

مركز أبوظبي للصحة المهنية
ABU DHABI OCCUPATIONAL SAFETY AND HEALTH CENTER

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Abu Dhabi Occupational Safety and Health System Framework

(OSHAD-SF)

Code of Practice

CoP 51.0 – Powered Lift Trucks

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ABU DHABI PUBLIC
HEALTH CENTRE

مركز أبوظبي
للصحة العامة



Important Note:

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1. Introduction

- (a) This Code of Practice (CoP) applies to all employers within the Emirate of Abu Dhabi. This CoP is designed to incorporate requirements set by UAE and Abu Dhabi regulatory authorities. If requirements of this document conflict with requirements set by another regulatory authority, employers are required to follow the more stringent requirement.
- (b) This CoP sets out the requirements for the use of lift trucks. For the purposes of the *OSHAD-SF* these have been defined as follows (refer to Appendix 1, Figures 1-7 for further information):
 - (i) **Powered Industrial Truck:** An industrial vehicle used to carry, push, pull, lift or stack material that is powered by an electric motor or an internal combustion engine. Included are vehicles that are commonly referred to as forklift trucks, rider trucks, motorized or powered hand trucks, pallet trucks and tugs. Not included farm vehicles or vehicles intended primarily for earth moving or over-the-road hauling; and
 - (ii) **Rated Capacity:** The maximum weight that the truck is designed to lift as determined by the manufacture.
- (c) This CoP does not cover all lifting operations and lifting equipment, specific requirements as defined within *OSHAD-SF – 34.0 – Safe use of Lifting Equipment and Lifting Accessories*.

2. Training and Competency

- (a) Employers shall ensure that OSH training complies with the requirements of:
- (i) *OSHAD-SF – Element 5 – Training, Awareness and Competency;*
 - (ii) *OSHAD-SF – Mechanism 7.0 – OSH Professional Entity Registration; and*
 - (iii) *OSHAD-SF – Mechanism 8.0 – OSH Practitioner Registration.*
- (b) Employers shall ensure that specific training programs are developed for each different type of lift truck that is operated within their premises.
- (c) Prior to permitting an employee to operate a lift truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required by this section.
- (d) Operators of powered lift trucks shall hold the appropriate vehicles operator's license as required by the Abu Dhabi Police Traffic Department.
- (e) Training shall include a combination of formal instruction (eg. lecture, discussion, interactive computer learning, video, written material), practical training (demonstrations performed by the trainer, and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.
- (f) Operator training and evaluation shall be conducted by competent persons, certified by an independent third party, who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence, as per the requirements of *OSHAD-SF– Mechanism 8.0 – OSH Practitioner Registration.*
- (g) Training on Lift Trucks shall include three stages:
- (i) Basic – the basic skills and knowledge required to operate the powered industrial truck;
 - (ii) Specific – operating principles and controls of the truck, use of the truck in work specific conditions and the type of work to be undertaken; and
 - (iii) Familiarization – application of skills learned under normal conditions, with close supervision by a competent person / trainer.
- (h) The training program shall incorporate a complete presentation of issues and information on powered industrial truck operations as prescribed by the Regulatory Authority, regarding:
- (i) the truck(s) to be operated;
 - (ii) their operation and limitations; and
 - (iii) workplace related topics.
- (i) Refresher training in relevant topics shall be provided to the operator when:
- (i) the operator has been observed to operate the vehicle in an unsafe manner;
 - (ii) the operator has been involved in an incident or near-miss incident;

- (iii) the operator has received an evaluation that reveals that the operator is not operating the truck safely;
 - (iv) the operator is assigned to drive a different type of truck;
 - (v) a condition in the workplace changes in a manner that could affect safe operation of the truck; or
 - (vi) as required by risk assessment and/or legal requirements.
- (j) An evaluation of each powered industrial truck operator's performance shall be conducted at least once every year.
- (k) Employer shall maintain a record the training and evaluation required by this section. The record shall include;
- (i) the name and Emirates ID number of the operator;
 - (ii) the date of the training;
 - (iii) the date and results of the evaluation; and
 - (iv) the identity of the person(s) performing the training or evaluation.
- (l) Training records required by this section are to be maintained by the employer for the duration of employment plus 1 year.

