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TECHNICAL BULLETIN 180401

TO: All operators of Magic Carpet Lifts, to include Area Management, Operations Management, Maintenance Management, Risk Managers, Human Resources, and Maintenance Personnel.

SUBJECT: MAINTENANCE WORK ON POWERED CONVEYORS

Lift mechanics have become entangled in conveyors while performing maintenance work with guards removed. The hinged doors and removable hatches of a Magic Carpet Lift are considered guards. Their removal for inspection and subsequent maintenance work presents an extreme hazard to the workers involved. Accidents are occurring in two major areas: a) the tail section with the top hatch removed and b) the area under the head section where areas have installed an access point. Entanglement points also exist anywhere a rotating shaft or in-running nip point exists.

ACTION REQUIRED

- 1) Maintenance Personnel and Operators who are exposed to hazardous areas must be instructed by the owner in Lock Out/Tag Out procedures and in their responsibilities regarding safe work practices. Anyone working on or maintaining a Magic Carpet® lift is to keep *in their possession* the key to the power disconnect lock so no one else can start the conveyor.
- 2) All conveyor inspections and snow removal (housekeeping) that exposes an individual to a hazard must be done with the guards in place if the conveyor is under power. If a guard is removed or a door or hatch is unlocked, two qualified mechanics must be present and working together. One person must be stationed at the Emergency Shut Down push button station to immediately disconnect power if a problem or unsafe condition is encountered.



- 3) Any adjustment or maintenance on the conveyor lift must be performed with the power locked out per the requirements of the manufacturer, Authority Having Jurisdiction and the Owner's Safety Plan.

- 4) Detecting a misaligned belt at the tail section involves watching the belt leave the tail section and checking to see if the belt is bearing hard on the guide plastic, possibly folding the belt. This inspection shall be done without removing the top hatch covers if the lift is so equipped. If the belt is misaligned, power shall be disconnected and the adjustment of the bearings can then be done through the hinged covers. Whatever side the belt is running off to, the bearing on that side should be adjusted to provide more tension, 1/8" at a time. If the belt is grossly off the tail drum, the top covers may be removed, and the belt de-tensioned and then manually placed on the center of the drum before re-tensioning. The top covers are to be reinstalled before applying power.

- 5) If it is determined that a safeguard must be bypassed during or prior to startup, setup, repair, inspection, adjustment or maintenance, procedures to control the unexpected energization of mechanical and electrical power transmission apparatus shall be implemented *prior* to bypassing the safeguard. This program, developed by the owner, shall be in writing and shall include proper procedures and adequate training of maintenance personnel. Only authorized maintenance personnel shall be allowed to access a hazard area.

- 6) Signage must be in place to warn employees and guests of any hazards per the requirements of Annex D in the B-77 code. Area risk managers or owners must access the installation of any Magic Carpet® lifts to determine if additional signage is required related to hazard areas.

TYPICAL MAINTENANCE ACTIVITIES THIS BULLETIN COVERS

These maintenance and operation activities below present specific hazards. Two trained maintenance personnel must be present during these activities. As emphasized in the Magic Carpet Lifts manufacturer's manual, Lock Out/Tag Out procedures must be followed in these circumstances, and personnel should refer back to the area risk manager or owner for additional information or clarification regarding mitigation:



ENTANGLEMENT
POTENTIAL

- Snow removal from pit in the head terminal area, the tail terminal area and in any underground vaults. Owner supplied vaults require specific instruction on entry by the owner.
- Adjusting/replacing brush bearings in head terminal. Can be done using access at hinged head terminal covers
- Adjusting/replacing pulley bearings in head terminal. Can be done using access at hinged head terminal covers – **Stored Energy Hazard.**
- Adjusting /replacing pulley bearings in tail terminal. Can be done using access at hinged tail terminal covers. Leave access hatches in place unless conveyor lift is locked out – **Stored Energy Hazard.**
- Adjusting/replacing pulley bearings in gravity take up vaults. With perimeter guarding, gravity take up units are fully exposed to personnel - **Stored Energy Hazard.**
- Replacing /Return rollers under intermediate sections. This area must be guarded to prevent entry under the lift by unauthorized persons.
- Any maintenance done directly underneath the conveyor. Areas under the conveyer where a hazard exists can only be approached through a locking door or hatch and power must be disconnected and locked out (LOTO) before these areas are entered.

NOTE: Not all entanglement points or stored energy sources are identified in this document. Always refer back to our manufacturer's manual. Resort Area Owners, department supervisors, maintenance personnel, risk managers, or Environmental Health and Safety managers should all use this document in conjunction with the Owner Responsibilities outlined in the ANSI B-77 or Z-98 current regulatory documents, the manufacturer's manual, along with any resort-specific requirements or procedures that are developed or being developed.

If you have any questions regarding this bulletin, contact the manufacturer.