



# SAFETY BULLETIN 03/06

## ASIA INDUSTRIAL GASES ASSOCIATION

298 Tiong Bahru Road, #20-01 Central Plaza, Singapore 168730

[www.asiaiga.org](http://www.asiaiga.org)

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### Safe operation of Fork Lift Trucks

#### 1. Introduction

Fork lift trucks (FLT's) play an increasingly important role within our industry moving heavy loads safely and enabling a reduction in manual handling. Over recent years the number of FLT's in use in most of the companies have increased as we have looked for increased efficiencies and safer working practices. As a result manual handling injuries within the industry have fallen, however the FLT is not risk free and, as the following reports show, it brings with it the potential for serious or even fatal injuries if not correctly controlled:

- A FLT driver hit a hydrogen bundle and one of the pipes broke. Hydrogen escaped and ignited. The driver was injured.
- A FLT hit a pedestrian causing him fatal injuries.
- An operator was supervising the loading of pallets. He was hit and injured by a FLT due to lack of visibility.
- An operator was handling cylinders in a pallet, which was still on the forks of a FLT. The FLT moved slightly causing the cylinders to fall hitting the operators foot.
- While lifting a hydrogen bundle, the wheels of the FLT sank into soft ground and the FLT overturned.

- An operator's fingers were squeezed between the forks of a FLT and the structure of a building.

The high frequency of such accidents shows dramatically that this is an area where much more attention must be paid. By inference the education and training of FLT drivers obviously does not keep pace with the ongoing automation of cylinder handling and the increasing use of FLT's.

#### 2. FLT Specification

- *Fuel type* can be Diesel, or LPG.
- *Operator protection* - Closed cab to protect the driver from small falling objects and from the weather and to provide protection in case of a rollover. Doors should be fitted to reduce noise levels and improve the working environment. If the cab is not closed, a safety belt is necessary which protects the driver against fatal risk when the FLT rolls over.
- *Lights* - both normal operating lights for use in all weathers and flashing lights to warn of FLT presence. Also consider spot lights to shine on pallets and assist in positioning forks.
- *Reversing audible alarms* - to warn pedestrians and other operators completing or replacing the flashing lights.

- *Speed limiters* – to prevent excessive speed being attained.
- *Visibility* - The cab seat should be raised to provide adequate visibility over packs or banks. Additional mirrors can be installed in order to improve visibility.

### 3. FLT driver training

It is assumed that companies in accordance with prevailing safety policy operate a driver licensing scheme and driver training and re-training schemes.

In some ways a FLT is like a private car - most of the traffic rules are the same and the brake accelerator and steering controls look similar.

However there are several basic differences. A FLT uses its rear wheels to steer. It is easier to steer loaded than unloaded and you are likely to spend as much time going in reverse as you are going forward. To drive a FLT you must have attended and passed an approved training course - this may be run internally by qualified staff or at an externally approved supplier. Once basic training has been completed refresher training and a check on competence by a practical test is recommended at intervals not exceeding five years. Training must cover the basic principles of FLT operation as well as the risks and hazards associated and there must be a practical test.

### 4. Traffic plan

Each site needs to develop a plan to ensure that pedestrians and vehicles are kept apart as far as possible and also ensure that cars, trucks and FLT's are kept separate. Consider the following:

- Use national signs to set speed limits, identify pedestrians crossings and denote one way systems etc.

- Set site traffic rules and communicate them clearly to all staff and visitors.
- Clearly mark walkways and operational areas.
- Protect people from opening doors straight into traffic routes.

### 5. FLT operation

#### 5.1. Pre-use check

- FLT's should be checked daily by the operator or if in continuous use prior to the start of each shift.
- The daily check should at least cover: Tyres, brakes, lights, signals, flashing lights, fork condition, horn, reversing alarms, wheel nut security etc or manufacturer recommendation (*refer to sample checklist in appendix*). Any defect found should be noted and repaired prior to use.
- Keep a log book for each FLT in use to ensure there is a history of pre-use checks and evidence that repairs have been carried out when necessary.

