4123:1-5-13 Motor vehicles, mobile mechanized equipment, and marine operations.

(A) Reserved

(B) Reserved

(C) General requirements for motor vehicles and mobile mechanized equipment.

(1) A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims or rims equipped with locking rings or similar devices.

(2) Machinery, equipment, or parts thereof, being supported by slings, hoists, or jacks shall be substantially blocked or cribbed. Bulldozer blades, scraper blades, end-loader buckets, dump bodies, and similar equipment shall be either fully lowered or blocked when being repaired or not in use.

(3) Equipment parked on inclines shall have the brakes set, and the blade, bucket, etc., fully lowered if the equipment is unattended (out of sight or more than twenty feet from the operator).

(4) All cab glass shall be safety glass or equivalent with the vision unimpaired by its condition.

(5) All equipment which can contact power lines shall also comply with the requirements of paragraph (D) of rule 4123:1-5-23 of the Administrative Code.

(6) At locations where gasoline is being transferred to the fuel tank of any machinery, a notice shall be posted by the employer stating specifically that the engine shall be shut down and that no smoking or open flames be permitted during the transfer.

(7) All motor vehicles operating within the confines of the owner's property shall be equipped with an audible or visual warning device, in an operable condition, activated at the operator's station.

(D) Overhead protection.

(1)All haulage vehicles loaded by means of cranes, power shovels, loaders, or similar equipment shall have a substantial cab shield or canopy to protect the operator from shifting or falling materials.

(2) High lift rider trucks shall have a substantial overhead guard as protection against falling objects, constructed in a manner that does not interfere with visibility. Openings shall not exceed six inches in one of the two dimensions, width or length, and shall extend over the operator under all normal truck operations, including forward tilts.

(a)Where materials being handled are of such dimensions that objects could fall through the above protection, then substantial guarding, such as expanded metal, woven wire, or

similar materials, shall be used in addition to the above (see rule 4123:1-5-99 of the Administrative Code).

(b) Exception: Where headroom conditions are such that overhead protection cannot be used because of clearance, means of limiting the lift height shall be provided and the load shall not extend above the operator's head.

(3) In stacking or tiering operations, where the load extends above the backrest and may endanger the operator, load backrest extensions shall be provided and used.

(E) Motor vehicles used to transport employees.

(1) Vehicles assigned to, or generally used for the transportation of employees shall be equipped with securely fastened seats and backrests.

Tools and material transported in the same compartment with employees shall be secured to prevent movement

(F) Powered industrial trucks.

(1)General requirements.

(a) All nameplates and markings shall be affixed in place and maintained in legible condition.

(b) Modifications or additions which affect capacity shall conform with manufacturer's specifications. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

(c) Where trucks are designed to permit the interchange of front-end attachments, each attachment shall be marked to identify it and show its approximate weight and capacity, together with instructions to consult truck nameplate for combination capacity at maximum elevation with load laterally centered.

(d) Trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts, except as provided in paragraph (F)(1)(e) of this rule. Additional counterweighting of fork trucks shall not be done unless authorized by the truck manufacturer.

(e) Trucks originally approved for the use of gasoline for fuel may be converted to liquefied petroleum gas (LPG) fuel; provided the conversion meets the manufacturer's specifications.

(f) Moving parts that represent a hazard to the operator in the
normal operating position shall be guarded.
(g) Employees shall not be required to operate any truck that is not equipped with an adequate, properly maintained braking system.

(h) Only employees who have been trained and are authorized by their employer shall be required to operate a powered industrial truck.

(2) Restricted locations for fire safety purposes.

(a) The location or atmosphere shall be classified, as to whether it is hazardous or non-hazardous, prior to trucks being used therein.

(b) Trucks shall not be used in atmospheres containing explosive or flammable concentrations of liquids, gases, or vapors, such as, but not limited to, acetylene, butadiene, or hydrogen.

(c) Under the following described conditions trucks may be used only if designed and built specifically for use therein (see appendix to this rule for "Summary Table on use of Industrial Trucks in Various Locations"):

(i) Atmospheres containing explosives or flammable concentrations of metal dust, such as aluminum, magnesium, and their alloys, or other metals of similarly hazardous characteristics;

(ii) Atmospheres containing explosives or flammable concentrations of dust in grain processing operations, such as starch plants, malting plants, and other occupancies of similar nature;

(iii) Atmospheres containing explosive or flammable concentrations of dust from coal, coke, carbon black, or similar materials;

(iv) Locations hazardous due to the presence of easily ignitable fibers or flyings which may or may not be in suspension in the air;

(v) Locations where deposits or accumulations of the aforementioned dusts may be ignited by arcs or sparks originating in the truck;

(vi) Locations where easily ignitable fibers are stored or handled, including outside storages.

(3) Lighting and ventilating for operating areas.

(a) Where general lighting is less than two lumens per square foot, auxiliary directional lighting shall be provided on the truck.

(b) Adequate ventilation shall be provided in enclosed areas as required in rule 4123:1-5-18 of the Administrative Code (see also the current edition of "Threshold Limit Values (TLVs) for Chemical Substances in the Work Environment" adopted by the "American Conference of Governmental Hygienists (ACGIH)."

(4) Lifting of personnel.

