

PART 3: RIGHTS AND RESPONSIBILITIES

WORKPLACE INSPECTIONS

Inspection of tools and equipment	3.6	Machinery, tools and equipment must be inspected in accordance with the manufacturer’s recommendations or as otherwise specified by the relevant provisions of this Regulation.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer’s requirements found in the *Occupational Health and Safety Regulation* (“*OHSR*”) have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer’s requirements.

PART 4: GENERAL CONDITIONS

BUILDINGS, STRUCTURES AND EQUIPMENT

Safe machinery and equipment

- 4.3 (1) The employer must ensure that each **tool**, machine and piece of equipment in the workplace is
- (a) capable of safely performing the functions for which it is used, and
 - ~~(b) operated in accordance with the manufacturer's recommendations and instructions if available, with safe work practices and with the requirements of this Occupational Health and Safety Regulation.~~
 - (b) selected, used and operated in accordance with**
 - (i) the manufacturer's recommendations and instructions, if available,**
 - (ii) safe work practices, and**
 - (iii) the requirements of this Regulation.**
- ~~(2) A machine or piece of equipment must be inspected, tested and maintained at the intervals and by the means specified by the manufacturer and any standard the machine or piece of equipment is required to meet, or as specified by a professional engineer.~~
- (2) Unless otherwise specified by this Regulation, the installation, inspection, testing, repair and maintenance of a tool, machine or piece of equipment must be carried out**
- (a) in accordance with the manufacturer's instructions and any standard the tool, machine or piece of equipment is required to meet, or**
 - (b) as specified by a professional engineer.**
- (3) A tool, machine or piece of equipment determined to be unsafe for use must be identified in a manner which will ensure it is not inadvertently returned to service until it is made safe for use.
- (4) Unless otherwise specified by this Regulation, any modification of a tool, machine or piece of equipment must be carried out in accordance with**
- (a) the manufacturer's recommendations and instructions, if available,**
 - (b) safe work practices, and**
 - (c) the requirements of this Regulation.**

Note: The procedure for determining if an item is unsafe for use is provided by the requirements for the correction of unsafe conditions and refusal of unsafe work in Part 3 (Rights and Responsibilities).

Explanatory Note

This provision has been broadened to include typical wording found in many other specific provisions which are proposed for deletion.

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES

SUBSTANCES UNDER PRESSURE

- Containers** **5.36** (1) A tank, cylinder, bottle or other vessel containing a substance under pressure, together with any associated pressure or flow regulator and piping or conveyance system, must be
- (a) protected from sparks, flames, excessive heat, physical damage, electrical contact or corrosion, **and**
 - (b) equipped with suitable pressure relief mechanisms installed so that no worker will be endangered in the event of discharge, ~~and~~
 - ~~(c) modified or repaired only in accordance with the manufacturer's instructions.~~
- (2) Hand-held aerosol spray cans are exempt from the requirements of subsection (1)(b).

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES

SUBSTANCES UNDER PRESSURE

Regulator maintenance	5.42	A regulator used for a compressed gas cylinder must be regularly serviced in accordance with the manufacturer's instructions.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES

EMERGENCY WASHING FACILITIES

- Testing and maintenance** **5.93** ~~(1) The employer must ensure that an emergency eyewash or shower facility is tested upon initial installation in accordance with the manufacturer's instructions.~~
- (2) The employer must ensure that a plumbed emergency eyewash or shower facility is full flow tested at least once per month, for a sufficient length of time to completely flush the branch of the water line supplying the eyewash.
- ~~(3) The employer must ensure that water or flushing solution stored in a portable (non-plumbed) eyewash facility is protected from contaminants and treated or replaced regularly in accordance with the manufacturer's instructions to prevent the growth of micro-organisms.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 6: SUBSTANCE SPECIFIC REQUIREMENTS

ASBESTOS

Designated Work Areas and Containments

Glove bags	6.15	<p>The employer must ensure that when a prefabricated glove bag is used for the removal of asbestos insulation from pipes, ducts and similar structures</p> <ul style="list-style-type: none">(a) the glove bag is sealed to prevent the release of asbestos fibres into the work area outside the bag, and is used according to the glove bag manufacturer's instructions,(b) waste materials on surfaces are washed to the bottom of the glove bag and all exposed asbestos insulation is encapsulated while inside the glove bag enclosure,(c) all glove bags are evacuated through a HEPA vacuum to remove the air inside the bag, prior to removal of the bag, and(d) after removing the glove bag, all exposed surfaces are cleaned again.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 6: SUBSTANCE SPECIFIC REQUIREMENTS

TOXIC PROCESS GASES

- Monitors and alarms** **6.128** (1) Where practicable, the employer must install continuous monitoring systems that detect fugitive emissions and accidental releases and effectively determine work conditions within the restricted access area.
- (2) Continuous monitors must be connected to alarm systems to adequately warn workers of hazardous conditions and, when practicable, must be designed to safely activate appropriate control measures when emergency situations are detected.
- (3) Monitoring and alarm systems must be
- (a)** tested at least monthly for proper operation, **and**
 - (b)** calibrated at least annually
- by authorized personnel using procedures acceptable to the board ~~and maintained according to manufacturer's instructions.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 6: SUBSTANCE SPECIFIC REQUIREMENTS

TOXIC PROCESS GASES

Maintenance **6.132** The employer must ensure that the servicing and maintenance of equipment and machinery addresses all critical components ~~and is scheduled and performed in accordance with the manufacturer's instructions.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 8: PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

GENERAL REQUIREMENTS

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| Selection, use
and
maintenance | 8.3 | <p>(1) Personal protective equipment must</p> <ul style="list-style-type: none">(a) be selected and used in accordance with the manufacturer's instructions and recognized standards, and provide effective protection,(b) not in itself create a hazard to the wearer,(c) be compatible, so that one item of personal protective equipment does not make another item ineffective, and(d) be maintained in good working order and in a sanitary condition. <p>(2) If the use of personal protective equipment creates hazards equal to or greater than those its use is intended to prevent, alternative personal protective equipment must be used or other appropriate measures must be taken.</p> |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 8: PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