3. Requirements

3.1 Roles and Responsibilities

3.1.1 Employers

- (a) Employers shall undertake their roles and responsibilities in accordance with the general requirements of *OSHAD-SF – Element 1 – Roles, Responsibilities and Self-Regulation Section 3.2.5*.
- (b) Employers shall ensure that all persons who are required to use a powered lift truck are trained, competent and licensed to do so. The employer shall also ensure that a system is implemented to prevent untrained employees from using powered lift trucks.
- (c) Employer shall ensure that all powered lift trucks are maintained and inspected in line with legal and manufacturers requirements.
- (d) Employers shall, so far as is reasonably practicable, separate the movements of pedestrians and powered lift trucks.
- (e) Employers shall ensure that all traffic routes are safe and in accordance with the requirements of *OSHAD-SF – CoP 44.0 – Traffic Management and Logistics*.

3.1.2 Employees

- (a) Employees shall undertake their roles and responsibilities in accordance with the general requirements of *OSHAD-SF – Element 1 – Roles, Responsibilities and Self-Regulation Section 3.2.7*.
- (b) Employees shall only use powered lift trucks that they have been trained in the use of and are authorized to use by the employer.
- (c) Employees shall only use powered lift truck for the tasks they have received training in and shall not undertake any task that the lift truck is not appropriate for.
- (d) Employees shall ensure that any defect on the powered lift truck is reported immediately and the truck taken out of service until such times as a competent engineer has inspected the lift truck and declared it fit for use. Employees shall not undertake any type of repair unless competent and authorised by the employer.
- (e) Employees shall ensure that they immediately report any hazard or information that may affect, adversely or otherwise, the works being undertaken.

3.2 Planning and Assessment

- (a) Employers shall evaluate each site or operation to determine what hazards are present in relation to the use of powered lift trucks and shall assess the risk using risk management practices as required by *OSHAD-SF – Element 2 – Risk Management*.

3.3 Operator Selection

- (a) Employers shall ensure that all persons selected to operate powered lift trucks are medically fit to do so and have shown a reliable and mature attitude to work.
- (b) Employers shall undertake appropriate medical screening prior to authorizing any person to use a powered lift truck. The minimum checks are highlighted in table 1. Refer to *OSHAD-SF– CoP 5.0 – Medical Surveillance* for further information on medical screening.

Issue	Reasoning
Health questionnaire	To identify any pre-existing condition which may affect the ability to operate a lift truck safely; to identify any medication which is taken which may affect the ability to operate a lift truck safely.
Eyesight testing	Eyesight shall comply with the Group1 standard, which is the ability to read a vehicle license plate at a distance of 20.5 meters. Complete field of vision and good depth perception are also required.
Blood pressure	Raised blood pressure increases the risk of heart disease and stroke.
Mobility	Operators shall have appropriate flexibility and mobility to enable them to look behind them and to maintain good control over the vehicle.
Height/weight	Being very overweight may restrict mobility and may also make it difficult to operate the lift truck comfortably.
Hearing	Appropriate hearing may be required to ensure that the operator is able to hear warning shouts or alarms. Good conversational hearing will usually be considered appropriate, but audiometry may be conducted where there are specific concerns.

Table 1 – Medical Screening Prior to Authorization to Operate a Powered Lift Truck