Lift trucks equipped with vertical only, or vertical and horizontal travel controls using a lifting carriage or forks for lifting of personnel shall:

(a) Have a platform with standard guardrails, intermediate rail, and toeboards, and a mast guard seventy-two inches in height, all securely fastened to the lifting carriage or forks;

(b) Have controls whereby personnel on the platform can shut off power to the truck and the platform, provided that such controls shall not be required if there is a truck operator in attendance at the truck controls at all times when the platform is raised; and

(c) Have overhead protection on the work platform where the employee is exposed to falling objects.

(G) Highway-type trucks, trailers, and railroad cars.

(1) Wheel chocks shall be provided and employees instructed to place them under the rear wheels to prevent highway-type trucks and trailers from rolling while they are being loaded or unloaded by powered industrial trucks. Equivalent protection may be provided instead of wheel chocks.

(2) Wheel stops or other recognized protective devices shall be provided and used to prevent railroad cars from moving while they are being loaded or unloaded by powered industrial trucks.

(3) Warning signals, i.e., blue lights at night and blue flags in the daytime, shall be placed at any end of a car accessible by switch engines to warn against movement of railroad cars while dockboards.

(H) Marine operations and equipment.

When employees are required to step or operate a vehicle to or from a wharf, float, barge, or towboat, a ramp with side boards or a walkway shall be provided substantial in construction and fastening.

Effective: 1/1/86
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APPENDIX TO RULE 4123: 1-13
SUMMARY TABLE ON USE OF INDUSTRIAL TRUCKS IN VARIOUS LOCATIONS

CLASSES	UNCLASSIFIED	CLASS I LOCATIONS			
Description of Classes	Locations not possessing atmospheres as described in other columns	Locations in which flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitible mixtures.			
Groups in Classes	NONE	A	B	C	D
Examples of locations or atmospheres in classes and groups	Piers & Wharves Inside and Outside General Storage General Industrial or Commercial Properties	Acetylene	Hydrogen Manufactured Gas	Ethyl ether, Ethylene, Cyclopropane	Gasoline, Naphtha, Alcohol, Acetone, Butane, Propane, etc.
Divisions (Nature of Hazardous Conditions)	NONE	1 Above condition may exist continuously, intermittently, or periodically under normal operating conditions, frequently because of repair, maintenance or leakage, or where there might also be simultaneous failure of electrical equipment		2 Above condition may occur in case of accidental rupture or breakdown of containers or systems, abnormal operation of equipment, or failure of ventilating equipment.	

TRUCKS BY TYPES IN GROUPS OF CLASSES AND DIVISIONS

Groups in Classes	NONE	A	B	C	D	A	B	C	D
Types of Trucks Authorized Diesel Type D	D								
Type DS									DS
Type DY									DY
Electric Type E	E								
Type ES									ES
Type EE									EE
Type EX					EX				EX
Gasoline Type G	G								
Type GS									GS
LP-Gas Type LP	LP								
Type LPS									LPS

SUMMARY TABLE ON USE OF INDUSTRIAL TRUCKS IN VARIOUS LOCATIONS — cont'd

CLASS II LOCATIONS			CLASS III LOCATIONS	
Locations which are hazardous because of the presence of combustible dust.			Locations where easily ignitible fibers or flyings are present but not likely to be in suspension in quantities sufficient to produce ignitible mixtures.	
E	F	G	NONE	
Metal dust (including aluminum, magnesium and similar)	Carbon black, Coal dust, Coke dust	Flour, Starch or Grain dust	Rayon, cotton, sisal, istle, jute, hemp, tow, cocoa fiber, oakum, baled waste kapok, Spanish moss, excelsior, and similar materials.	
1		2	1	2
Explosive mixture may be present under normal operating conditions, or where failure of equipment may cause the condition to exist simultaneously with arcing or sparking of electrical equipment, or where dusts of an electrically conducting nature may be present.		Explosive mixture not normally present, but where deposits of dust may cause heat rise in electrical equipment, or where such deposits may be ignited by arcs or sparks from electrical equipment.	Locations in which easily ignitible fibers or materials producing combustible flyings are handled, manufactured or used.	Locations in which easily ignitible fibers are stored or handled (except in the process of manufacture.
TRUCKS BY TYPES IN GROUPS OF CLASSES AND DIVISIONS (cont'd)				
E	F	G	NONE	NONE
		DS		DS
		DY	DY	DY
				E
		ES		ES
		EE	EE	EE
EX	EX	EX	EX	EX
		GS		GS
		LPS		LPS

DESIGNATIONS OF POWERED INDUSTRIAL TRUCKS OR TRACTORS:

D units similar to the G units except that they are diesel engine powered instead of gasoline engine powered.

DS diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems, They may be used in some locations where a D unit may not be considered suitable.

DY diesel powered units that have all the safeguards of the DS units and in addition do not have any electrical equipment including the ignition and are equipped with temperature limitation features.

E electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

ES electrically powered units that, in addition to all of the requirements for the

E units, are provided with additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures. They may be used in some locations where the use of an E unit may not be considered suitable.

EE electrically powered units that have, in addition to all of the requirements for the E and ES units, the electric motors and all other electrical equipment completely enclosed. In certain locations the EE unit may be used where the use of an E and ES unit may not be considered suitable.

EX electrically powered units that differ from the E, ES, or EE units in that the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.

G gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

GS gasoline powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of a G unit may not be considered suitable.

LP similar to the G unit except that liquefied petroleum gas is used for fuel instead of gasoline.

LPS liquefied petroleum gas powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of an LP unit may not be considered suitable.