

Forklift Truck Safety – Lights, Flashing Beacons, Reversing Alarms and Mirrors

Aim

The aim of this bulletin is to provide members of the UK Material Handling Association with clear guidance when to fit lights, flashing beacons, reversing alarms and mirrors to forklift trucks.

Legal Obligation to Fit Devices

Any legal duty to fit devices such as lights, flashing beacons, reversing alarms and mirrors to forklift trucks is dependent on conditions of use and type of machine used.

In general, lights, flashing beacons, reversing alarms and mirrors can improve safety. However, they can in some circumstances, increase the danger to operators and other employees, or produce environmental hazards that outweigh potential safety benefits. It is therefore important to understand the legal limitations and the significance of risk assessment when considering the use of such devices.

Legislation

Extracts from legislation and explanatory notes are listed within the sections for each device. The main relevant items of legislation are:

The Provision and Use of Work Equipment Regulations (PUWER).

Also, this bulletin quotes clarifying excerpts from the Health & Safety Executive (HSE) Approved Code of Practice and guidance (ACOP) for PUWER – **L22 Safe use of work equipment**. ACOP L22 paragraph numbers are shown where appropriate.

The Road Vehicles Lighting Regulations (RVLR).

Safe Operations

In stressing the fact that any legal duty to fit said devices is dependent on conditions of use and type of machine used, the UKMHA does not support a negative attitude to the safety benefits that are often gained from the use of such devices.

However, nor does the Association support the blind adoption of such devices when the fitting, may be detrimental to safety or where there are cost implications that cannot be justified.

Safe operations should always be the over-riding factor, and this will be the subject of risk assessment.

Forklift Truck Safety – Lights, Flashing Beacons, Reversing Alarms and Mirrors

Risk Assessment

The Management of Health and Safety at Work Regulations mandates that an employer must identify in a risk assessment, the nature and levels of risk associated with work activity.

Appropriate precautions need to be taken to eliminate or control these risks. A proportionate response according to the risk is required. The higher the level of risk identified through the risk assessment, the greater the measures that will be needed to reduce it.

Retrospective Fitting of Lights, Flashing Beacons, Reversing Alarms and Mirrors

The remainder of this bulletin concerns the retrospective fitting of these devices. The greater the measures that will be needed to reduce it.

Lights

There is a requirement to fit lights to forklift trucks, depending on conditions of use.

PUWER Regulation 28(f) concerns equipping mobile work equipment (including forklift trucks) with appropriate lighting for use at night or in dark places and states:

28. Every employer shall ensure that, where self-propelled work equipment may, while in motion, involve risk to the safety of persons –
- (f) if provided for use at night or in dark places –
- (i) it is equipped with lighting appropriate to the work to be carried out; and
 - (ii) is otherwise sufficiently safe for such use.

ACOP L22 states:

288 In terms of this regulation, 'dark' means any situation where the light levels are not good enough for the driver to operate the self-propelled work equipment safely without risks to themselves or other people in the vicinity.

289 In such situations the equipment needs to be equipped with 'appropriate' lighting. The level of lighting required will depend on the type of equipment being operated, how it is being operated and the area in which it is operating. Factors you will need to consider are the presence of other people and/or obstacles in the vicinity of the equipment and ground conditions which could lead to risk. In situations where there is a significant risk of an accident, the lighting will need to be at a sufficient level to help control this risk.

290 Regulation 28(f) only covers lighting on mobile work equipment. Lighting provided at the workplace for the use of all work equipment is covered by regulation 21.

It is clear from the above that the fitting of lighting is a matter for risk assessment. The Regulation gives clear guidance on what factors should be considered. In some circumstances, improving lighting at the workplace may be a better option than fitting lights to forklift trucks.

Forklift Truck Safety – Lights, Flashing Beacons, Reversing Alarms and Mirrors

Lights For Use On A Public Road. If a forklift truck is only used on a public road between sunrise and sunset and is not fitted with any front or rear position lamp. Under **RVLRL Regulation 4(3)** the vehicle is exempt from having to be fitted with any lamp or reflector.

This exemption does not apply to fork lift trucks being used on a public road during the hours of darkness – between sunset and sunrise. Under these circumstances, lamps will be required. Full details are given in FLTA Technical Bulletin 03 – Requirements for the use of Forklift Trucks on a Public Road.

Flashing Beacons

There is a requirement to fit flashing beacons to forklift trucks, depending on conditions of use and type of machine used.