BUOYANCY EQUIPMENT

Automatically inflatable lifejackets	8.29	If automatically inflatable lifejackets are used, the employer must keep a record of all inspections made and maintenance performed on them. Automatically inflatable lifejackets may be used only if they are inspected and maintained in accordance with the manufacturer's instructions and recommendations, and records of all inspections and maintenance are made.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 9: CONFINED SPACES

VERIFICATION AND TESTING

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| Procedures
and
equipment | 9.26 | <p>(1) Testing must be carried out in a safe manner and as specified in the written procedures.</p> <p>(2) Each confined space test must be carried out by an adequately trained worker, using reliable equipment that is properly serviced, calibrated and maintained in accordance with the instructions of the manufacturer of the equipment.</p> <p>(3) The test record must show the date and time of the test, the initials of the tester and the levels or condition found.</p> <p>(4) Test results, other than continuous monitoring results, must be posted without delay at all points of entry to the confined space.</p> |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements. In addition see sections 9.4, 9.5 and 9.7 of the OHSR.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

GENERAL REQUIREMENTS

Safe operation	12.9	A machine, piece of equipment and industrial process must be operated in accordance with the manufacturer's recommendations and instructions, and with this Regulation.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

GUARDING MECHANICAL POWER TRANSMISSION PARTS

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| Flywheels and pulleys | 12.21 | <p>(1) A pit for a flywheel or pulley must have curbs or toeboards around the upper edge of the pit.</p> <p>(2) A flywheel or pulley must not be operated at a speed that exceeds the manufacturer's specifications.</p> <p>(3) A flywheel or pulley which is defective or has been exposed to excessive heat must be removed from service and must not be returned to service until it has been repaired according to the manufacturer's recommendations, or certified safe for use by a professional engineer.</p> |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

ABRASIVE EQUIPMENT

**Speed of
abrasive
wheels**

- 12.46** ~~(1) An abrasive wheel must not be rotated at a speed that exceeds the wheel manufacturer's specifications.~~
- (2) The allowable arbor or shaft speed of abrasive equipment must be clearly marked on the equipment.
- (3) A pneumatic grinder must have a governor which limits maximum shaft speed to that specified by the tool manufacturer, and the maximum rated speed must be marked on the equipment.
- ~~(4) An abrasive or wire wheel must be selected and used in accordance with the wheel manufacturer's recommendations.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 12: TOOLS, MACHINERY AND EQUIPMENT

ABRASIVE EQUIPMENT

Dressing grinding wheels	12.50	A grinding wheel must be dressed with the proper tool at the intervals recommended by the wheel manufacturer.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

POWDER ACTUATED TOOLS

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| Tool use | 12.56 | <ul style="list-style-type: none">(1) Only a qualified and authorized person may handle or use a powder actuated tool or power loads.(2) The operator must have immediately available when using or servicing a powder actuated tool<ul style="list-style-type: none">(a) a copy of the manufacturer's operating instructions for the tool,(b) a copy of the power load and fastener charts for the tool, and(c) any accessories or tools needed for use or field servicing of the tool, including personal protective equipment.(3) A powder actuated fastening system must be used and serviced in accordance with the requirements of the tool manufacturer.(4) A powder actuated tool must not be used in an explosive or flammable atmosphere.(5) A powder actuated tool may only be loaded when it is being prepared for immediate use, and must be unloaded at once if work is interrupted after loading.(6) A powder actuated tool must not be pointed at any person.(7) If a powder actuated tool misfires, the operator must hold the tool firmly against the work surface for at least 5 seconds, then follow the manufacturer's instructions for such occurrences, and until the cartridge has been ejected, keep the tool pointed in a direction which will not cause injury to any person. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that duplicate the general duty provision in the *OHSR* relating to authorizing the use of equipment have been removed. Section 4.10 of the *OHSR* provides that a machine or piece of equipment may only be operated by authorized persons.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

AUTOMOTIVE LIFTS AND OTHER VEHICLE SUPPORTS

Assembly and installation **12.75** An automotive lift, shop crane, jack or other vehicle support must be assembled and installed by qualified personnel ~~according to the manufacturer's recommendations.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

MISCELLANEOUS EQUIPMENT

**Pneumatic
nailing and
stapling tools**

- 12.82**
- (1) A hand held pneumatic nailing or stapling tool capable of driving fasteners larger than 1.2 mm (0.05 in or 18 gauge ASWG) must not activate unless the operator performs 2 actions, one of which is to place the tool against a work surface.
 - (2) The trigger of a pneumatic nailing or stapling tool must not be taped or otherwise secured in the "on" position, or held in the "on" position while moving between operations.
 - (3) The air supply to a pneumatic nailing or stapling tool must be disconnected before adjusting or servicing the tool.
 - ~~(4) The maximum safe operating air pressure specified by the manufacturer of the tool, hoses and fittings must not be exceeded.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

ABRASIVE BLASTING AND HIGH PRESSURE WASHING

Pressure restriction	12.107	Hoses, fittings and all other components must not be used at a pressure higher than the pressure rating specified by the manufacturer.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

WELDING, CUTTING AND ALLIED PROCESSES

Standards	12.112	Welding, cutting and similar processes must be carried out according to the requirements of <ul style="list-style-type: none">(a) CSA Standard W117.2-94, Safety in Welding, Cutting, and Allied Processes, or other standard acceptable to the board,(b) the manufacturer's instructions and recommendations for the equipment being used, and(c) other applicable requirements of this Regulation.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that allow the Board to accept publications, codes, standards, practices, procedures or rules other than those specified in a provision have been removed. These provisions have been replaced with one general provision in section 4.4 of the OHSR, as amended.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

WELDING, CUTTING AND ALLIED PROCESSES

Flashback prevention	12.120	Suitable safety devices to prevent reverse gas flow and to arrest a flashback must be installed on each hose in an oxyfuel system, between the torch and the regulator, and in accordance with the manufacturer's instructions.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer’s requirements found in the *Occupational Health and Safety Regulation* (“*OHSR*”) have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer’s requirements.

