

Safety specification for vehicle:

General Machinery Regulations

3. Safeguarding of machinery

- (1) Every employer or user of machinery shall—
 - (a) ensure that all machinery used by him, is suitable for the purpose for which it is used, and that it is installed, operated and maintained in such a manner as to prevent the exposure of persons to hazardous or potentially hazardous conditions or circumstances;
 - (b) in particular cause every exposed and dangerous part of machinery which is within the normal reach of a person to be effectively safeguarded by means of insulation, fencing, screening or guarding, except where an inspector has granted written permission for the omission of such safeguarding;
 - (c) ensure that all safety equipment is kept in a good working condition and is properly used; and
 - (d) ensure that the quality of material used in, and the construction, of the machinery or safety equipment is suitable for the purpose for which it was intended.
- (2) Where machinery constitutes a danger to persons, the employer or user of machinery concerned shall cause the premises in question to be enclosed, and where such premises are unattended the designated entrances to such premises shall be kept closed and locked.
- (3) Unless he has been authorised thereto by the employer or user of machinery, no person shall remove any safety equipment which relates to the machinery in question.

4. Operation of machinery

- (1) An employer or user of machinery shall ensure that every person authorised to operate machinery is fully aware of the dangers attached thereto and is conversant with the precautionary measures to be taken or observed to obviate such dangers.
- (2) If a person operates any machinery which requires constant attention in order to avoid accidents, he shall under no circumstances leave his post while such machinery is in operation, unless he is relieved by a person who is authorised and competent to operate such machinery.
- (3) An employer or user of machinery shall ensure that any machinery which requires constant attention in order to avoid accidents is under the supervision of a shiftsman, who shall at all times be present on the premises while such machinery is in operation, and no person shall attend to or operate such machinery, except under the general supervision of a shiftsman.
- (4) No person supervising machinery and no person operating machinery shall, without the permission of his superior, authorise any other person to do his work.

(5) If machinery threatens or is likely to threaten the safety of persons when it is unexpectedly set in motion or made electrically alive, the employer or user of machinery concerned shall take all reasonable precautionary measures in order to ensure that such machinery cannot be so set in motion or made electrically alive, and any person intending to set such machinery in motion or make it electrically alive shall take all reasonable precautionary measures in order to ensure that the safety of a person is not threatened or likely to be threatened.

(6) If machinery in operation threatens or is likely to threaten the safety of persons, the person supervising or operating such machinery or the employer or user of machinery concerned shall stop such machinery or cause it to be stopped.

6. Devices to start and stop machinery

- (1) An employer or user of machinery shall provide devices to start and stop machinery, and these devices shall—
 - (a) be in a position where they can readily and conveniently be reached by the person who operates such machinery; and
 - (b) be so constructed and arranged as to prevent the accidental starting of such machinery.
- (2) An employer or user of machinery shall provide positive means for rendering the controls of machinery driven by an electric motor inoperative while repairs or adjustments are being made, and such means shall not only be the mere tripping of a switch.
- (3) If machinery is simultaneously operated by two or more persons, the employer or user of machinery concerned shall provide such machinery—
 - (a) at every operation point with a stopping device which locks out when it is used and requiring manual resetting before such machinery can be restarted; and
 - (b) with an audible warning device to be sounded before the machinery is set in motion: Provided that an inspector may grant written permission for alternative precautionary measures whereby the safety of those persons is ensured.

9. Information regarding regulations

- (1) An employer or user of machinery shall furnish each person designated in terms of regulation 2(1), free of charge, with a copy of the Act and the regulations made thereunder.
- (2) Any employer or user of machinery shall affix—

- (a) in respect of a boiler, a notice in the form set out in Schedule C to these Regulations; or
 - (b) in respect of any machinery other than a boiler, a notice in the form set out in Schedule D to these Regulations, in both official languages in legible form in a conspicuous place on or in the premises in question.
- (3) Any employer or user of machinery shall cause any notice referred to in subregulation (2) to be explained to all employees who are not conversant with an official language.

SCHEDULE D

NOTICE IN RESPECT OF MACHINERY OTHER THAN A BOILER UNDER REGULATION 9(2) OF THE GENERAL MACHINERY REGULATIONS, 1988

1. Every employer or user of machinery is required by law to provide safety equipment in connection with machinery, and it is an offence for any person to fail to use such equipment properly or to interfere with them.
2. No person working in close proximity to moving machinery shall wear any loosely fitting outer clothing, any jewelry or ornament, any watch or key chain, any long loose-hanging hair or anything which may be caught up in the moving parts of such machinery.
3. Unless an apparatus approved by an inspector is used, no driving belt shall be shipped or unshipped whilst machinery is in motion, except in the case of a light belt which may be shipped on the coned pulley of a machine tool in order to alter the working speed of such tool.
4. Machinery in motion shall not be cleaned, repaired, adjusted or oiled, unless such machinery is cleaned, repaired, adjusted or oiled by a competent person when it is impracticable to stop such machinery.
5. No person other than a competent person shall enter the safeguarded area of machinery in motion, and then only if it is impracticable to stop such machinery.
6. No person under the influence of alcohol or drugs shall enter any premises where machinery is used.
7. Any accident or other incident which threatens or is likely to threaten the safety of employees shall be reported immediately to the employer, or user of machinery.
8. No person supervising machinery and no person operating machinery shall, without the permission of his superior, authorize any other person to do his work.

