DIRECTOR'S SAFETY ORDER

IN THE MATTER OF:

THE TECHNICAL STANDARDS AND SAFETY ACT, 2000, S.O. 2000, c. 16 (the “Act”)
- and -

ONTARIO REGULATION 209/01 (Elevating Devices) made under the Act

Subject: Hydraulic Cylinder Collar Welding on Lifts for Persons with Physical Disabilities

Sent to:
All Elevator Contractors
All Owners of hydraulic vertical platform lifts, designed per CAN/CSA B355

The Director, Elevating Devices Regulation (O.Reg. 209/01) pursuant to his authority under section 14 of the Technical Standards & Safety Act, 2000 hereby orders the following:

1. ORDER to Contractors

1.1. No later than the next maintenance visit, in addition to your normal maintenance functions, all maintaining contractors of hydraulic vertical platform lifts, designed per CAN/CSA B355, shall identify if the hydraulic vertical platform lift has the following design features:
   1) an inverted cylinder
   2) uses a collar around the hydraulic cylinder to transmit loads from the carriage to the hydraulic cylinder, and
   3) has set screws securing the collar to the hydraulic cylinder. (see Figure 1)

1.2. If the hydraulic vertical platform lift has the design features identified in subsection 1.1 of this order, the maintaining contractor shall immediately notify the owner of the owner’s obligations under this order.

1.3. Elevator Contractors who carry out the examinations required by subsection 2.1 of this order shall notify the director or the owner of their findings as described below.

   1) If the welds are present and are of the appropriate size and number, the contractor shall notify the director using a Notification form obtained from the TSSA web site at www.tssa.org.

   The “Subject” entry (box 5.0) should state: Cylinder Collar Weld
   The “TSSA Reference No.” entry (box 7.0) should state: 249/11
   The “Scope of Notification” entry (box 189.00 should state:

   Cylinder collar welds are present. The number of welds and the size of the welds correspond to the manufacturer’s recommendations or the recommendations of a Professional Engineer.

   The completed form can be faxed to (416) 231-5435 or emailed to edminorb@tssa.org.

   Note: There are NO FEES associated with this Notification process.
2) If the welds are missing or are of the incorrect number or size, the mechanic shall immediately remove the device from service and notify the owner as required by section 36.(4) of Ontario Regulation 209/01 (Elevating Devices)

36. (4) Where a mechanic finds that an elevating device is in a condition that constitutes an immediate hazard to the safety of a person or property, he or she shall immediately remove the device from service and notify the owner or contractor maintaining the device.

1.4. Elevator Contractors who perform any necessary repairs as a result of this order shall obtain permission to return the device to service from an inspector as required by Section 36.(8) of Ontario Regulation 209/01 (Elevating Devices) and shall notify the director as described in subsection 1.3 1 of this order).

36. (8) No person shall return an elevating device referred to in subsection (1), (3), (4) or (5) to service until the cause of the incident or condition is identified, the safety of the device restored and an inspector gives permission to return the device to service.

2. ORDER to Owners

2.1. If your elevating device has the design features identified in subsection 1.1 of this order you shall, within 30 days of becoming aware, arrange to have a registered elevator contractor perform the following examinations:

1) observe the collar to verify that the required welds between the collar and the hydraulic cylinder are present, and

2) observe the welds between the collar and the hydraulic cylinder to ensure the size and numbers of welds correspond to the manufacturer’s installation requirements or the recommendations of a Professional Engineer.

2.2. If the elevator contractor observes missing welds or welds of the incorrect size or number, the owner, or the elevator contractor on behalf of the owner, shall notify the directory within 24 hours and submit an incident report within 7 days as required by section 36. (5) of Ontario Regulation 209/01 (Elevating Devices)

36. (5) Where a licence holder for an elevating device finds or becomes aware that the device is in a condition that constitutes an immediate hazard to the safety of a person or property, the licence holder shall,

(a) immediately remove the device from service;
(b) notify the director by telephone or other means within 24 hours of making the finding; and
(c) within seven days of making the finding, submit to the director in the form provided by the designated administrative authority a written report giving full particulars.

Notification by telephone can be made by calling 877-682-8772. Forms for incident reporting can be found on TSSA’s website at www.tssa.org by clicking “Report an Incident” near the upper right hand side of the home page.
3. **Background**

3.1. TSSA has become aware of several incidents involving hydraulic lifts for persons with physical disabilities.

3.2. The lifts involved in these incidents used an inverted hydraulic cylinder design. The investigation into these incidents has revealed that a contributing factor was the incorrect installation or repair of the lifting collar.

3.3. The design of the lifting collar requires that the collar be welded to the hydraulic cylinder in accordance with the manufacturer’s requirements. (See Figure 1)

3.4. The collar set screws are provided for positioning purposes only during installation. These screws are not meant as a means of transmitting the load in the carriage to the hydraulic cylinder.

3.5. In the subject incidents, the required welds have been found to be either missing or removed from the initial installation or to have failed during operation of the device.

3.6. **FOR REFERENCE PURPOSES:** The following are selected extracts of information regarding welding of the cylinder collars from two different manufacturers:

   - It is imperative that the collar be welded to the cylinder once it is in its final position. At least a ¼-inch fillet weld, 2 inches in length is required. Do not over weld. Too much heat can distort the cylinder. The weld should be two 1-inch beads on opposite sides of the collar.
   
   - When finally in position, the collar must have two ½-inch beads of weld on the collar. Do not weld all around.

4.0 This order is effective immediately.

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**Roland Hadaller P.Eng.**
Director, Ontario Regulation 209/01 (Elevating Devices), appointed under the *Technical Standards and Safety Act, 2000*

This Bulletin has been developed in consultation with the Elevating Devices Advisory Council and the Field Advisory Committee.