

**Alberta Regulation
Elevating Devices Codes Regulation AR 192/2015
SINGLE BOTTOM CYLINDER UPGRADES**

ISSUE:

This VARIANCE is being issued by Alberta Municipal Affairs and the Safety Codes Council's Elevator Technical Sub-Council to inform you that effective March 1, 2016 all existing hydraulic elevators with single bulkhead at the bottom of the cylinders be replaced with double bulkhead cylinders or other means to prevent accidental falls due to cylinder failures.

BACKGROUND:

Hydraulic elevators that were installed before 1979 are exposed to a potential safety problem that could result in possible failure should the bottom cylinder plate rupture due to corrosion.

When this happens the oil supporting the elevator will be expelled into the surrounding ground and the elevator could fall at an uncontrolled rate.

Such occurrences have potential to cause serious injury, property damage, and environmental contamination. ASME A17.1-2013/CSA B44-13 has addressed design requirements to prevent free fall for new elevators. Now the same requirements are being put into practice for all existing hydraulic elevators.

It is recognized that the owners will require time to be in compliance with the new requirements as set-out in the Elevating Devices Codes Regulation AR 192/2015 and this variance is expected to provide viable options for equipment owners to meet the ASME A17.1-2013/CSA B44-13, Safety Code for Elevator and Escalators requirements.

CODE REQUIREMENT: ASME A17.1-2013/CSA B44-13

8.6.5.8 Safety Bulkhead.

Hydraulic cylinders installed below ground shall conform to 3.18.3.4 (requirements for new elevators), or the elevator shall conform to 8.6.5.8(a) or 8.6.5.8(b):

- (a) The elevator shall be provided with car safeties conforming to 3.17.1 and guide rails, guide-rail supports and fastenings conforming to 3.23.1; or
- (b) The elevator shall be provided with a plunger gripper conforming to 3.17.3. The plunger gripper shall grip the plunger when the applicable maximum governor tripping speed in table 2.18.2.1 is achieved.

Issue of this STANDATA is authorized by
the Elevator Technical Administrator



[Original Signed]
Dean Bruce



VARIANCE:

It is the intent to have all cylinders meet the requirements of the Elevating Devices Codes Regulation by March 1 2016. This variance is to allow, additional time for owners to determine if their elevators in question have a single bottom cylinder so the necessary action can be taken. To qualify for this extension the following is required:

- a) Identify if the device is in fact a single bottom cylinder, by September 1, 2016 and:
- b) After March 1, 2017 if the cylinder is not in compliance with 8.6.5.8 the following must be incorporated:
 - i. Oil loss monitoring record submitted to AEDARSA monthly, and
 - ii. Enter into a contract with an elevator contractor to meet the requirements of 8.6.5.8 to install plunger gripper or car safeties or replacement.

This time extension is only valid until March 1, 2018, at which time all cylinders must meet the requirements of Elevating Devices Codes Regulation AR 192/2015 and the ASME A17.1-2013/CSA B44-13 Safety Code for Elevator and Escalators.

GENERAL NOTE:

It should be noted that (a) and (b) of clause 8.6.5.8 does not fix the problem by preventing a failure. Rather, the option only makes the elevator safe, should a failure occur and thus prevent injury. Only replacement will prevent failure from occurring.

For further information, please contact the Alberta Elevating Devices and Amusement Rides Safety Association (AEDARSA).

Edmonton (780) 448-0184
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NOTE: Any changes to the original standard operating procedures and policies examined by this office are to be submitted for re-examination and approval to ensure they meet the intent of this Variance.