

Workplace Health and Safety Bulletin



Preventing Overhead Crane and Hoist Collisions: Use of Rubber Bumpers

Section 95(a) of the Occupational Health and Safety (OHS) Code requires that an overhead crane operating on rails, tracks or trolleys be equipped with a positive stop or limiting device, or that the stop or limiting device be attached to the rails, tracks or trolleys. The purpose of the requirement is to prevent the overhead crane from overrunning its safe movement limits or contacting other equipment that may be on the same rail, track or trolley.

Under normal operating conditions, multiple overhead cranes sharing the same rails, tracks or trolleys should not be capable of coming into contact with one another. Depending on the particular situation, this can be achieved through the use of shock-absorbing rail stops, rail-mounted rubber bumpers, limit switches, etc. or some type of speed-limiting motion or proximity sensor mounted on the overhead crane.

It is not uncommon for multiple cranes to share the same rail, track or trolley and to perform lifts requiring more than one crane at a time. In preventing “contact”, the requirement is referring to “uncontrolled, unintended contact” (a collision) that might upset or cause a load to swing, a crane to come off its rails, or a crane or its supporting structures to be damaged. The requirement is not intended to prevent a competent operator from performing a controlled, low-speed contact as may be required when setting up and performing a lift requiring multiple cranes.

The requirement is referring to “uncontrolled, unintended contact” (a collision).

Government of Alberta ■
Employment and Immigration


While rubber bumpers are an acceptable means of protecting equipment, they are unacceptable as an anti-collision device if mounted on the overhead crane. When mounted on a crane, a rubber bumper is considered to be part of the crane and not a positive stop or limiting device capable of preventing contact with other equipment.


The situation is similar to a motor vehicle and its bumper. Alberta Employment and Immigration does not consider the use of rubber bumpers and an administrative procedure to be a reliable and acceptable method of preventing uncontrolled, unintended equipment contact.

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Examples of limiting devices considered acceptable include motion detectors, proximity sensors, limit or travel switches, or other equally effective means. Depending on the situation and equipment used, the limiting device may need to have its functions disabled to permit the lifting equipment to make contact. If this is the case, the lifting equipment's pendant or control panel must be tagged to show that normal function of the limiting device has been disabled. Once the lifting operation is complete, the limiting device must be restored to normal function and the tag removed. The tag serves as a reminder to the equipment operator that the device is not functioning normally and the operator cannot rely on it to prevent uncontrolled equipment contact. The device must be reset and returned to normal function by the operator as soon as the lifting operation is complete. When two or more overhead cranes are used to lift a load, one competent worker must be in charge of the operation.

For more information

 http://employment.alberta.ca/documents/WHS/WHS-LEG_ohsc_2009.pdf
Occupational Health and Safety Code

 http://employment.alberta.ca/documents/WHS/WHS-LEG_ohsc_p06.pdf
OHS Code Explanation Guide – Part 6: Cranes, Hoists and Lifting Devices

Contact us:

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Web Site



www.worksafely.org

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www.qp.gov.ab.ca



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Workplace Health and Safety



<http://employment.alberta.ca/whs-ohs>

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