



Proudly made in the USA since 1990

DECEMBER 3, 2013

## TECHNICAL BULLETIN 131203

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

### **SUBJECT: GENERAL GUARDING-SAFE OPERATION REQUIREMENTS**

The B77-2011 standard in 7.1.2.7.1 references that "moving machine parts that normally may be in reach of personnel shall be fitted with guards. Where breakage of a power transmission component can result in injury, provisions shall be made for appropriate containment of said components. Guards and containment shall be done in conformance to American National Standard, ANSI/ASME B15.1-2000, *Safety Standard for Mechanical Power Transmission Apparatus.*" Still, injuries continue to individuals that ignore warnings and procedures.

This standard, B15.1-2000, was withdrawn in February, 2013. Standards that can be applied in place of the withdrawn standard include ANSI Standards B11.0-2010, B11.19 and B11.TR3. Areas can purchase these standards from [webstore.ansi.org](http://webstore.ansi.org). Currently, the B77 committee is working in ad-hoc committees on risk analysis and on guarding issues.

Since each Magic Carpet installation differs, there are no "one size fits all" recommendations for guarding. This Technical Bulletin address the protection of personnel operating and maintaining the lift. NOTE: Guarding can also apply to patrons who can come into proximity with a motion hazard. This Bulletin is not all inclusive and Risk Managers or appropriate area personnel at each area operating a conveyor lift should determine the required level of guarding for each identified hazard.

---

Magic Carpet Lifts, Inc. 6750 E. 46<sup>th</sup> Avenue Drive Denver, CO 80216 USA  
Tel: 303.333.5778 Fax: 303.333.6986 [www.MagicCarpetLifts.com](http://www.MagicCarpetLifts.com)

## **ACTION REQUIRED**

People having access to areas where electrical and motion hazards exist shall be protected, by safeguarding methods, from contact with moving parts (mechanisms) or sources of electrical and stored energy. Such safeguarding methods shall prevent people from walking into, reaching over or under, or other inadvertent contacts. Note that exposed areas under the intermediate sections of Magic Carpet Lifts presents a hazard to patrons and must be guarded.

All motion hazards associated with the operation of mechanical power transmission apparatus shall be identified and eliminated by design of the equipment, protection by a guard, device (presence sensing), safe distance, safe location, signage, lock out tag out procedure and training of personnel. Magic Carpet provides access panels which are bolted down, lockable control panels and Emergency Shut Down pushbutton stations for safeguarding.

When a safeguard must be bypassed during startup, setup, repair, adjustment or maintenance, a program to control the unexpected energization of mechanical and electrical power transmission apparatus shall be implemented. This program, developed by the area, shall be in writing and shall include proper procedures and adequate training of maintenance personnel. Only authorized maintenance personnel shall be allowed to access the hazard area.

## **DEFINITIONS** (from B11.19)

guard: A barrier that prevents exposure to a hazard

hazard: A potential source of harm

hazard area (zone): Any space within and/or around a machine in which a person can be exposed to a hazard

maintenance personnel: Personnel trained and authorized to maintain the machine, including the safeguarding

hazardous situation: circumstances in which a person is exposed to a hazard

device: A component, attachment or mechanism designed to serve a specific purpose or perform a specific function

safeguarding: Protection of personnel and patrons from hazards by the use of guards, safeguarding devices, awareness devices, or safeguarding methods

safeguarding method: Safeguarding implemented to protect individuals from hazards by the physical arrangement of distance, holding, openings or positioning of the machine or machine system to ensure that a hazard cannot be reached.

safe-location: A method of safeguarding by physically locating either the hazard or the individual such that the hazard is not accessible

perimeter guarding: A guard or safeguard designed to limit or detect an individual(s) entering a hazardous area after which the individual(s) is not being continuously being detected.

### **SPECIFIC AREAS OF CONCERN-NOT ALL INCLUSIVE**

All access panels on the head and tail terminals of the Magic Carpet Lift are to be bolted down when maintenance is not required.

The electrical panel is to be kept locked and the start key removed during non-operational hours.

Underground vault(s), machinery areas and machine rooms are to be locked to prevent unauthorized entry

Maintenance Personnel are to be specifically trained and informed of the hazards associated with conveyor lift maintenance and only those individuals are responsible for maintenance.

All sources of stored energy must be identified. These energy sources include belt tensioning devices, rollback devices, rotating shafts with rollers and pulleys, hydraulic systems and stored energy in electronic components.

Signage must be installed denoting electrical voltages, men working on lifts, instructions and warnings for use of the conveyor; no loose scarves, clothing or long hair exposed; load here; prepare to unload; unload here; stop gate or hit to stop lift; remain standing;

signage excluding unauthorized entry; appropriate confined space signage; and any other area specific signage.

A lock out-tag out procedure must be in place with written instructions and maintenance personnel must be trained in those procedures.

The full length of the lift must have safeguarding/perimeter guarding to protect patrons from exposure to hazards.

Stop pushbuttons are to be provided in all attendants' and operators' work positions, in machine rooms, machine compartments, access points to crawl spaces and out of doors in proximity to all loading and unloading areas.

The area must develop procedures to safely remove snow accumulation from under the conveyor without presenting a hazard to maintenance personnel. Lift must be shut down and Lock out-Tag Out procedure must be implemented before snow is removed from under lift.

Two maintenance personnel are required to be present before any maintenance is performed on equipment.

Operations personnel including lift attendants, lift operators and lift supervisors are to remain in a safe-location while the lift is in operation. Any housekeeping chores are to be done from this location.

Operations personnel including lift attendants, lift operators and lift supervisors are to be trained in the operation of the Magic Carpet Lift with written instructions for identifying and responding to abnormal conditions and a description of the scope of their duties in operating the lift. They are not to be given additional duties that impede their ability to perform their assigned tasks related to lift operation.

Confined spaces, vaults and machine rooms are to have lighting and communications systems meeting B77.1 regulations.

The Daily and Weekly inspection program must be kept current with any changes in the operation and maintenance protocols of the system and with changes in the B77 and other standards related to safety.

No bypasses are permitted on a conveyor lift.

## **CONCLUSION**

All of the above requirements are in the B77.1-2011 standard either by language or reference to other standards. This Technical Bulletin is designed to familiarize and refresh Magic Carpet operators of the importance of personnel and patron protection. The majority of injuries associated with conveyor lifts normally occur to area personnel with virtually all of these injuries being preventable through proper safeguarding methods.

For specific application advice, please contact Magic Carpet Lifts, 800.223.3740