

## FACT SHEET 05

### WHAT IS THE MAXIMUM GRADIENT FOR A FORK LIFT TRUCK?

This is a bit like asking “how long is a piece of string?” However there are guidelines.

#### Operating

As a general rule all gradients should be avoided. They are a hazard to any fork lift truck operation. If they cannot be avoided then the gradient must be met head on – straight up or down the slope. If the slope is icy or wet, or if the ground is uneven or soft, the hazard will increase. Most laden counterbalance trucks should cope with a gradient of 5%. Crossing any gradient sideways will increase the risk of the truck overturning. Loading or unloading of vehicles should take place on firm, level ground.

If difficult operating conditions cannot be avoided consider the use of equipment designed for rough terrain or off-road use.

#### Workplace Design

Problems with gradients can be minimized by considering the risks during the design stage of new builds, or through modifications. The British Industrial Truck Association (BITA) provides technical guidance that covers gradients of general floor surfaces, doorways, ramps and drainage gullies, For example they quote 12.5% as a maximum gradient for ramps. However, wherever possible, the specific truck specification sheet should also be consulted.

Further information is available in the following publications.

#### Operating

Fork Lift Truck Association booklets:

Operator Safety – Counterbalance Trucks  
Operator Safety – Warehouse Lifting Equipment

#### Workplace Design

BITA Guidance Note GN 52  
Industrial Trucks – Floor Surfaces and Gradients  
(Telephone 01344 623800)

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The information in this Fact Sheet has been assembled and interpreted to give truck owners and users basic guidance on frequently asked questions. Further important information will be given in the quoted reference documents. Responsibility for meeting the safety obligations discussed rests with the employer, and the FLTA will not accept liability for any problem arising as a result of the content of this document. **Technical Bulletins, containing more detailed information and updated as appropriate, are made available free to members of the [FLTA SAFE USER GROUP](#).**

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