

Ontario Ministry of Labour information bulletin

This is to alert you to some serious incidents involving Snowmobile Trail Groomers.

Two previous fatalities occurred in 1999 and 2001 when groomers broke through the ice and their occupants drowned.

Hazard Summary

In 2007 a snowmobile trail groomer broke through the ice near the shore of a lake and submerged to its cab roof. The operator was able to escape through the sunroof, but died of hypothermia before reaching help.

Investigation revealed the ice conditions on the lake were inadequate to support the weight of the groomer, and no testing of ice conditions had been conducted. When it sank the windshield of the groomer was pushed into the operator cab by ice or water pressure. Although the operator was able to get out through the sunroof, it was smaller than the minimum dimensions recommended for a secondary exit by the Canadian Standards Association (CSA). The operator was working alone and did not have a system for communication adequate to ensure his safety.

Near Christmas in 2007, a road groomer broke through ice while grooming a road, and was submerged in 65 feet of water. The operator died.

Locations and Sectors

Groomers are primarily used to maintain snowmobile and cross country ski trails and temporary ice roads but may also be used by forestry or exploration companies to access remote areas in the winter. They often are required to cross frozen water bodies (lakes, rivers, swamps etc.).

Applicable Legislation

The Occupational Health & Safety Act sections:

Employer duties

- 25(1)(b) – Equipment & protective devices maintained,
- 25(1)(d) – Protective devices used,
- 25(2)(a) – Training and supervision,
- 25(2)(h) – All every reasonable precautions,
- 25(2)(j) – Develop and implement H&S policy and programs

Supervisor duties:

- 27(2)(a) - Advise a worker of actual or potential hazards,
- 27 (2)(a) – Take every reasonable precaution and

Worker duties:

- 28(2)(b) – Use or operate equipment in a safe manner.

Various regulations may apply depending on the workplace location such as logging (Regulations for Industrial Establishments), ice road building projects (Regulations for Construction Projects) and mining exploration (Regulation for Mines and Mining Plants).

Precautions

Safe work practices must be implemented when groomers are to be operated on ice.

- Ice measurements must be taken regularly in accordance with the Employer's policy, to ensure the bearing capacity of the ice is suitable for the machine's weight and speed.
- Two exits are required for equipment such as groomers. This requirement is met by the two side doors; however they may be difficult or impossible to open once submerged. When traveling on ice the door(s) should be tied open, or as an alternative a roof hatch provided that meets the minimum dimensions for exits specified by CSA.
- Large glass surfaces should be reinforced to prevent them from entering the cab.

- Employers must ensure that there is an adequate working alone/communications policy in place to ensure worker safety.

Information on determining the bearing capacity of ice and safe work practices are available from several sources, a well recognized one being “Safety Guide for Operations Over Ice” from the Treasury Board of Canada. <http://www.tbs-sct.gc.ca>

http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/tbm_119/chap5_3_e.asp

This memorandum does not represent a published Ministry of Labour alert. However, you may find the information useful as a basis for alerting your clients about this specific hazard and assisting with an assessment of the hazard and implementation of a program that addresses the appropriate operation of snowmobile trail groomers.

[Received by the Construction Safety Association of Ontario in February 2008.]