PART 12: TOOLS, MACHINERY AND EQUIPMENT

Dry Cleaning

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| Systems and equipment | 12.144 | <p>(1) Dry cleaning systems and equipment must be designed, installed, operated and maintained</p> <ul style="list-style-type: none">(a) in accordance with the manufacturer's instructions,(b) to prevent the escape of solvent, and(c) to maintain concentrations of solvent vapour in the workplace below the applicable exposure limits. <p>(2) Dry cleaning solvents may only be used in transfer, dry-to-dry, or fully enclosed refrigerated systems designed and installed for this purpose.</p> |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that simply provide a cross-reference to other parts of the OHSR have been removed. See section 5.48 of the OHSR.

PART 14: CRANES AND HOISTS

MOBILE CRANES, BOOM TRUCKS AND AERIAL LADDER CRANES

- Outriggers and stabilizers** 14.67 ~~(1) Outrigger beams, jacks and stabilizers must be deployed as specified by the crane or boom truck manufacturer if required to meet load chart requirements.~~
- (2) Outrigger beams on a crane or boom truck must be marked to indicate when the necessary extension has been achieved.
- ~~(3) Outrigger beams on a crane or boom truck must be secured against retraction if required by the manufacturer.~~
- (4) Floats must be secured to the outrigger jacks of a crane or boom truck when outriggers are used.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements. In addition, see section 14.2 of the OHSR, as amended, which provides additional requirements for cranes.

PART 14: CRANES AND HOISTS

TOWER CRANES

Wind limitations

- 14.92
- (1) An anemometer must be mounted on the crown, apex or operator's cab of each tower crane.
 - (2) The readout for the anemometer required by subsection (1) must be readable by the operator while at the crane controls.
 - (3) Tower crane operations must stop when **a load cannot be handled safely because of wind.**~~the wind speed exceeds the maximum permitted wind speed for safe operation of the crane as specified by the tower crane manufacturer, or when a load cannot be handled safely because of wind.~~
 - (4) In the absence of the manufacturer's specifications for maximum permitted wind speed during crane operation, the maximum allowable wind speed in which a tower crane may be used is 50 km/h (30 mph), or less if a load cannot be handled safely because of wind.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 15: RIGGING

GENERAL REQUIREMENTS

- Use of rigging 15.4** ~~(1) Rigging and fittings must be used only for the purposes for which they were designed and manufactured.~~
- (2) The load applied to any rigging or rigging assembly must not exceed the working load limit.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 15: RIGGING

GENERAL REQUIREMENTS

Wire rope lubrication ~~15.13~~ ~~Wire rope must be lubricated periodically as specified by the manufacturer to prevent strength loss due to premature wear or corrosion.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 15: RIGGING

GENERAL REQUIREMENTS

- Spooling rope 15.19** ~~(1) Rope must be spooled onto a drum according to the manufacturer's instructions.~~
- (2) Except as provided in subsection (3), workers must not use their hands or feet or any hand held object to guide the rope ~~onto the drum~~ **when spooling the rope onto the drum.**
- (3) In an emergency a steel guide bar of acceptable design may be used to guide the rope onto the drum, but the line speed must be kept as low as practicable and the worker must be positioned to be clear of the drum.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 15: RIGGING

GENERAL REQUIREMENTS

- Wire rope clips** **15.22** ~~(1) U-bolt and double saddle type wire rope clips must be installed and used as specified by the manufacturer.~~
- (2) If the manufacturer's specifications **for installing and using wire rope clips** cannot be determined, the number of clips and the installation torque must be as shown in Table 15-2.
 - (3) The U-bolt part of a wire rope clip must be installed so that it bears on the unloaded end of the wire rope.
 - (4) Malleable cast iron wire rope clips must not be used for hoisting or other critical applications unless approved by the manufacturer for that purpose.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER’S

PART 15: RIGGING

SLINGS

Adverse conditions ~~15.35~~ ~~The working load limit of a sling used under adverse conditions, such as in chemically active environments, must be reduced according to the manufacturer's specifications.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer’s requirements found in the *Occupational Health and Safety Regulation* (“*OHSR*”) have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer’s requirements.

PART 16: MOBILE EQUIPMENT

TIRE SERVICING

- Equipment and procedures** **16.48**
- (1) A tire must be deflated before demounting, and deflation must be done in an area where ignition sources are controlled or removed.
 - (2) Each tire, rim and wheel part must be cleaned and inspected for damage before mounting, and cracked, broken, bent or otherwise damaged parts replaced.
 - (3) A tire must be inflated using a remote chuck with a sufficient length of hose and an inline, hand operated valve with a gauge so the worker is outside the likely trajectory should wheel components separate during inflation.
 - (4) A tire mounted on a multipiece rim wheel must be placed in a cage or other restraining device when it is being inflated.
 - (5) If a bead expander is used to seat the beads of a tire, it must be removed before the tire is inflated to more than 34.5 kPa (5 psi).
 - ~~(6) A tire must be inflated to the pressure specified by the tire manufacturer for the particular application.~~
 - (7) Welding or heating on assembled rim or wheel parts is not permitted, except that limited heating to facilitate removal of a wheel from a hub is acceptable after the tire has been deflated by removing the valve core.
 - (8) A tire on a multipiece rim wheel must be deflated to atmospheric pressure by removing the valve core or by other effective means before demounting, and in the case of a dual wheel arrangement, both tires must be deflated to atmospheric pressure before loosening any wheel nuts.
 - (9) Multipiece rim and wheel components must not be interchanged except as permitted by rim/wheel charts from the appropriate rim/wheel manufacturer.
 - (10) Multipiece rim wheels which have been used at less than 80% of the recommended inflation pressure for that application must be deflated, disassembled and inspected before reinflation.
 - (11) Procedures other than those specified in subsections (1) to (10) that provide equivalent or better safety may be used if acceptable to the board.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 16: MOBILE EQUIPMENT