9. Any person intending to start a machine shall before doing so satisfy himself that no other person is endangered.

Driven Machinery Regulations

“lift truck” means a mobile lifting machine, but does not include—

- (a) a vehicle designed solely for the purpose of lifting or towing another vehicle;
- (b) a mobile earth-moving machine; or
- (c) a vehicle designed solely for the removal of a waste bin;

“lifting machinery entity” means a legal entity approved and registered by the chief inspector in terms of regulation 19;

“lifting machinery inspector” means a person who is employed by a Lifting Machinery Entity and who is registered by the Engineering Council of South Africa in terms of the Engineering Profession Act, 2000 (Act 46 of 2000);

“lifting tackle” means chain slings, wire rope slings, woven webbing slings, master links, hooks, shackles and swivels, eye bolts, lifting or spreader beams, tongs, ladles, coil lifters, plate lifting clamps and drum lifting clamps used to attach a load to a lifting machine;

“training provider” means a training provider for lifting machinery operators approved and registered by the chief inspector in terms of regulation 20;

18. Lifting machines, hand-powered lifting devices and lifting tackle

- (1) No user may use or permit the use of a lifting machine or hand-powered lifting device unless—
- (a) it has been designed and constructed in accordance with a generally accepted technical standard;
 - (b) it is conspicuously and clearly marked with the safe working load: Provided that when such safe working load varies with the conditions of use of the manufacturer, a table showing the safe working load with regard to every variable condition shall be posted by the user in a conspicuous place easily visible to the operator;
 - (c) the manufacturer's identification plate displaying the name of the manufacturer, the design standard, the serial or reference number and the country of origin is affixed to such machine; and

- (d) it has at all times at least three full turns of rope on the drum of each winch that forms part of such a machine when such winch has been run to its lowest limit, and that is controlled by an automatic cut-out device:

Provided that paragraphs (b) and (d) above shall not apply to capstan-type hoists.

- (2) The user shall ensure that every power-driven lifting machine is fitted with a brake or other device capable of holding the safe working load should—
 - (a) the power supply or lifting effort fail;
 - (b) the load attachment point of the power-driven lifting machine reach its highest and lowest safe position; or
 - (c) the load condition be greater than the rated load condition of that machine.
- (3) The user shall cause every chain or rope that forms part of the load path of a lifting machine or hand-powered lifting device to have the factor of safety prescribed by the standard to which that machine was manufactured: Provided that in the absence of such prescribed factor of safety, chains, steel-wire ropes and fibre ropes shall have a factor of safety of at least four, five and 10, respectively, with regard to the safe working load of that machine.
- (4) The user shall cause every hook or any other load-attaching device that forms part of the load path of a lifting machine or hand-powered lifting device to be so designed or proportioned that accidental disconnection of the load under working conditions cannot take place.
- (5)
 - (a) The user shall cause the entire installation and all working parts of every lifting machine or hand-powered lifting device, as well as ancillary lifting equipment used with the machine or device, excluding lifting tackle, to be subjected to a thorough examination and a performance test, as prescribed by the standard to which the lifting machine was manufactured, by a lifting machinery inspector of a lifting machinery entity, which shall determine the serviceability of the structures, ropes, machinery and safety devices before they are put into use and every time they are dismantled and re-erected, and thereafter at intervals not exceeding 12 months: Provided that, in the absence of a manufacturing standard or a standard incorporated under section 44(1) of the Act, the whole installation of the lifting machine shall be tested with 110% of the safe working load applied over the complete lifting range of such machine and in such a manner that every part of the installation is stressed accordingly.

