



Elevating and Amusement Devices Safety Division	Ref. No.: 520 / 04	Rev. No.: 1
DIRECTOR'S SAFETY ORDER	Date: April 8, 2004	Date: April 26, 2005

IN THE MATTER OF:

**THE *TECHNICAL STANDARDS AND SAFETY ACT 2000*,
S.O. 2000, c. 16**

- and -

**ONTARIO REGULATION 221/01 made under the
Technical Standards and Safety Act 2000
(Amusement Devices)**

Subject: Gravitron Ride and Gravitron type rides made by Wisdom Manufacturing Inc.
SHUT DOWN ORDER AND FOLLOW UP REQUIREMENTS TO OPERATE
Sent to: All Amusement Devices Licensees & Consultants

The Director, Amusement Devices Regulation (O.Reg. 221/01) pursuant to his authority under section 14 of the *Technical Standards & Safety Act* hereby orders the following:

1. EFFECTIVE IMMEDIATELY

All Gravitron or Gravitron type rides including those operating under the names of Starship 2000, Starship 3000, and Starship Enterprise, manufactured by Wisdom Manufacturing Inc., must be removed from service and shall not be put back into service or used until owners have complied with the instructions below.

2. INSTRUCTIONS

Prior to returning the ride in question into service, Owners shall:

- 2.1** Comply with Wisdom Manufacturing Inc, bulletin dated June 1, 2004(attached).
- 2.2** Comply with the findings in the US CPSC Release #92-068 dated March 19, 1992 (attached).
- 2.3** Provide written confirmation in accordance with Section 2.5 that the Safety Order has been complied in full and the ride meets the requirements of the attachments referenced in Sections 2.1 and 2.2.
- 2.4** The owner of the device in question shall make either the necessary repairs, changes or part replacements as required and must ensure that all prior "Manufacturer Update Notices" have been carried out.
- 2.5** Page 6 of this order shall be filled out by the owner and attached to the ride's logbook. The owner of the ride is confirming completion of the work on the ride in accordance with this Safety Order. The logbook and confirmation shall be made available to the inspector at the time of inspection.

3. BACKGROUND

An incident in Florida involving the Gravitron ride has prompted the release of this Director's Safety Order. Summary notes have been attached regarding the Florida incident.

Gravitron accident injures seven at Florida fair

(Friday, April 3, 2004) - At the Miami-Dade County Fair in Miami, Florida, a Gravitron amusement ride broke open and ejected several passengers. Seven people were injured, three of whom were thrown from the ride through the opening left by the broken panel.

Gravitron rides banned in Florida

(Wednesday, April 7, 2004) - Gravitron rides similar to the one which broke apart at a fair last week have been banned from operation across the state of Florida. State officials say that the ban is a standard response to any major amusement ride accident. The ban includes all Gravitron rides including those operating under the names of Starship 2000, Starship 3000 and Starship Enterprise -- all of which are manufactured by the same company -- and will remain in effect until the investigation into the accident is completed.

The accident happened Friday night at the Miami-Dade County Fair in Miami. A panel broke off the ride, ejecting three passengers at full speed.

<original signed>

Roland Hadaller, Director, TSS Act 2000, (Amusement Devices)

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs
FOR IMMEDIATE RELEASE
March 19, 1992
Release # 92-068

Washington, DC 20207
CONTACT:
(301) 504-7908

Gravitron Mobile Amusement Rides To Be Modified

WASHINGTON, D.C -- In the wake of the accident last summer at the Missouri State Fair, Sedalia, MO, the U.S. Consumer Product Safety Commission (CPSC) and Wisdom Manufacturing, Inc. (WMI) are announcing a program to modify the "Gravitron" mobile amusement ride. The ride is a whirling cylinder which uses centrifugal force to hold the riders to their seats as the seats rise, giving the illusion that the floor is dropping out. On August 20, 1991, at the Missouri State Fair, a panel on the ride separated, throwing some patrons onto the midway and injuring 11 children.

The program announced today will strengthen the ride design and permit easier visual inspections by ride operators and inspectors. "These changes must be made to ensure riders' safety," said CPSC Chairman Jacqueline Jones-Smith.

The modifications require ride operators and/or inspectors to:

- | | |
|--|---|
| Install turntable safety plates, | Install corner pin reinforcement plates, |
| Install an inside strap to the bottom frame, | Note additions and changes to operators manual, |
| Check and replace floor pins, if necessary, | Inspect the panel bottom hole, for cracking, |
| Trim carpet for easier floor pin inspection. | |

Since several states including Missouri, where the accident occurred, have no state inspection requirements, it is especially important that ride operators participate in the modification program. For information on the program, operators and inspectors should contact WMI directly at 303-522-7515 or CPSC's Office of Compliance and Enforcement at 301-504-7913.

[Send the link for this page to a friend!](#) The U.S. Consumer Product Safety Commission is charged with protecting the public from unreasonable risks of serious injury or death from more than 15,000 types of consumer products under the agency's jurisdiction. Deaths, injuries and property damage from consumer product incidents cost the nation more than \$700 billion annually. The CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard or can injure children. The CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters, and household chemicals - contributed significantly to the 30 percent decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

To report a dangerous product or a product-related injury, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270, or visit CPSC's web site at www.cpsc.gov/talk.html. Consumers can obtain this release and recall information at CPSC's Web site at www.cpsc.gov.