ALL-TERRAIN VEHICLES

- Operating restrictionsUse on sloping ground**
- 16.52** ~~(1) If an ATV is used to move a load, the load must conform to the weight and height specifications of the ATV manufacturer.~~
- (2) If the manufacturer has not set limits for operation of the ATV on sloping ground, 5% is the maximum allowable slope unless the employer has developed and implemented written safe work procedures appropriate for any steeper slope on which the equipment is to be used.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer’s requirements found in the *Occupational Health and Safety Regulation* (“OHSR”) have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer’s requirements.

PART 17: TRANSPORTATION OF WORKERS

MARINE CRAFT

- Seaworthiness** 17.17 A boat or other vessel used for transporting workers must
- (a) be seaworthy, **and**
 - ~~(b) be properly maintained to the manufacturer's specifications, and~~
 - (c) meet safety standards applicable to the size and carrying capacity of the vessel.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 19: ELECTRICAL SAFETY

ELECTROFISHING

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| Manufacturer's instructions | 19.43 | (1) Electrofishing equipment must be operated and maintained in accordance with the manufacturer's instructions.
(2) Safe operating procedures from the manufacturer must be readily available for electrofishing equipment. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the *OHSR*, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

CONCRETE FORMWORK AND FALSEWORK

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| Equipment requirements | 20.22 | (1) Equipment, materials and hardware which cannot be identified as meeting the standards specified in the professional engineer's drawings and specifications must not be used. |
| | | (2) Proprietary formwork components must be used and maintained as required by the manufacturer's instructions. |

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

CONCRETE PUMPING

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|---------------------------------------|--------------|---|
| Load on a
placing
boom | 20.41 | (1) The load on a concrete placing boom or mast must not exceed the specification of the manufacturer or a professional engineer. |
| Use of a
placing boom | | (2) The length and diameter of hose suspended from a concrete placing boom or mast must not exceed the specification of the manufacturer or a professional engineer. |
| | | (3) A concrete placing boom or mast must not be used to drag hoses or other loads. |

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

CONCRETE PUMPING

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| Pipe diameter and thickness | 20.42 | <p>(1) The diameter and weight of pipe mounted on a concrete placing boom or mast must not exceed the boom manufacturer's specification or the specifications of a professional engineer.</p> <p>(2) The pipe wall thickness of pipe mounted on a concrete placing boom or mast must be sufficient to withstand a pressure greater than the maximum pressure that the concrete pump can produce in the concrete being pumped.</p> <p>(3) The method used to measure pipe wall thickness on a concrete pump, placing boom or mast must be in accordance with the manufacturer's instructions, and Pipe sections must be replaced when thickness measurements indicate that wall thickness has been reduced to the limits specified by the manufacturer.</p> |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer’s requirements found in the *Occupational Health and Safety Regulation* (“OHSR”) have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer’s requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

TILT-UP BUILDING CONSTRUCTION

Design requirements

- 20.56** (1) The plans and specifications for tilt-up panel erection and bracing must ensure that the load to be imposed on each lifting and bracing insert and anchor during panel lifting, moving and bracing will not exceed
- ~~(a) the working load limit specified for the insert or anchor by its manufacturer,~~
 - ~~(ba) if a working load limit for the insert or anchor is not specified by the manufacturer, a maximum working load on the component determined by dividing the manufacturer's guaranteed minimum failure load by the applicable safety factor required by subsection (2) or (3), or~~
 - ~~(cb) if the information required by paragraphs (a) or (b) is not available, the maximum load to be imposed on an insert or anchor must be determined by calculating its ultimate load capacity in accordance with accepted engineering practice and the *BC Building Code*, and dividing this value by the applicable safety factor required by subsection (2) or (3).~~ **if the working load limit or the manufacturer's guaranteed minimum failure load is not available, a maximum working load determined by calculating the ultimate load capacity in accordance with accepted engineering practice and the *BC Building Code*, and dividing this value by the applicable safety factor required by subsection (2) or (3).**
- (2) The minimum safety factor for cast-in lifting inserts is 2.5 except as provided in subsection 20.57(5); and for lift-points secured by drilled-in anchors, the minimum safety factor is 4.0.
- (3) The minimum safety factors for bracing components are
- (a) 1.67 for braces, and for the uplift or sliding of an anchor slab,
 - (b) 2.0 for cast-in brace inserts, and
 - (c) 2.5 for drilled-in bolt or expansion anchors, or greater if so specified by the manufacturer.
- (4) The number of lift inserts for a panel must not be less than the total weight of the panel divided by the working load limit for the inserts in pullout and in shear.
- (5) The temporary bracing for a tilt-up panel must be designed to resist the greater of
- (a) an unfactored design wind pressure of 700 Pa (15 psf), or
 - (b) wind pressure calculated in accordance with the *BC Building Code* based on the probability of 1 in 10 of being exceeded in any year, as listed in the *Supplement to the National Building Code of Canada 1990* or as otherwise specified by the local building authority, multiplied by a pressure coefficient of 1.5.

