



SAFETY ORDER

CONVEYOR SAFETY ORDER

Date of Issue: June 28, 2017

No: SO-PR-2017-01

This safety order is issued pursuant to section 31 of the Safety Standards Act. A person affected by this safety order may appeal this order in writing to the Safety Standards Appeal Board within 30 days. The appeal process is set out on the Safety Standards Appeal Board's website at www.gov.bc.ca/safetystandardsappealboard.

Failure to comply with a safety order is an offence under section 72 of the Safety Standards Act.

Part 1: Details of Regulated Work or Regulated Product

This safety order is issued to all owners of existing conveyors used for the purpose of transporting skiers, riders or foot passengers uphill at locations used for recreation and the owners of any new conveyors installed after the date of issue of this safety order.

During the 2016/2017 operating season there were two serious incidents in British Columbia which involved employees conducting maintenance on conveyors – one which was fatal. In both cases the worker was exposed to moving, rotating equipment while conducting maintenance tasks. In addition to these incidents, there have been numerous reported injuries to workers throughout North America sustained while maintaining this type of equipment.

Part 2, section 1 through 3 of this safety order shall be in effect prior to October 15, 2018. Prior to the completion of the requirements outlined in sections 1 through 3 of this safety order, section 4 of this safety order shall be met.

Documentation as required in section 4 (b) of this safety order shall be submitted to BCSA for review within 30 days of the issuance of this safety order. No work shall be undertaken prior to submission of the required documentation.

Part 2: Requirement(s) of this Safety Order

All owners and contractors of conveyors are responsible for complying with the following requirements of this safety order.

1) Access to Equipment

- a) Electrical Protective Devices:** Where a hazard from moving equipment is present at locations where visual inspections or adjustments are made, electrical protective devices shall be provided which will cause the electric power to be removed from the drive motor when points of access such as panels, hatches or doors are opened or removed. The electrical protective devices shall not be dependent solely upon springs to open.

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- b) **De-energization and lock out:** The electrical protective devices shall not be considered a lock out device. If any maintenance work other than adjustment and visual inspection is conducted, the de-energization and lock out requirements of WorkSafe BC and the CSA Z98-14 shall be followed.

2) Inspection Control

Each conveyor shall be provided with inspection controls to provide constant pressure operation when inspection or adjustments are conducted.

Inspection Control Requirements:

- a) **Transfer Switch:** A switch for transferring the control to inspection operation shall be provided at each location where adjustments or inspections are conducted.
- i. The switch shall have two positions and be labelled "NORMAL" and "INSPECTION".
 - ii. When in the "INSPECTION" position the movement of the conveyor shall be only possible with the use of a constant pressure operating device located where the transfer switch was operated from.
 - iii. Where more than one transfer switch is in the "inspection" position then all constant pressure operating devices at all locations shall be inoperative.

Note: It is permissible to by-pass the electrical protective device (1 (a) above) for the access panels, hatches and access doors when transferring control to "INSPECTION". All other electrical protective devices shall remain operative.

- b) **Constant Pressure Operating Device:** The constant pressure operating device shall:
- i. Allow movement of the conveyor by constant pressure only.
 - ii. Be protected against accidental contact.
 - iii. Be situated in such a manner that the maintenance personnel shall not be able to contact the moving equipment and maintenance personnel shall be able to observe the moving equipment from the operating device location.
 - iv. Provided with an emergency stop switch located adjacent to the constant pressure operating device and when activated shall cause the conveyor to stop as quickly as practicable.

Note: All changes to electrical equipment shall be approved by the manufacturer or by a professional engineer registered in the province of British Columbia. All electrical schematics shall be updated accordingly.

3) **Guarding:**

When the provisions of part 2, sections 1 through 2 are not possible due to electrical

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constraints of the conveyors' controller, guarding shall be installed. The manufacturer or a professional engineer registered in the province of British Columbia shall provide a written statement as to why the requirements of part 1 through 2 cannot be met for each conveyor installation.