- (b) The lifting machinery inspector of the lifting machinery entity referred to in paragraph (a) must have knowledge of the erection, load-testing and maintenance of the type of lifting machine or similar machinery involved.
 - (c) Notwithstanding paragraph (a), mobile cranes, self-erecting cranes and mobile elevated work platforms shall be excluded from the performance test after each re-deployment within the 12-month period referred to in that paragraph.
- (6) Notwithstanding subregulation (5), the user shall cause all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine or hand-powered lifting device to be subjected to a thorough examination by a competent person at intervals not exceeding six months.
- (7)
- (a) Every user of a lifting machine or hand-powered lifting device shall at all times keep on their premises a register in which the user shall record or cause to be recorded full particulars of any performance test and examination referred to in subregulations (5) and (6) and any modification or repair to such lifting machine or hand-powered lifting device, and shall ensure that the register is available on request for inspection by an inspector.
 - (b) Every user of a leased lifting machine or hand-powered lifting device shall at all times keep on their premises a register in which the user shall have the latest applicable performance test and service records not older than 12 months.
 - (c) The owner and the lessor of leased equipment shall keep and maintain full service history records on their premises for at least 10 years.
- (8) No user shall require or permit any person to be moved or supported by means of a lifting machine unless that machine is fitted with a man-cage designed and manufactured according to an approved SANS standard approved for that purpose by an inspector and after a risk assessment has been done.
- (9) No user shall use or permit any person to use any power-driven lifting machine unless it is provided with—
- (a) in the case of a power-driven lifting machine with a lifting capacity of greater than 5 000 kg, a load indicator capable of indicating to the operator of the machine the mass of the load being lifted: Provided that such device shall not require manual adjustment, from the application

of the load to the power-driven lifting machine until the release of that load, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting; and / or

- (b) a load-limiting device that will automatically arrest the driving effort whenever the load being lifted is greater than the safe working load of the power-driven lifting machine at that particular radius, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting: Provided that such device shall not arrest the driving effort when the power-driven lifting machine is being operated into a safer position:

Provided that power-driven lifting machines manufactured or refurbished prior to the commencement of these Regulations shall be deemed to comply with these Regulations.

(10) No user may use or allow the use of any lifting tackle unless—

- (a) every item of lifting tackle is well constructed of sound material, is strong enough, is free from defects and is constructed in accordance with a generally accepted technical standard;
- (b) every lifting assembly consisting of different items of lifting tackle is conspicuously and clearly marked with traceable identification particulars and the safe working load that it is designed to lift with safety;
- (c) the ropes, chains or woven webbing have a factor of safety with respect to the safe working load they are designed to lift; the safety factor being—
 - (i) 10 for natural-fibre ropes;
 - (ii) seven for man-made fibre ropes or woven webbing;
 - (iii) six for steel-wire ropes, except for double-part spliced endless sling legs and double-part endless grommet sling legs made from steel-wire rope, in which case the factor of safety shall be at least eight;
 - (iv) five for steel chains; and
 - (v) four for high-tensile or alloy steel chains:

Provided that when the load is equally shared by two or more ropes or chains the factor of safety may be calculated in accordance with the sum of the breaking strengths taking into consideration the angle of loading;

- (d) all lifting tackle is inspected and discarded if such items show any sign of damage, defect, wear or distortion that would make them unsafe for use, as per manufacturer's specification; and
 - (e) such lifting tackle is examined at intervals not exceeding three months by a competent person, appointed by the user in writing for this purpose, who shall record and sign results of such examination.
- (11) The user shall ensure that every lifting machine is operated by an operator specifically trained for that particular type of lifting machine: Provided that in the case of a lifting machine listed in the National Code of Practice for Training Providers of Lifting Machine Operators, the user shall not require or permit any person to operate such a lifting machine unless the operator is in possession of a certificate of training, issued by a training provider accredited by the Transport Seta approved for the purpose by the chief inspector.

19. Approval and registration of lifting machinery entity

- (1) The chief inspector may approve any legal entity that has the competency and operational ability and that is involved in the examination and performance-testing of lifting machines, hand-powered lifting devices and ancillary lifting equipment used with the machine or devices.
- (2) An application for approval and registration as a lifting machinery entity shall be made to the chief inspector in the form of Annexure A.
- (3) The chief inspector shall furnish an approved lifting machinery entity with the appropriate certificate of registration and shall enter such registration into the national database.
- (4) An approved lifting machinery entity shall on request produce a certificate of registration to an inspector or to any person to whom it intends to render an examination or performance test.
- (5) An approved lifting machinery entity shall inform the chief inspector of any change affecting its approval and registration under these Regulations within 14 days of such change.

20. Approval and registration of training providers

- (1) The chief inspector may approve and register any training provider that has been accredited by the Transport Education and Training Authority as an approved training provider.
- (2) An application for approval and registration as a training provider must be made to the chief inspector in writing and must be accompanied by—
 - (a) a certified copy of the accreditation letter issued by the Transport Education and Training Authority; and
 - (b) a cancelled company letterhead.
- (3) The chief inspector shall furnish an approved training provider with the appropriate certificate of registration and enter such registration into the national database.
- (4) An approved training provider shall inform the chief inspector of any change affecting its approval and registration under these Regulations within 14 days of such change.