



Racking and Shelving Structures (What you should know)

Information Sheet
(No. 2008-0002)

This information sheet has been developed to provide some basic information to assist you in your management of your racking/shelving structures, to comply to applicable legislation and to demonstrate what is required to show due diligence.

WHY IS THIS IMPORTANT?

Racking and shelving structures become hazardous, dangerous and often collapse due to:

- Errors in the design, improper specifications and poor installation
- Being overwhelmed by goods exceeding their capacity
- Capacity of the structure being unknown by the employer or the worker
- The lack of visual inspection/assessment or maintenance
- Improper repairs being performed by “unqualified” or “incompetent” persons
- Improper material handling/storage procedures, including lift trucks operations
- Lack of or Improper training on material handling/storage, including lift truck operations

Racking and shelving are highly efficient structures specifically designed, built and assembled to take great weights when in good condition and used properly. Each component and connection is critical to the overall stability of the structure. There is very little leeway for damage or transmitting unanticipated forces such as banging it with a lift truck.

- Frame can have capacities from 20,000 lbs. up to 100,000 lbs
- Load capacities can be up to 5,600 lbs. per level
- You can hold 25,000 lbs on a couple of 2” x 3” posts that are less than 1/8” thick (that’s like having 10 compact cars standing on two little posts)



WHAT DOES THE LAW SAY?

The Canada Labour Code Regulation Part XIV states that “All materials, goods and things shall be stored in the work place in such a manner that the maximum safe load carrying capacity of the floor or other supporting structures is not exceeded”. As well, maintaining proper clearances, lighting, passageways, traffic lanes, access to fire safety equipment, safe operation of motorized/manual handling equipment and employee’s health and safety is required.

The Ontario Regulation 851 states that “Material, articles or things shall be transported, placed or stored so that the material, articles or things will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker”. Also, there is a requirement to conduct a Pre-Start Health & Safety Reviews (PSR) when a new racking or shelving structure is to be constructed, added, installed, modified or a new process is to be used.

Note: Both Federal and Provincial legislators require a visual inspection/assessment of the condition of the racking or shelving structure based on the environment conditions, incidents of damages and local regulations (at least once a year).

Some City/Town Building Departments may require employer/owner to obtain a Building Permit.

WHO CAN DO THE WORK?

Even though a company has a skilled and trained technician to evaluate and repair racking, all load bearing assessments, construction, repairs and conducting a PSR for racking and shelving structures must be overseen and approved by an “authorized engineer”.

Note: Both Federal and Provincial legislators refer to the CSA A344.1-05/A344.2-05 for racking and shelving structures.

An “authorized engineer” is a licensed professional engineer registered with the province of Ontario who has a Certificate of Authorization (C of A) for the work in question. This license and C of A are issued by the Association of Professional Engineers of Ontario (PEO), giving the engineer the right to use an engineer’s seal.

Note: For more information on Professional Engineers, go to the PEO web site at: www.peo.on.ca

Even though safety inspections are conducted monthly by the Health and Safety (H&S) Committee member or the H&S Representative, the annual visual inspection/assessment required by the legislators has to be done by a “qualified” or “competent” person. This person must be able to show qualification (a certificate of training) because of his/her training, knowledge and experience.

SO, ARE YOU READY FOR THE MOL OR HRSDC INSPECTOR? CAN YOU ANSWER THE FOLLOWING QUESTIONS?

- Have your storage racks/shelves been designed and installed to applicable codes?
- Who installed the racking shelving system and where is the paperwork?
- When was the last time you took a good look at it?
- Has the maximum beam and skid load capacity been determined for your workplace?
- Have repairs been done according to manufacturer’s specifications and approved by an engineer?

For more information on this subject or on Racking/Shelving Structure Inspections training, contact the OABA office:

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