

# FORK LIFT TRUCKS

(See also: [Work Equipment\(91\)](#); [Warehousing\(87\)](#); [Transport in the Workplace\(83\)](#); [Lifting Plant and Equipment\(45\)](#))

## FORK LIFT TRUCKS



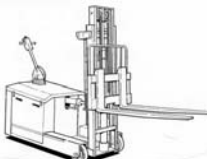

### INTRODUCTION

Forklift trucks (FLT) feature prominently in workplace accidents. Every year there are about 8000 lift truck accidents resulting in injury, and on average 10 of them are fatal. Even if people are not injured in FLT accidents there could be damage to buildings, storage systems or stock. The main causes of FLT accidents are:

- lack of operator training
- inadequate premises
- poor FLT maintenance

It is the responsibility of management to assess FLT operations and ensure that safe system of work are implemented and maintained. Subsequent responsibilities for safe use will also lie with line managers, supervisors and operators.

Some of the main types of FLT in the local authority-enforced sector are summarised in the following table:

TYPE	CHARACTERISTICS
1. Counterbalanced FLT 	Counterweight balances load on the forks Tilttable mast (5-15°) Operate on smooth surfaces only Many attachments available
2. Reach Truck 	Mast 'reaches' out to pick up load Load is 'reached' back and carried within the wheelbase if possible Has greater manoeuvrability in restricted areas Operate on smooth surfaces only Commonly battery-operated and used in warehouses
3. Pedestrian Controlled FLT 	Limited lift height (usually no more than 2 metres) Electrically or manually operated Operator walks with the machine and controls it with a handle
4. Side Loading FLT 	Load is carried on the deck of the FLT, the mast being traversed sideways to pick up/set down the load Used for long loads e.g. timber or pipes May be fitted with stabilisers

**Ref: 32**

**July 03**

## **FORK LIFT TRUCK OPERATORS**

The important considerations are:

- (i) selection
- (ii) training
- (iii) authorisation

i.e.

### **1. Selection**

- FLT drivers should be reliable, mature and responsible people, with appropriate physical/mental capabilities. Selection testing may be useful.
- Medical considerations include:
  - pre-employment fitness screening is recommended, as are 5 yearly checks for the over- 40's.
  - general health, particularly mobility/agility
  - vision, which should not normally be less than 6/12 with both eyes
  - hearing

### **2. Training**

- Training should be carried out in accordance with the Approved Code of Practice (ACoP) 'Rider operated lift trucks: operator training'. 'Rider-operated' means any truck capable of carrying an operator and includes trucks controlled from both seated and stand-on positions. It relates to stacking rider-operated lift trucks (such as counterbalanced FLT's, reach trucks, rough terrain counterbalanced FLT's and telescopic materials handlers) and excludes straddle carriers and no lift trucks. No person to whom the code applies should be employed to operate a lift truck unless he or she has satisfactorily completed training and testing as described in the code.
- Training should include the following stages:
  - i) Basic training
  - ii) Specific job training, relating to the FLT to be used
  - iii) Familiarisation training at the workplace, under supervision.
- Conversion training would be needed for operators going onto different FLT's.
- Records should be kept of training given to individuals and associated results in testing. Certificates of basic training are a useful, practical means of providing documentary evidence that relevant training has taken place and an appropriate level of operating ability has been attained.
- Employees should continuously monitor the performance of operators to ascertain whether they might need refresher training. Indicators might be near misses, accidents or consistently unsafe working practices. This is especially the case if operators are occasional users, have not operated trucks for some time, or there has been a change in their working practices or environment.

The HSE has recognised a number of bodies as competent to operate voluntary schemes of accreditation for training providers. Details can be obtained from the Council or the HSE.

Information and instruction on safe operation and use of FLT's could be issued to support the training outlined above.

### 3. Authorisation

Only authorised personnel should be allowed to operate FLT's. Authorisation should be:

- in writing
- confined to the type of FLT and work for which the employer has found the operator competent
- for a specified period.