**WISDOM
INDUSTRIES, Ltd.**

IMPORTANT SAFETY BULLETIN

DATE: JUNE 1, 2004

RIDE: GRAVITRON/STARSHIP, ET. AL

**SUBJECT: INSPECTION, REPAIR & REPORTING
PROCEDURE**

❖ **This bulletin is a supplement to and supersedes the bulletin issued April 12, 2004. This bulletin addresses specific new items and clarifies some of the inspection procedures from the previous bulletin. Review this bulletin to see if you have complied in an appropriate manner to the items listed in these bulletins.**

- 1) Prior to inspection, clean the lower end of the panel with compressed air or pressure washer. To aid in inspecting the panel frame components (Drawing: Panel Inspection). Make sure the power is off to the panels if water is used.

❖ **NOTE: USE EYE PROTECTION WHEN CLEANING THE PANELS.**

- 2) Inspect the welds and steel components of the 16 panel frames (15 passengers and 1 door) for cracked or broken components. Initial repair for cracked or broken components is to be performed with 7018 Rod using good welding procedure by a certified welder. Inspect bottom strap to seat angle gussets for missing or broken gussets (Drawing: Bottom of Panel-Weld Inspection). If bottom strap to seat angle gussets are broken contact Wisdom Industries for repair information. Review attached drawing for inspection points. Inspect bottom strap.

✓ **If more than one repair is required per panel, then contact Wisdom to determine if repair or replacement is required.**

***Continued on next page**

- 3) Inspect platform hinges.
 - ✓ **Inspect the hinges for wear- when the wing is folded. Hinge bolts can be removed one at a time and the hinges checked for cracks or wear in the hinges (Drawing: Hinge Inspection).**
- 4) Inspect platform hinge bolts.

Inspect to be sure the 8 hinge bolts are in good condition. The hinge bolts must be grade 8 or better. After the ride is set up if any of the hinge bolts can be turned, that hinge bolt must be removed and the hinge bore and bolt must be inspected for wear. With the ride set up, loosen the hinge nut ½ turn. Use a torque wrench preset to release when a torque of 50 ft-lbs. is reached to turn the head of the bolt. If the bolt can be turned with a torque of less than 50 ft. lbs. remove and inspect the bolt and hinge for wear. Refer to Drawing 7W 041 for proper length of replacement bolt.

 - ✓ **Hinge bolts Grade 8 or better. Length per attached drawing showing Typical Section of Hinge and Rotated Inner Hinge Assembly.**
- 5) Check tire air pressure for 35 PSI minimum to 40 PSI maximum on all 3 idler and 1 drive tires.
- 6) Make sure that wing sag is less than ¾ inch of main table.
 - ✓ **Review attached procedure for checking wing level and shim wing if required (Procedure: Leveling Procedure for the Gravitron Turntable dated 8-12-93).**
- 7) Inspect condition of the underwing alignment bolts (table bolts).

These bolts must be 7/8 diameter and 8 inch in length.
(Drawing: Turntable Bolt Inspection).

 - ✓ **Replace on a yearly basis. If the bolt is bent during operation, contact Wisdom for instructions on possible structure concerns.**
- 8) Inspect that the 4 under wing alignment bolts are snug. If the wing has a gap at the wing to platform joint that can be pulled together by the alignment bolt, contact Wisdom Industries for possible hinge wear and repair procedure.

***Continued on next page**

- 9) Inspect condition of the fiberglass at the lower end of the panel. If a large amount of fiberglass is missing under the floor strap or on the vertical section just up from the floor this must be replaced.
 - ✓ **Inspect the condition and amount of fiberglass at the bottom of the panels. Wear to the fiberglass behind the panel safety plates is acceptable. If more than 25 percent of the fiberglass that goes under the bottom panel strap is missing the fiberglass must be replaced. If more than 10 percent of the vertical surface next to the panel safety straps is broken or missing this must be replaced. Contact Wisdom Industries for the proper materials and procedure to repair or replace the fiberglass.**
 - ✓ **Inspect the fiberglass for cracking at the lower section of the panel near the floor. Cracks or torn fiberglass of more than 2 inches will need to be repaired prior to further operation.**
- 10) During operation if the platform demonstrates movement (wobble) of over 1 ½ inches, measure wing sag and shim platform.
 - ✓ **Contact Wisdom Industries for additional areas to inspect.**
- 11) Review attached drawing for procedure on repair of under wing alignment hole and sleeves (Drawing: Turntable Bolt Inspection).
- 12) Follow attached “Gravitron Checklist After Setup” and “Daily Inspection Checklist.”

NOTE: This Safety and Inspection Requirements Bulletin is being announced in cooperation with the U.S. Consumer Product Safety Commission, who will monitor the effectiveness of its implementation and distribution.

Any questions about this bulletin should be directed to the manufacturer: Victor Wisdom, Wisdom Industries, Ltd. (970) 522-7515; FAX: (970) 522-2902 or Email: vwisdom@kci.net.



NOTIFICATION OF COMPLIANCE WITH DIRECTORS ORDER 520/04-r1

I _____ (print name) confirm that I am the owner of the amusement device known as the "Gravitron", AD # _____, and have personally ensured that all required work has been completed in accordance with Director's Order 520/04-r1.

Indicate the following has been completed by initialling each item:

Initials

Completed all work in accordance with Wisdom Manufacturing Inc, bulletin dated June 2004 _____

Completed all work in accordance with the bulletin in the US CPSC Release # 92-068 dated March 19, 1992 _____

Signature of Owner

Name of Company (Licensee)

Date