3.4 Powered Lift Trucks

- (a) Employers shall ensure that powered industrial trucks used in the workplace are in good condition, well maintained and appropriate for the type of service required.
 - (i) if at any time a powered industrial truck is found to be defective or in need of repair, or in any way unsafe, it shall be removed from service until it has been restored to safe operating condition in accord with the manufacturer's or supplier's requirements; and
 - (ii) only industrial trucks approved for the particular class of hazard shall be operated in hazardous locations.
- (b) Modifications shall not be made to the powered lift truck without prior written approval from the manufacturer. Capacity, operation and maintenance instruction plates, tags or decals shall be updated to reflect any changes.
- (c) Fuel tanks shall not be filled when the engine is running.
- (d) No truck shall be operated with a leak in the fuel system until the leak has been corrected.
- (e) Open flames shall not be used to check the level of fuel in fuel tanks or the level of electrolyte in storage batteries.
- (f) Powered lift truck batteries shall be charged, stored and changed by competent trained person(s), in accordance with both the vehicle and battery manufacturer requirements.
- (g) Attachments shall not be fitted to fork trucks unless appropriate for the type of truck and loads carried. Fitting of attachments may alter the rating and stability of the lift truck.
- (h) Employers shall ensure that powered industrial trucks are operated in compliance with the following operating procedures.
 - (i) industrial trucks shall be inspected by the operator before each use or each shift, whichever is greater;
 - 1. the employer shall develop a written checklist for the inspection. The checklist shall specify the specific truck inspected and the appropriate inspection items for that class of truck; and
 - 2. completed checklists shall be maintained by the employer for a period of one year.
 - (ii) unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized;
 - (iii) when a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, keys removed and brakes set. Wheels shall be blocked if the truck is parked on an incline;
 - (iv) a powered industrial truck is unattended when the operator is 10 meters or more away from the vehicle which remains in view or whenever the operator leaves the vehicle and it is not in view;
 - (v) there is to be appropriate headroom under overhead installations, lights, pipes, sprinkler system, etc;
 - (vi) an overhead guard shall be used as protection against falling objects. It shall be noted that an overhead guard is intended to offer protection from the impact of small

packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load;

- (vii) Powered lift trucks shall be fitted with:
 - 1. audible and visual reverse alarms; and
 - 2. appropriate mirrors (rear view and wing);
 - 3. appropriate headlights if required to work in reduced visibility conditions;
- (viii) all traffic regulations shall be observed, including authorized workplace speed limits. A safe distance shall be maintained, approximately three truck lengths, from the truck ahead, and the truck shall be kept under control at all times;
- (ix) the driver shall be required to look in the direction of, and keep a clear view of the path of travel;
- (x) under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner;
- (xi) brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto;
- (xii) dock board or bridge plates shall be appropriately secured before they are driven over. Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded;
- (xiii) Powered lift trucks shall not be used for lifting people to and room height unless authorized and appropriate fit for purpose attachments are fitted to the truck;
- (xiv) only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered; and
- (xv) only loads within the rated capacity of the truck shall be handled.

3.5 The Working Area

- (a) Employers shall ensure, so far as is reasonably practicable, that pedestrians are separated from vehicle routes through the provision of physical barriers. Physical barriers shall be of appropriate construction and strength to withstand collision from a lift truck and continue to provide a safe route, refer to *OSHAD-SF – CoP 22.0 – Barricading of Hazards* for further information.
- (b) Where it is not reasonably practicable to segregate through physical barriers, the employer shall ensure that pedestrian routes are clearly marked and employees who are required to use these walkways are fully aware of the hazards.
- (c) Employers shall ensure that all powered lift trucks are fitted with audible and visual warning devices to ensure that pedestrians are aware of their presence.
- (d) Employers shall ensure that all areas where lift trucks are working are appropriate and safe for the tasks being undertaken.

- (e) Employers shall ensure that all aisles/passageways or roads where lift trucks are used are kept in good repair, with appropriate safety signage and clearly marked. Safety signage shall be in compliance with *OSHAD-SF – CoP 17.0 – Safety Signs and Signals*.
- (f) Employers shall ensure that the concentration of vehicle emissions are monitored and controlled within the work environment to ensure they are within safe limits as required by *OSHAD-SF – Occupational Standards and Guideline Values*.

4. Record Keeping

- (a) Employers shall maintain the appropriate records as required by their OSHMS, including but not limited to:
- (i) valid and up to date test and inspection certificates for Powered Lift Trucks undertaken by approved third party;
 - (ii) inspection records shall be maintained on site for a minimum period of one year;
 - (iii) maintenance records shall be maintained on site for the lifespan of the vehicle;
 - (iv) training records for operators shall be kept on site for the duration of their employment; and
 - (v) copy of operator's vehicle operator license shall be kept on site for the duration of their employment.