### LAYOUT AND MAINTENANCE OF AREAS

- **Roadways and aisles etc.** should have sufficient width and overhead clearance (for loaded FLT's and for FLT's passing each other if necessary); road humps should be avoided; consideration could be given to a 1-way system if warranted; adequate lighting is essential.
- **Pedestrians** should be prohibited where possible, or risks assessed and controlled by the use of signs or barriers that are clearly marked (black and yellow diagonal stripes).
- **Edges** of loading bays etc. should be clearly marked or, where possible, fitted with barriers.
- Avoidance of **sharp bends, obstructions**, etc.
- **Warning devices**, mirrors etc. may be needed where barriers cannot be used.
- **Structural features** should be identified, marked and protected (e.g. with impact barriers).
- **Parking areas** for FLT's should be provided in a secure or supervised area to prevent unauthorised access.
- **Protection of personnel** should be achieved by consideration of the following measures:
  - (i) Segregation of pedestrians from vehicles (barriers, marking of routes, warning devices).
  - (ii) Audible warning devices on FLT's, e.g. horn, reversing bleeper.
  - (iii) Flashing beacons on FLT's.
  - (iv) High visibility clothing.
  - (v) Head protection, where there is a risk of head injury from falling objects.

## THE FORK LIFT TRUCK ITSELF

### 1. **Safety considerations** include:

- **Operation** in the workplace - loading, movement, position of forks, turning etc.  
NB Safe capacity is a function of the rated capacity, lift height and load centre distance, which will be shown on the FLT capacity data plate.
- **Tyres** - inflation pressure; damage; use of safety cage if wheels have split rims, and no 'hot work' before tyre has been completely removed.
- **Brakes, horn, safety lock** or switch with removable key.
- **Overhead guard** if lift height exceeds 1.8m or if falling objects are foreseeable.
- **Dangerous moving parts** - e.g. traps caused by telescopic mast sections, lifting chains etc.
- **Lifting chains** - require 12 monthly thorough examination - or at intervals specified - by a competent person, who should take account of the risks involved. Trucks operating more than 40 hours per week, or being used to lift people or which have attachments fitted are likely to need examination at least every 6 months. Certification of the examinations must be retained for examination.
- **Battery charging** - see Battery Charging Element of this Manual.
- **Potentially explosive/flammable atmospheres** - petrol/LPG FLT's not to be used; electrical FLT's to be suitably protected.
- **Attachments** - may alter the FLT's characteristics and rating; need to be securely fastened.

### 2. **System of checks**

- (i) **Safety equipment check** (guards, backrest extension, horn, warning beacon, fire extinguisher, rating plate (SWL plate)).
- (ii) **Pre-operation check** (fluid levels; condition of horn, lights, tyres; gauges; brakes check; hydraulic controls)
- (iii) **Periodic inspection** (tension/condition of fan belt; level of forks; tightness of components; lift chains; hydraulic system under load; refuelling equipment).

## CHECKLIST - FORK LIFT TRUCKS

- |  |     |    |
|--|-----|----|
| 1. Do you apply appropriate criteria when selecting FLT drivers?   | YES | NO |
| 2. Do you train FLT operators in accordance with the Approved Code of Practice on Rider Operated Lift Trucks?  | YES | NO |
| 3. Do you maintain records of training and performance in associated tests?  | YES | NO |
| 4. Do you provide instruction and information to operators on the safe use of FLTs?  | YES | NO |
| 5. Do you have a system of written authorisation for operators of FLTs?  | YES | NO |
| 6. Do you maintain your premises in such a condition as to secure safety in the use of FLTs (signage, barriers, lighting, layout, mirrors, traffic management systems etc.)? | YES | NO |
| 7. Do you maintain your FLTs through a system of safety checks, and are records kept?  | YES | NO |

## REFERENCES/FURTHER DETAILS

- \*1. Booklet HS(G)6 : Safety in working with lift trucks  
ISBN 0 7176 1781 5 (HSE)
- \*2. Approved Code of Practice and Supplementary Guidance  
"Rider Operated Lift Trucks- operator training".  
ISBN 0 7176 2455 2 (HSE)
- \*3. Guidance Note PM28 - Working platforms on forklift trucks  
(HSE)
- \*4. Booklet HSG187: Control of Diesel Engine Exhaust Emissions  
in the Workplace. (HSE)(ISBN 0-7176 1662 2)(£6.95)
- 5. MISC 175 (revised) Retrofitting of roll-over protective  
structures, restraining systems and their attachment points  
to mobile work equipment.  
[www.hse.gov.uk/pubns/misc175.pdf](http://www.hse.gov.uk/pubns/misc175.pdf)

- 
- \* Available to view by prior arrangement at Nuneaton and Bedworth Borough Council, Environmental Health Services, Council House, Coton Road, Nuneaton. CV11 5AA
  - \*\* Free copy available from Nuneaton and Bedworth Borough Council at the above address.

ORIGINAL ISSUE DATE: October 1997	ISSUE No: 3 DCY	ISSUE DATE: July 2003
SECTION: Fork Lift Trucks		PAGE No. 5 of 5