#### 5.2 Loading / Unloading

- Before doing anything, fix the wheels of the truck you are going to load or unload or take other precautions to be sure that the truck cannot be moved during FLT operation on same.
- Don't operate with a FLT at a truck as long as the truck driver is in his cabin and could move the truck.
- Know the maximum load limit of your FLT. Always check the load before you raise the forks.
- Never try to pick up anything that is outside of the capacity of your FLT.
- Check to see that the load is correctly balanced, stowed and trimmed onto the supports.
- Do not allow operators to work with pallets on the forks of a FLT.
- Be sure the load you are lifting is ready to be lifted. For example:

Bundles disconnected from filling hose, cylinders in pallets are strapped down, pallet straps are not caught in adjacent pallets etc.

- Be sure there are no pedestrians in the way when manoeuvring the FLT. Obtain assistance to help you with traffic control, when operating in busy areas.
- Be sure that people are not under the load

### 5.3 Driving

- Never allow unauthorized people to drive your truck.
- Only use driving surfaces that are capable of handling a load.
- Only drive on surfaces that are within the maximum gradient of FLT's operating condition.
- If a problem arises while operating a FLT stop the truck and take it out of service.
- Always drive with the forks 4 - 6 inches off the ground.
- Drive carefully and do not speed. Obey site speed limit. It is recommended that you do not drive in excess of 10 km/h.
- Avoid violent braking - this can dislodge the load.
- Do not drive with the cab doors swinging around.
- Keep the forks tilted back towards the FLT at all times to ensure retaining of the load.
- Only drive forward if you can see where you are going. If you can't see in front, stop and reverse - if this is not possible (for example when going up a hill) you must get someone to guide you.

- Never turn with a raised mast or load -you could easily tip the truck over.
- Never transport single gas cylinders lying unsecured on the forks.
- If you must cross a public roadway for any reason, be sure to use proper signals and give way to oncoming public.
- Seat belt must be worn

### 5.4 Special tasks

- Use fork lift trucks accessories as necessary. For example: Fork extensions, fork positioners, drum grippers, bracket hoists. Be sure that you have received training in the use of these accessories before you use them and understand that their use may down rate the load carrying capacity of the FLT.
- Never carry people on a FLT unless they are in a properly designed cage.
- Do not use a FLT as a tow truck unless it is designed for the purpose.

### 5.5 Parking the FLT

Good parking practices of a FLT are an integral part of a FLT's care and maintenance. When you have finished operating the FLT, please observe the following rules:

- Do not block emergency equipment such as fire hydrant, exit door or electrical cabinet.
- Park your FLT in a safe area, preferably protected from the weather.
- Lower the forks until they are shot on the floor.
- Engage the parking brake.
- Take out the key.

## Appendix: Sample Forklift Daily Checklist

THIS FORM MUST BE COMPLETED BEFORE THE FORKLIFT IS USED AT THE BEGINNING OF THE DAY

### 1. FORKLIFT IDENTIFICATION

Plant/Unit .....

Date and time:.....

### 2. CHECKLIST

	Satisfactory	Need Attention
<b>Safety items</b>		
• Tyre pressure	<input type="checkbox"/>	<input type="checkbox"/>
• Brakes function	<input type="checkbox"/>	<input type="checkbox"/>
• Light signals	<input type="checkbox"/>	<input type="checkbox"/>
• Flashing lights	<input type="checkbox"/>	<input type="checkbox"/>
• Lift fork condition	<input type="checkbox"/>	<input type="checkbox"/>
• Horns	<input type="checkbox"/>	<input type="checkbox"/>
• Reversing alarm	<input type="checkbox"/>	<input type="checkbox"/>
• Wheel & nut security	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other items (rectify immediately)</b>		
• Radiator Water	<input type="checkbox"/>	
• Engine oil	<input type="checkbox"/>	
• Hydraulic oil	<input type="checkbox"/>	
• Fuel oil	<input type="checkbox"/>	

### 3. AUTHORISATION

The forklift has been checked and is in a satisfactory condition for use

Name:..... Signature.....

### 4. OTHER REMARKS:

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