State of Minnesota

HOUSE OF REPRESENTATIVES

EIGHTY-EIGHTH SESSION

H. F. No. 1094

03/04/2013 Authored by Persell; Johnson, S., and Mahoney
The bill was read for the first time and referred to the Committee on Labor, Workplace and Regulated Industries

A bill for an act

relating to occupational safety; providing standards for recovery of embedded equipment and vehicles; proposing coding for new law in Minnesota Statutes, chapter 182.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. **[182.6771] CITATION; EMBEDDED EQUIPMENT AND VEHICLE RECOVERY SAFETY.**

Sections 182.6771 to 182.6776 may be cited as the "Embedded Equipment and Vehicle Recovery Safety Act."

Sec. 2. **[182.6772] DEFINITIONS.**

Subdivision 1. **General.** For the purpose of sections 182.6771 to 182.6776, the terms defined in this section have the meanings given them.

Subd. 2. **Cable.** "Cable" means a rope or steel wire, used for lifting, pulling, towing, or securing.

Subd. 3. **Clevis or shackle.** "Clevis" or "shackle" means a U-shaped device with a hole in the end of each arm which is secured by a bolt or pin to connect to other recovery equipment.

Subd. 4. **Chain.** "Chain" means a flexible, interconnected series of links, including but not limited to those made of metal, used to support, restrain, drive, or pull.

Subd. 5. **Competent individual.** "Competent individual" means an individual who: (1) is capable of identifying existing or potential working conditions which are hazardous to employees; and (2) has the authority to stop work or take prompt corrective actions to eliminate or control the hazardous working conditions.

Subd. 6. **Domestic type.** "Domestic type" means having been produced or manufactured in, or having specifications meeting the minimum quality standards of materials or products in, the United States of America.

Subd. 7. **Embedded.** "Embedded" means to become deeply or solidly lodged in mud, soil, or snow.

Subd. 8. **Employee.** "Employee" has the meaning given in section 182.651, subdivision 9.

Subd. 9. **Employer.** "Employer" has the meaning given in section 182.651, subdivision 7.

Subd. 10. **Equipment and vehicles.** "Equipment and vehicles" includes, but is not limited to: tractors, combines, trucks, implements, bulldozers, graders, scrapers, pay loaders, skid-steer loaders, track or wheel articulating loaders, backhoes, all-terrain vehicles, automobiles, and tractor-trailer combinations.

Subd. 11. **Ferrule.** "Ferrule" means a circular clamp used to hold together and attach fibers, wires, or posts, generally by crimping, swaging, or otherwise deforming the ferrule to permanently tighten it onto the parts that it holds.

Subd. 12. **Force.** "Force" means the strength or energy exerted or brought to bear, that causes motion or change.

Subd. 13. **Hazard zone.** "Hazard zone" means the zone or area in which a malfunction of towing equipment is likely to impact and includes the area enclosed by: (1) a circle drawn around the connection point on the towing vehicle or machinery; and (2) a circle drawn around the connection point of the towed vehicle or machinery. The radius of each of the circles in clauses (1) and (2) must be at least equal to the length of the towing equipment.

Subd. 14. **Kinetic energy.** "Kinetic energy" means the energy of a body that results from its motion.

Subd. 15. **Qualified individual.** "Qualified individual" means an individual in possession of a recognized degree, certificate, or professional standing, or who has extensive knowledge, training, and experience and has demonstrated successful problem-solving skills relating to the subject matter, the work, or the project.

Subd. 16. **Recovery operation.** "Recovery operation" means using a controlled force to extricate an embedded vehicle.

Subd. 17. **Rope.** "Rope" means a strong cord made by twisting together strands of hemp, other types of fiber, or wire.

Subd. 18. **Swaging.** "Swaging" means a forging process in which the dimensions of a cable, wire rope, or other material is altered using a die or dies, into which the item

is forced. A mechanical or hydraulic process is used to secure the item securely within a ferrule.

Subd. 19. **Taut.** "Taut" means pulled or stretched tightly.

Subd. 20. **Wire rope.** "Wire rope" means a rope made of twisted strands of wire.