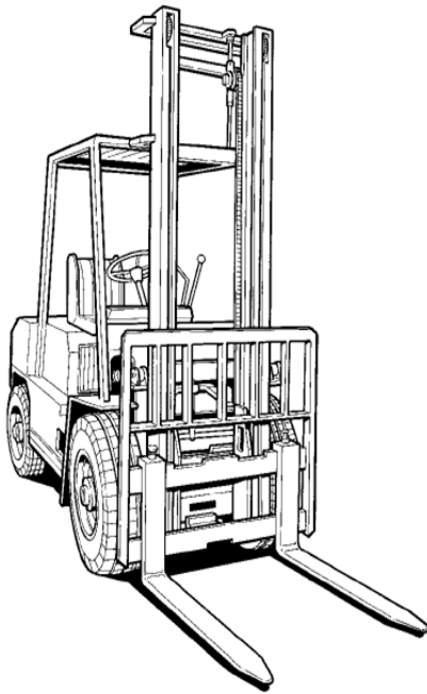
5. References

- *OSHAD-SF – Element 1 – Roles, Responsibilities and Self-Regulation*
- *OSHAD-SF – Element 2 – Risk Management*
- *OSHAD-SF – CoP 5.0 – Medical Surveillance*
- *OSHAD-SF – CoP 17.0 – Safety Signs and Signals*
- *OSHAD-SF – CoP 24.0 – Lock-out and Tag-out (Isolation)*
- *OSHAD-SF – CoP 22.0 – Barricading of Hazards*
- *OSHAD-SF – CoP 44.0 – Traffic Management and Logistics*

6. Document Amendment Record

Version	Revision Date	Description of Amendment	Page/s Affected
3.0	1 st July 2016	Change of Logo	All
		Change from AD EHS Center to OSHAD	throughout
		Change of document title: AD EHSMS RF to OSHAD-SF	Throughout
		Acknowledgements deleted	2/3
		Preface Deleted	4
		EHS changes to OSH	throughout
		Update of incorrect reference	10

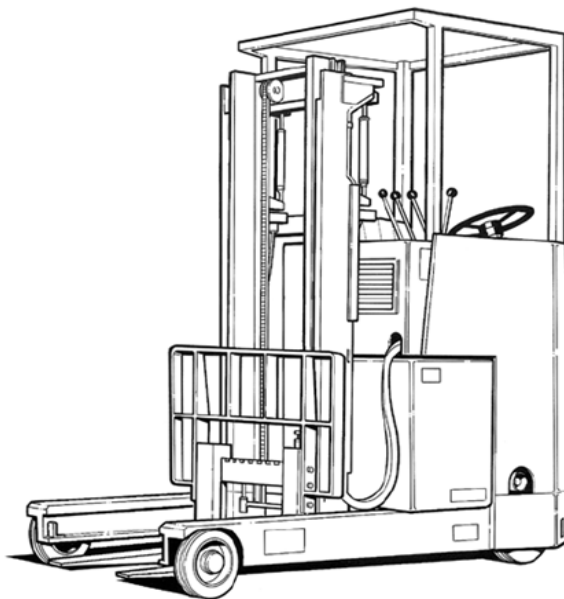
Appendix 1: Types of Powered Lift Trucks



Industrial counterbalance lift truck

This has a counterweight to balance the load on the fork arms. The fork arms and load project out from the front of the machine. Loads can be raised or lowered vertically and the mast may be tilted forwards or backwards up to 15° (but in practice more usually about 5°). This type of lift truck is only suitable for use on substantially firm, smooth, level and prepared surfaces. A wide range of attachments is available.

Figure 1 Industrial counterbalance lift truck



Industrial reach truck

This is so called because the mast is moved forwards or reached out to pick up the load. For travelling, the load is reached back and carried within the wheelbase. This allows greater manoeuvrability in areas where space is restricted. This type of lift truck is only suitable for use on substantially firm, smooth, level and prepared surfaces and is particularly used in warehouses.

Figure 2 Industrial reach truck

Rough-terrain counterbalance lift truck

This is similar in design to the industrial counterbalanced lift truck but is equipped with larger wheels and pneumatic tyres, giving it greater ground clearance. It has greater ability to operate on uneven and soft ground and is mainly used in the construction industry and in agriculture. It may be used with a range of attachments.