**PROPOSED AMENDMENTS TO THE OCCUPATIONAL HEALTH AND SAFETY REGULATION
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S**

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

CONCRETE PRE-STRESSING AND POST-TENSIONING

- Strand vises and hydraulic devices** **20.66** ~~(1) Strand vises and hydraulic equipment and components must be used and maintained in accordance with the manufacturer's instructions.~~
- (2) Strand vises must not be reused until they have been inspected by a qualified person and determined to be safe for reuse.
 - (3) Damaged or worn vises and hydraulic equipment must be removed from service.
 - (4) The supervisor must ensure that operators are given the maximum allowable values for both stretch of the tendon and hydraulic pressure at the pump.
 - (5) If there is a significant difference between the expected value and the measured value for either stretch of a tendon or hydraulic pressure at the pump, the workers must stop operations on that particular tendon and consult with the professional engineer in charge to obtain instructions on how to proceed.
 - (6) Each jack pressure gauge must be checked at frequent intervals against a master gauge, and the site engineer must be furnished with a calibration chart.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

ROOF WORK

Mechanical equipment	20.77	Mechanical or powered equipment which has the potential to push or pull a worker over an unguarded edge must not be used unless operated according to the manufacturer's instructions and procedures acceptable to the board.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

EXCAVATIONS

Manufactured shoring ~~20.84~~ ~~Manufactured equipment for supporting an excavation must be used, inspected, repaired, and maintained in accordance with the manufacturer's instructions or those of a professional engineer.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

EXCAVATIONS

Trench support structures

- 20.85** (1) Trench support structures, other than those designed by a professional engineer, must comply with Table 20-1 for the following relevant soil conditions:

Soil type	Description of soil
A	hard and solid
B	likely to crack or crumble
C	soft, sandy, filled or loose

- (2) If Table 20-1 is to be used for a combination of supporting and sloping, the selection of shoring elements must be based on the overall depth of the excavation, and the arrangement must conform to Figure 20-3.
- (3) Cross braces and trench jacks must be installed in a horizontal position and must be secured against dislodgment.
- (4) The minimum number of cross braces at each cross bracing location is determined by the trench depth as follows:

Depth at location	Number of braces
up to 2.4 m (8 ft)	2
2.4 m to 3.7 m (8 ft to 12 ft)	3
3.7 m to 4.6 m (12 ft to 15 ft)	4
4.6 m to 6 m (15 ft to 20 ft)	5

- (5) At each cross bracing location the cross braces must be less than 1.2 m (4 ft) apart, and the uppermost cross brace must be within 60 cm (2 ft) of ground level.
- ~~(6) Manufactured trench jacks extended by a screw, hydraulic or pneumatic means must be used in accordance with the instructions of the manufacturer or a professional engineer.~~
- (7) Hydraulic or pneumatic trench jacks must have a means of ensuring that they will not collapse in the event of loss of internal pressure.
- (8) Uprights must not spread outwards more than 15 degrees from the vertical when viewed along the trench.
- (9) Plywood may be substituted for two inch thick shoring elements provided that
- the plywood is not less than 19 mm (3/4 in) thick,
 - the trench is not over 2.7 m (9 ft) in depth,
 - uprights are installed at not over 60 cm (2 ft) centres,
 - cross braces do not bear directly on plywood, and
 - cross braces bearing on uprights or walers are located at all joints in plywood sheathing.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 21: BLASTING OPERATIONS

ELECTRICAL INITIATION

Testing Capacity of blasting machines	21.64	(1) A blasting machine must be maintained in good mechanical condition and must be tested according to the manufacturer's specifications.
		(2) The capacity of the a blasting machine must be clearly marked on the blasting machine and must not be exceeded.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements. In addition see sections 4.1 and 4.11 of the OHSR which contain requirements, in the maintenance of machinery.

PART 22: UNDERGROUND WORKINGS

WORKING REQUIREMENTS

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| Atmospheric testing | 22.30 | <ol style="list-style-type: none">(1) The employer must ensure that tests of the underground atmosphere are conducted to ensure that an oxygen deficient atmosphere does not exist, that a worker's exposure to air contaminants does not exceed the exposure limits in Part 5 (Chemical and Biological Substances), and that a worker's exposure to respirable combustible dust (RCD) does not exceed its exposure limit, which is 1.5 mg/m³, based on an 8-hour time weighted average.(2) Tests must be conducted by a qualified person using equipment, devices and methods acceptable to the board.(3) Testing equipment must be maintained in good working order, calibrated in accordance with the manufacturer's specifications, and Calibrations of testing equipment must be recorded in the Underground Record.(4) Test results must be recorded and signed in the Underground Record by the qualified person doing the testing, and must be readily available for review by affected workers. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements. In addition, see section 4.1 of the OHSR which requires equipment to be maintained in such a condition that workers will not be endangered.

PART 22: UNDERGROUND WORKINGS

FIXED AND MOBILE EQUIPMENT IN UNDERGROUND WORKINGS

Operating requirements	22.88	Any diesel engine being operated in an underground working must
		(a) not expose workers to respirable combustible dust (RCD) from the exhaust in excess of 1.5 mg/m ³ based on an 8-hour time weighted exposure, and
		(b) not idle unnecessarily, and
		(c) be maintained in strict accordance with manufacturer's specifications.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 22: UNDERGROUND WORKINGS

RAISES

- Bolts** **22.121** ~~(1) All bolts used in the assembly of a raise climber must be of the correct grade and size and properly torqued, as specified by the manufacturer.~~
- (2) Defective or damaged bolts must not be used and all exposed bolts and other components must be protected against damage from falling rock.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 22: UNDERGROUND WORKINGS

RAISES

Modification restriction	22.123	Modifications designed to increase the capacity or speed of a raise climber, or modifications which may affect the load carrying capacity of a raise climber or work platform, must not be made unless approved by the manufacturer or a professional engineer.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 22: UNDERGROUND WORKINGS

RAISES

- Repair requirements** **22.130** ~~(1) Repairs to structural or critical safety components must only be done in accordance with the instructions of the manufacturer or a professional engineer.~~
- (2) Repairs to a rack or pinion must only be carried out under the direction of a manufacturer's representative or a professional engineer, and the repaired components must be non-destructively tested in accordance with the requirements of section 22.110(4).