Sec. 3. **[182.6773] SCOPE AND APPLICABILITY.**

Sections 182.6771 to 182.6776 apply to employers and employees operating in Minnesota, as outlined in section 182.652, subdivision 1, except agricultural operations and other business establishments meeting exemptions as defined in the Federal Appropriations Act as specified to state designees in the federal OSHA Enforcement and Compliance directive, CPL 02-00-051.

Sec. 4. **[182.6774] OPERATING PROCEDURES; RECOVERY EQUIPMENT AND SUPPLIES; REQUIREMENTS.**

Subdivision 1. **Operating procedures.** An employer must ensure that the following conditions have been satisfied before any employee is allowed to use recovery equipment or undertake the recovery of embedded equipment or vehicles:

(1) a competent or qualified individual shall survey the circumstances to ensure a safe operation;

(2) prior to recovery operations, a competent individual shall be made available to direct the operation;

(3) communication shall be maintained between all employees or other persons involved. If adequate communication cannot be made by voice or hand signals, an additional adequate means of communication shall be used;

(4) only the operators of force-pulling equipment shall be allowed in the hazard zone during recovery operations;

(5) draw bars or other manufacturer-approved connection equipment shall be used for anchorage points during the recovery operation;

(6) all anchorage points shall be of sufficient strength to withstand the load and the forces applied by the recovery equipment;

(7) assurances shall be made by the competent individual as to the selection and use of the proper connection equipment including, but not limited to, chains, ropes, clevises, and shackles;

(8) recovery equipment shall be taut before applying a force with the use of chains and wire ropes;

(9) exceptions shall be allowed for fiber ropes and straps if used following manufacturer specifications in conjunction with safety straps. Running and jerking starts are prohibited with the use of steel chains and wire ropes; fiber ropes and straps utilizing kinetic energy properties must be used in accordance with manufacturer specifications;

(10) recovery equipment shall have like or similar capacity ratings and be of sufficient capacities to handle the load with a safety factor designed for the equipment being used; and

(11) when possible, all materials or obstructions located in, on, or around the wheels, frames, or other parts of the equipment to be recovered must be removed.

Subd. 2. **General equipment requirements.** Recovery tools and equipment, whether powered or manually operated, shall be used only for their intended purpose. Tools and equipment shall not be altered, modified, or used for anything other than their intended purpose without the manufacturer's written approval unless under the direction of a qualified individual in accordance with accepted engineering requirements to prevent creating an additional hazard. Ratings shall be clearly visible and implemented on all recovery equipment in use.

Subd. 3. **Chains, ropes, and connections; requirement.** (a) Chain and wire ropes shall be of the domestic type and shall be no less than a grade of 80. Chains, wire rope, and connectors shall be rated with a 4:1 safety factor with alloy steel, and a 5:1 safety factor with carbon steel.

(b) Wire rope or cable connections shall be affixed by: (1) swaging; or (2) clamping only if there are at least three forged clamps spaced a minimum of six rope diameters apart and attached with the base or saddle of the clamp against the longer or live end of the cable.

(c) Wire rope clips must meet the standards provided for under Minnesota Rules, part 5205.0700, for rope diameter, number of clips, and minimum spacing requirements. Wire rope clamps must be installed and torqued as provided by manufacturer specifications. Wire rope-related equipment must conform to the diameter of the wire rope being used.

Sec. 5. **[182.6775] TRAINING.**

Training shall be provided by a competent individual on the proper selection, use, inspection, and maintenance of recovery equipment. Training shall be done prior to initial recovery tasks and annually thereafter for each employee. Additional training shall take place when new equipment or new procedures have been implemented. Training shall be made available by the employer at no cost to the employee.

Sec. 6. **[182.6776] INSPECTIONS.**

Periodic inspections shall be performed on recovery equipment by a competent individual before and after each use. Inspections conducted under this section must include visual inspections and nondestructive testing that is capable of determining that erosion, corrosion, stress, fatigue, damage, repairs, or alterations have not compromised the equipment. Wire rope, chains, fiber ropes, and other recovery equipment shall be immediately removed from service when defects are identified. Safe usage, proof testing, retention of manufacturer certificates and labels, proper storage, protection, and all other criteria that are not specifically addressed by this section are covered by paragraph 5.2 of the American Society for Testing and Materials, Specification A391.65 (ANSI G61.1-1968).