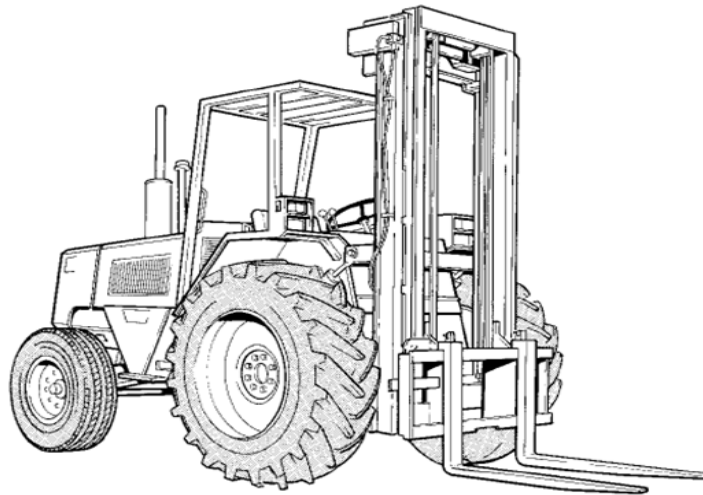


Figure 3 Rough-terrain counterbalance lift truck

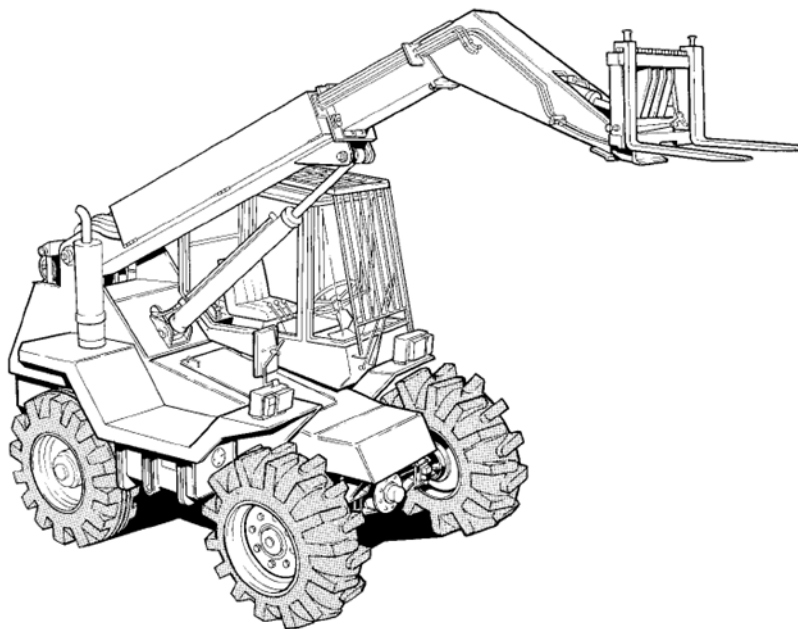
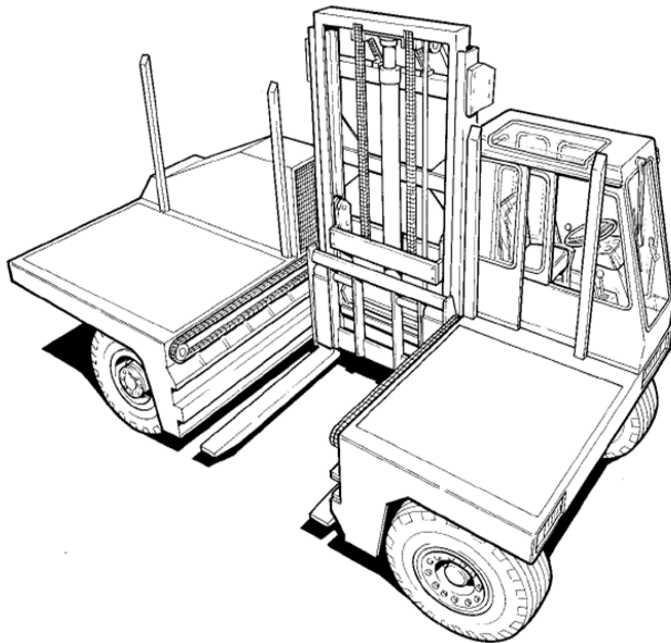


Figure 4 Telescopic materials handler

Telescopic materials handler

This is fitted with a boom that is pivoted at the rear of the machine. The boom is raised and lowered by hydraulic rams. In addition, the boom can be extended or retracted (telescoped) to give extra reach or height. These machines may be two- or four-wheel drive, and have two-wheel, four-wheel or crab steering. They are used mainly in agriculture and the construction industry. A range of attachments may be used with them.



