-38522

STEERING WHEEL
 3-86369

ACORN NUT
 6-48000

STEERING WHEEL BEARING

Drill 9/32" hole
 (4 places)

4200 W. Walker
Wichita, KS 67209
Phone: 316-942-7411 ext. 2293
Faxes: 316-942-2012
Web: www.rides.com



Fax

To: Al Recht
State of New Jersey
From: Steven Laycock QA/Product Safety Mang.
Steven Laycock

Fax: 609-984-7084

Pages: 1

Phone:

Date: April 27, 2006

Re: SKYDIVER

CC:

The vehicles on the above noted amusement ride were originally installed using a taper pin and an R-key. Over time, field experience showed that the taper pin would rotate causing the R-key to either dig into the bearing housing causing damage to the housing or to come out of the taper pin. Modifications to these ride were done which allowed for a lynch pin to be installed behind the head of the taper pin. This would trap the taper pin in place while allowing it to rotate. With the lynch pin in place the R-key was no longer necessary. This information was never updated in the manuals, bulletins, or Field Inspection Guides. Consequently, these printed material will still call out for the R-key to be used.

This letter is to verify that the R-key should not be installed in the taper pin of the vehicle hanger on the above noted amusement ride.

If you have any questions regarding this information, please feel free to contact me.