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 23: OIL AND GAS

GENERAL REQUIREMENTS

- Pressure relief device - installation** **23.16**
- (1) A pressure relief device must be set to discharge at a pressure not exceeding the manufacturer's recommended working pressure for the pipes and fittings in the system or as specified by a professional engineer.
 - (2) Any fluid or material discharged through a pressure relief device must be piped to a place where it will not endanger workers.
 - (3) The diameter of piping connected to the pressure side and the discharge side of a pressure relief device must not be smaller than the diameter of the openings to the device.
 - (4) The piping on the discharge side of a pressure relief device must be
 - (a) secured to prevent movement, and
 - (b) sloped to drain fluids away from the pressure relief device if freezing could restrict the fluid flow.
 - (5) A valve must not be installed in the discharge opening of a pressure relief device or the device's discharge pipe unless required by engineering design.
 - (6) A pressure relief device that requires block valves by engineering design must have the block valves locked in the appropriate position.
 - ~~(7) A shear pin used in a pressure relief device must be of a design and strength specified by the device manufacturer.~~
 - (8) A guard must be installed around the shear pin and spindle of a pressure relief device.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 23: OIL AND GAS

GENERAL REQUIREMENTS

Rigging up and tearing out

- 23.21
- (1) The driver of a vehicle used for rigging up or tearing out equipment must not move the vehicle until signalled to move by a qualified signaller.
 - (2) The signaller must ensure that workers are clear of the path of the vehicle, load and load line.
 - (3) To prevent materials or equipment from rolling or sliding off a truck or trailer during unloading operations, load tie down devices must not be removed until the lifting slings and hoist line have been attached to the equipment or material that may slide or roll off, and slack in the hoist line and rigging has been taken up.
 - (4) A worker must not remain or ride on a load or part of a load being raised, lowered or moved.
 - (5) The movement of a load being raised or lowered must be controlled by
 - (a) a tag line long enough to ensure that the worker controlling it cannot be struck by the load, or
 - (b) where a helicopter is being used, by effective work procedures.
 - (6) A worker must not work, stand or pass
 - (a) under a suspended load,
 - (b) between the winch mechanisms and a load being winched, or
 - (c) in areas where the worker may be injured due to winch line or mechanism failure.
 - ~~(7) The working load on a winch mechanism, line, sling, hook and fitting must not exceed the rated load or working load limit specified by the manufacturer.~~
 - (8) Winch mechanisms, lines, slings, hooks and fittings must be inspected thoroughly by the equipment operator
 - (a) before commencing work, and
 - (b) at such intervals as the nature of the work may require.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PROPOSED AMENDMENTS TO THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*
RE: DUPLICATION AND REDUNDANCIES – MANUFACTURER'S

PART 23: OIL AND GAS

GENERAL REQUIREMENTS

- Steep slopes** **23.23** ~~(1) Equipment must not be operated on a slope exceeding the maximum specified by the manufacturer or a professional engineer.~~
- (2) If material or equipment must be moved on steep terrain, a written plan must be prepared before snubbing or yo-yo operations are carried out.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 23: OIL AND GAS

DRILLING AND SERVICING RIGS

Auxiliary escape

- 23.39** (1) Each drilling and servicing derrick must have a specially rigged and securely anchored line as an auxiliary means of escape which
- (a) provides a ready means of escape from the principal working platform above the drill floor,
 - (b) consists of a wire rope not less than 13 mm (½ in) diameter,
 - (c) has a length twice the vertical distance between the ground and the point at which it is attached to the derrick,
 - (d) is effectively anchored and able to withstand a load of 13.3 kN (3,000 lbs), and
 - (e) is kept free of obstructions.
- (2) Equipment must not be placed, and vehicles must not pass, under the last 15 m (50 ft) of the escape line.
- (3) A safety buggy of a design acceptable to the board must be installed and operated on the escape line ~~in accordance with the manufacturer's specification.~~
- (4) The safety buggy must be
- (a) kept at the derrickhand's principal working platform,
 - (b) provided with an effective brake and means to prevent the trolley from coming off the escape line, and
 - (c) inspected by a qualified person at least once a week.
- (5) The escape line must be tensioned so that a worker seated in the safety buggy will touch the ground at a safe distance from the derrick, not less than 6 m (20 ft) from the ground level anchor.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 23: OIL AND GAS

DRILL STEM TESTING, SWABBING, CEMENTING, WELL SERVICING AND STIMULATION

- Flow piping** **23.69** (1) Flow piping systems must be anchored during well testing or stimulation unless there is an effective quality assurance program to ensure integrity of the piping system.
- (2) The quality assurance program must include routine inspections, non-destructive testing, pressure testing, identification of piping components, and piping specifications that meet the service application.
- (3) If swivel joints or hoses are used in well stimulation and similar operations, the piping system must be secured at the well head and supply vehicle or pumping unit end with wire rope safety lines not less than 11 mm (⁷/₁₆ in) diameter, or chains of equal strength.
- (4) Flowback lines must be anchored and restrained.
- (5) If a system of piping and swivel joints with a pressure greater than 2,000 kPa (300 psi) is used in well stimulation and similar operations
- (a) the operation must be conducted by remote control,
- (b) unauthorized workers must not enter the area between the point of discharge and the well head, and
- (c) before starting operations, warning signs must be posted in the area stating "DANGER, NO UNAUTHORIZED WORKERS ALLOWED IN THIS AREA" or other similar language.
- (6) Subsections (3) and (5) do not apply to well testing.
- (7) In a flow piping system exceeding 3,500 kPa (500 psi),
- (a) connections must be welded, flanged or hammer unions, and
- (b) if there is only a threaded connection available at the well head, special precautions must be taken.
- (8) A piping system must be completely depressurized before leaking connections or fittings are corrected.
- (9) Hammering on a pressurized system is not permitted.
- ~~(10) Welding of high pressure pipe or fittings must be done only in accordance with the manufacturer's specifications and instructions.~~
- (11) If liquid carbon dioxide or other liquified gas is used for well stimulation, the valve controls of the supply unit must be on the side opposite to the pipe supplying the liquified gas.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 24: DIVING, FISHING AND OTHER MARINE OPERATIONS