Side-loading lift truck

The operator is positioned at the front and to one side of the lift truck. The load is carried on the deck, the mast being traversed out sideways to pick up or set down the load. This type of lift truck is used for stacking and moving long loads such as bales of timber and pipes, and may be fitted with stabilisers for use when picking up or setting down loads.

Figure 5 Side-loading lift truck

Pedestrian-controlled lift truck

This has a limited lift height, usually not greater than two metres. It may be electrically or manually powered for lifting and for traction. The operator walks with the machine and controls it with a handle.

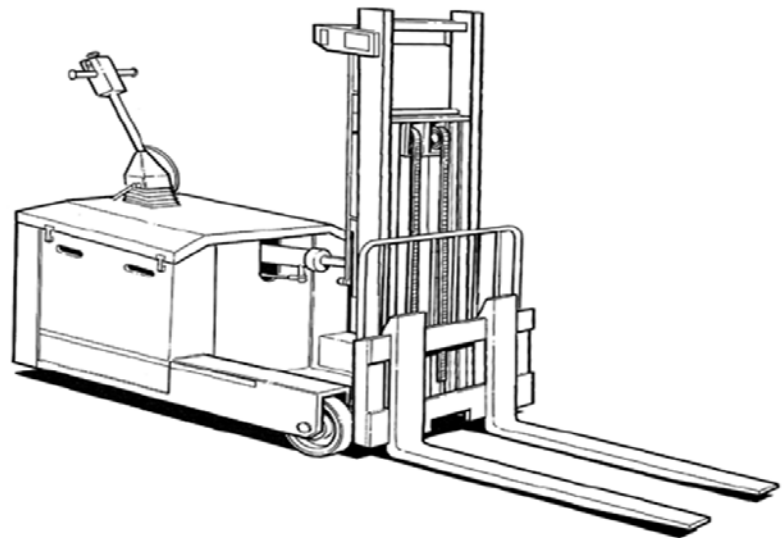


Figure 6 Pedestrian-controlled lift truck

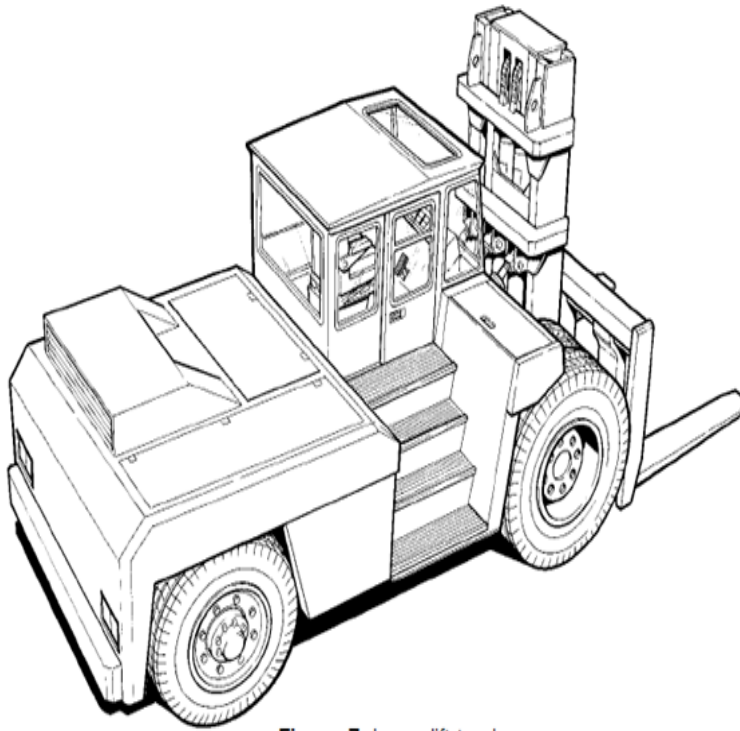


Figure 7 Large lift truck

Large lift truck

This may be either masted or telescopic, and is often fitted with a spreader for lifting freight containers. The spreader may attach to the side or top of the container. These are specialist lift trucks used mainly in container terminals.