The design of the guarding shall meet, but not be limited to, the following requirements:

- i. Open framework to allow visual inspection of rotating and moving equipment.
- ii. Reject a ball no greater than 25 mm in diameter.
- iii. Only be removed with the use of tools.
- iv. Designed and stamped by a professional engineer registered in the province of British Columbia.
- v. All welding shall comply with the requirements of section 4.8 of the CSA Z98-14 code.

Note: CSA Z432 should be used as a guide when designing guarding.

4) Safety Procedures:

- a) Management shall provide written safety procedures to be used when maintenance, inspection and adjustments are carried out on conveyors.
- b) Management shall provide a document which is signed by all individuals maintaining, inspecting or adjusting a conveyor stating that the individual who is maintaining, inspecting or adjusting a conveyor has read and understands the safety procedures. These documents shall be available to the safety officer upon request.
- c) Only qualified individuals shall be permitted to maintain, inspect or adjust conveyors.

5) Permits and Inspections:

The addition of electrical protective devices, inspection controls and/or guarding shall be considered an alteration.

- i. A technical submission shall be filed for each conveyor with BCSA.
- ii. An alteration permit acceptance inspection shall be completed by a safety officer before the conveyor may be used for public operation.

Part 3: Details of Issue:

This safety order is issued to the following:

All owners of existing conveyors which are used for the purpose of transporting skiers, riders, or foot passengers uphill at locations used for recreation and the owners of any new conveyors installed after the date of issue of this safety order.

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Part 4: Details of Ordering Safety Manager – Please read following page

I certify that I am authorized to issue this safety order in accordance with section 15 (d) of the Safety Standards Act or that I have been delegated this power under section 15 (g) of the Safety Standards Act.



Nav Chahal,
Acting Safety Manager, Elevating, Ropeways & Amusements

Date: June 28, 2017

Safety Standards Act:

Safety Orders

- 31 (1) To prevent, avoid or reduce risk of personal injury or damage to property, a provincial safety manager may, in writing, issue a safety order.
- (2) A safety order may be issued to any person in relation to any of the following:
- (a) regulated work or regulated products generally;
 - (b) a specific class of regulated product or regulated work;
 - (c) a specific regulated product or regulated work.
- (3) For certainty, a safety order issued under this section may apply to
- (a) regulated work that meets the requirements under this Act,
 - (b) regulated work that previously met the requirements under this Act or a former Act but does not meet the current requirements under this Act,
 - (c) regulated products that meet the requirements under this Act, or
 - (d) regulated products that previously met the requirements under this Act or a former Act but do not meet the current requirements under this Act, including a regulated product that bears a certification mark.
- (4) A safety order may specify any requirement that is intended to prevent, avoid or reduce the risk of personal injury or damage to property and may include any of the following orders:
- (a) that an existing regulated work or regulated product must be made safe in compliance with the safety order;
 - (b) that a regulated product must be
 - (i) disconnected from a power source,
 - (ii) uninstalled, or
 - (iii) modified before continued use;
 - (c) that a regulated product must be operated, installed, manufactured or disposed of only as specified or that a regulated product must not be moved;
 - (d) that current or future regulated work or a regulated product must conform to the terms or conditions of the order;
 - (e) that a person take or refrain from taking any action that a safety manager considers necessary to prevent, avoid or reduce a risk of personal injury to persons or damage to property;
 - (f) that the manufacturer make reasonable efforts to recall the regulated product.
- (5) The provincial safety manager must give written notice of the safety order to the following persons:
- (a) the manufacturer of the regulated product;
 - (b) an owner of the regulated product if the identity of the owner is known to the provincial safety manager;
 - (c) the person in charge of the regulated work.
- (6) The notice must state the reasons for the decision and that the person has the right to appeal the decision to the appeal board.
- (7) Despite section 54, a safety order may not be stayed during an appeal.



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References:

Safety Standards Act