GENERAL REQUIREMENTS

Compressor intake	24.28	The compressor intake must meet the manufacturer's recommended diameter to length ratio and must be located so that the breathing medium will not be contaminated by gasoline vapours, engine exhausts, or other objectionable impurities.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 26: FORESTRY OPERATIONS

GENERAL REQUIREMENTS

Vehicle load limits	26.12	The load on a vehicle used in a forestry operation must not exceed the limits specified by the vehicle manufacturer or certified by a professional engineer.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 26: FORESTRY OPERATIONS

GENERAL REQUIREMENTS

Slope limitations

- 26.16 ~~(1) Equipment must not be operated on a slope exceeding the maximum specified by the manufacturer of the equipment or a professional engineer.~~
- (2) If the equipment manufacturer's maximum slope operating stability limit **for equipment** is not known, written procedures that have been developed specifically for the worksite to ensure machine stability must be followed **when the equipment is used on slopes.**
- (3) **If the manufacturer's information and information under subsection (2)** ~~If the information specified in subsection (1) or (2)~~ is not available, the following limits apply:
- (a) a rubber tired skidder must not be operated on a slope which exceeds 35%;
 - (b) a crawler tractor, feller buncher, excavator and other similar equipment must not be operated on a slope which exceeds 40%;
 - (c) any other forestry equipment specifically designed for use on a steep slope must not be operated on a slope which exceeds 50%.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 26: FORESTRY OPERATIONS

YARDING AND SKIDDING

- Mobile yarders 26.33**
- (1) A mobile yarder must not be used unless a legible and easily visible sign provided by the manufacturer or a professional engineer is permanently attached, showing
 - (a) the name of the manufacturer, and date of manufacture,
 - (b) the model and serial number,
 - (c) if the yarder is designed for skyline, slackline, or modified slackline systems, the maximum and minimum size of skyline, mainline, and haulback that can be used,
 - (d) the maximum diameter of the mainline,
 - (e) the minimum size, number and placement of guylines, if required,
 - (f) the placement and number of outriggers, if required,
 - (g) the permissible yarding angles, and
 - (h) auxiliary equipment that may be safely attached.
 - (2) A mobile yarder must be rigged and used according to the ~~manufacturer's specifications and the~~ information included on the sign required by subsection (1).
 - (3) A mobile yarder must not be moved with the spar or tower in the vertical operating position unless the stability of the equipment can be maintained.
 - (4) Multiple throttle controls on a mobile yarder must be arranged to preclude the simultaneous operation of 2 or more controls.
 - (5) Each mobile yarder and attached equipment must be inspected frequently, ~~and maintained in accordance with the manufacturer's specifications.~~
 - (6) Manufacturer's manuals must be provided and inspection and maintenance must be done as required by Part 14 (Cranes and Hoists).

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 26: FORESTRY OPERATIONS

WATER OPERATIONS

Portable augers	26.97	A portable auger must be operated in accordance with the manufacturer's instructions, if available, and with safe work practices.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 27: WOOD PRODUCTS MANUFACTURING

GENERAL REQUIREMENTS

Personnel hoists	27.10	A personnel hoist for a hot press, a pulp and paper dryer or a similar machine must <ul style="list-style-type: none">(a) have effective means to prevent the platform from falling if the power or equipment fails,(b) be designed, constructed, operated and maintained in accordance with the manufacturer's instructions or the requirements of a professional engineer,(c) have critical components regularly inspected by a qualified person, and repaired as required by the manufacturer, or as specified by a professional engineer,(d) have the rated load clearly marked on the hoist platform,(e) have a log of inspections, maintenance and repairs meeting the requirements of Part 4 (General Conditions), and(f) be fitted with guardrails and toeboards meeting the requirements of Part 4.
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 27: WOOD PRODUCTS MANUFACTURING

SAWS AND KNIVES

Saw speeds ~~27.27~~ ~~A saw must not be operated at a speed in excess of the maximum speed recommended by the manufacturer.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 30: LABORATORIES

GENERAL REQUIREMENTS

Equipment operation

30.2 ~~Laboratory equipment must be set up, operated and maintained in accordance with the manufacturer's instructions and~~ **Operators of laboratory equipment** must be adequately instructed and trained in the safe **use of laboratory equipment** ~~operating procedures and the precautions to be taken when the equipment is used for use.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 30: LABORATORIES

GENERAL REQUIREMENTS

- Plumbing** **30.4** (1) Laboratory water faucets with goosenecks must be protected by vacuum breaks meeting the requirements of *ANSI Standard ANSI/ASSE 1001-1990, Pipe Applied Atmospheric Type Vacuum Breakers*, ~~or other standard acceptable to the board.~~
- (2) ~~A vacuum break must be maintained in a state of good repair and must be tested in accordance with the manufacturer's requirements.~~
- (3) The location of an in-line vacuum break must be clearly identified.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that allow the Board to accept publications, codes, standards, practices, procedures or rules other than those specified in a provision have been removed. These provisions have been replaced with one general provision in section 4.4 of the OHSR, as amended.

PART 30: LABORATORIES

GENERAL REQUIREMENTS

- Ducting** **30.10** (1) A fume hood must not be connected to a common exhaust duct if
- (a) there is a danger of explosive reaction occurring in the duct,
 - (b) carcinogenic substances or radioactive materials are used in the hood, or
 - (c) there is a danger of backdrafts which could result in contaminants from one fume hood being discharged into the laboratory from another fume hood.
- (2) Fume hoods located in separate rooms must not be connected to a common exhaust duct unless effective controls prevent pressure imbalances and prior written permission has been obtained from the board.
- (3) Ducting used in the installation of a fume hood must be ~~in accordance with the manufacturer's design specifications and instructions, and~~ designed in accordance with established engineering principles.
- Note:** *Industrial Ventilation - A Manual of Recommended Practice*, published by the ACGIH is an acceptable source of established engineering principles.

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 30: LABORATORIES

GENERAL REQUIREMENTS

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| Centrifuges | 30.13 | <ol style="list-style-type: none">(1) Centrifuge loads must be balanced by sample distribution.(2) Aerosol-proof safety heads or cups or other equally effective means to prevent exposure of workers must be used where biohazardous aerosols may be generated, where carcinogens are present or where radioactive samples pose a hazard to workers.(3) Unless exempted by <i>CSA Standard C22.2 No. 151-M1986 Laboratory Equipment</i>, or other standard acceptable to the board, centrifuge doors must be interlocked to prevent workers accessing spinning rotors.(4) The interlock required by subsection (3) must prevent the door from opening while the rotor is spinning or cause the rotor to brake if the door is opened, or another equally effective means must be used to prevent a worker from accessing the spinning rotor.(5) Equipment purchased before April 15, 1998 is exempt from the application of subsection (3) until January 1, 2001.(6) All critical components of ultracentrifuges, including rotors, must be inspected regularly, and nondestructive testing must be performed in accordance with the manufacturer's instructions.(7) Rotors must be stored in a manner which will prevent them from being damaged. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

PART 31: FIREFIGHTING

PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

- Personal alert safety system** 31.18 (1) A firefighter must be provided with and use a Personal Alert Safety System (PASS) when involved in duties which require a self-contained breathing apparatus to be worn.
- (2) A PASS device must meet the requirements of *NFPA 1982, Personal Alert Safety Systems (PASS) for Fire Fighters, 1993 Edition*, ~~or other standard acceptable to the board.~~
- (3) A PASS device must be tested at least weekly and prior to use, ~~and must be maintained as required by the manufacturer's instructions.~~

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that allow the Board to accept publications, codes, standards, practices, procedures or rules other than those specified in a provision have been removed. These provisions have been replaced with one general provision in section 4.4 of the OHSR, as amended.

PART 31: FIREFIGHTING

RESPIRATORY PROTECTION

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| Maintenance and records | 31.26 | <ol style="list-style-type: none">(1) Self-contained breathing apparatus, including regulators, must be serviced and repaired by qualified persons in accordance with the manufacturer's instructions.(2) Inspection of compressed air cylinders must be in accordance with <i>CSA Standard CAN/CSA-Z.94.4-93, Selection, Use, and Care of Respirators (sections 10.3.4-10.4, inclusive)</i>, or other standard acceptable to the board.(3) Compressed air cylinders must be hydrostatically tested in accordance with <i>CSA Standard CAN/CSA-B339-88, Cylinders, Spheres, and Tubes for the Transportation of Dangerous Goods</i>, or other standard acceptable to the board.(4) Complete maintenance and repair records for each self-contained breathing apparatus and all air cylinders must be kept in accordance with the requirements of <i>CSA Standard CAN/CSA-Z.94.4-93, Selection, Use, and Care of Respirators (section 10.3.5.1-b to f, inclusive)</i>, or other standard acceptable to the board. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that allow the Board to accept publications, codes, standards, practices, procedures or rules other than those specified in a provision have been removed. These provisions have been replaced with one general provision in section 4.4 of the OHSR, as amended.

PART 32: EVACUATION AND RESCUE

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| Equipment | 32.3 | <ul style="list-style-type: none">(1) Workers performing rescue or evacuation must wear personal protective clothing and equipment appropriate to the hazards likely to be encountered.(2) Harnesses must meet the requirements of the applicable standards or code issued by the International Union of Alpinist Associations, National Fire Protection Association, or Canadian Standards Association, or other standard acceptable to the board.(3) Winches to be used for lifting people must be warranted by the manufacturer or certified by a professional engineer as being suitable for and capable of being used to lift workers.(4) When a platform suspended from a crane or hoist or attached to a crane boom is used for rescue, an injured worker on the platform is not required to use a personal fall protection system, if<ul style="list-style-type: none">(a) the worker is belted to a stretcher and the stretcher is securely fastened to the platform floor, and(b) the platform has a safety strap that will prevent the platform from falling more than 15 cm (6 in) if the platform becomes dislodged from the hook. |
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Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.

Provisions that allow the Board to accept publications, codes, standards, practices, procedures or rules other than those specified in a provision have been removed. These provisions have been replaced with one general provision in section 4.4 of the OHSR, as amended.

PART 32: EVACUATION AND RESCUE

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| Maintenance of equipment | 32.6 | (1) Rescue and evacuation equipment must be maintained according to the manufacturer's instructions. |
| Maintenance records | | (2) Maintenance records must be kept, including but not limited to <ul style="list-style-type: none">(a) the name of manufacturer,(b) the type of equipment,(c) the date put into service,(d) when and for what purpose the equipment has been used,(e) the date of the last inspection and name of the inspecting person,(f) any damage suffered, and(g) the date and nature of any maintenance. |
| | | (3) Maintenance records must be available upon request to any worker concerned with the safe operation of the equipment or to an officer. |

Explanatory Note

Provisions that duplicate the general duties relating to manufacturer's requirements found in the *Occupational Health and Safety Regulation* ("OHSR") have been removed. Section 4.3 of the OHSR, as amended, requires that equipment must be used and maintained in accordance with the manufacturer's requirements.