PUWER Regulation 24 concerns work equipment (including forklift trucks) warnings and states:

24.—(1) Every employer shall ensure that work equipment incorporates any warnings or warning devices which are appropriate for reasons of health and safety.

ACOP L22 states:

233 Warnings must be easily perceived and understood, and unambiguous. It is important to consider factors which effect people's perception of such devices,

especially for warnings of imminent danger.

Under general circumstances the fitting of flashing beacons will be a matter for risk assessment. Circumstances under which such fitting may not improve safety will be few and far between. The benefits may be limited in certain bright light applications or in areas where there are vehicles moving together with flashing beacons operating.

It should be possible to turn off flashing beacons for operational and environmental considerations.

When Flashing Beacons Must Be Used. There are a number of circumstances when there is a legal requirement for flashing beacons to be fitted and used. They are required on:

- Man-up – very narrow aisle (VNA) forklift trucks.
- Any type of forklift truck if it is being driven on a dual carriageway.
- Any forklift truck that is engaged in road works, including whilst it is parked.

Reversing Alarms

There is a requirement to fit reversing alarms to forklift trucks, depending on conditions of use.

PUWER Regulation 24 concerns work equipment (including forklift trucks) warnings and states:

24.—(1) Every employer shall ensure that work equipment incorporates any warnings or warning devices which are appropriate for reasons of health and safety.

Forklift Truck Safety – Lights, Flashing Beacons, Reversing Alarms and Mirrors

Reversing Alarms (cont)

TACOP L22 states:

233 Warnings must be easily perceived and understood, and unambiguous. It is important to consider factors which affect people's perception of such devices, especially for warnings of imminent danger. Visual warnings will be effective only if a person frequently looks in a particular direction, and therefore may not be as widely applicable as audible signals. Appropriate choice of colour and flashing can catch attention, and also reinforce the warning nature of a visual signal. The sound given by an audible signal should be of such a type that people unambiguously perceive it as a warning. This means that it must be possible to distinguish between the warnings given by separate warning devices and between the warnings and any other, unrelated, signals which may be in operation at the time. It may not be possible to rely on audible signals in a noisy environment, nor in circumstances where many such signals are expected to be active at one time.

Under all circumstances the fitting of reversing alarms will be a matter for risk assessment. The above paragraph indicates circumstances when such reversing alarms may not be appropriate.

The proximity of neighbours and adjoining properties will also have to be considered, as such alarms may be perceived as unwanted noise pollution. There are reversing alarms available that have a reduced impact away from the immediate vicinity of the forklift truck.

Where there is a need, it should be possible to turn off reversing alarms for environmental considerations.

Mirrors

There is a requirement to fit mirrors to forklift trucks, depending on conditions of use and type of machine used.

PUWER Regulation 28(e) concerns equipping mobile work equipment (including forklift trucks) with adequate devices to improve the driver's field of vision and states:

28. Every employer shall ensure that, where self-propelled work equipment may, while in motion, involve risk to the safety of persons–

(e) where the driver's direct field of vision is inadequate to ensure safety, there are adequate devices for improving his vision so far as is reasonably practicable;

ACOP L22 states:

286 This regulation applies when mobile work equipment is about to move or while it is travelling (including manoeuvring). Under these circumstances, where the driver's direct field of vision is inadequate to ensure safety then visibility aids or other suitable devices should be provided so far as is reasonably practicable. Regulation 17 requires that operators of mobile equipment should be able to see anyone who may be put at risk when any control is operated. Therefore, if direct vision is impaired, then mirrors or more sophisticated visual or sensing facilities may be necessary. Regulation 28(e) requires, so far as is reasonably practicable, mobile work equipment to have adequate devices to improve the driver's field of vision where this is otherwise inadequate. Such devices may include mirrors or closed-circuit television (CCTV) and the provision of these devices can be used to meet the requirements of both regulations.

Forklift Truck Safety – Lights, Flashing Beacons, Reversing Alarms and Mirrors

Mirrors (cont)

287 Examples of devices which can aid the driver's vision include:

- (a) plane, angled and curved mirrors;
- (b) Fresnel lenses;
- (c) radar;
- (d) CCTV systems.

The selection of these devices for use on mobile work equipment (including forklift trucks) is a matter for risk assessment, taking account of the purposes for which the devices are provided and their ability to improve driver visibility.

It is recommended that mirrors are fitted to forklift trucks that operate with any other traffic.

Some forklift trucks, such as those with high level cabs, or with high counterbalance weights, will not meet the visibility requirements of **PUWER Regulation 28(e)**. Therefore, they are to be fitted with rear view mirrors and where necessary 'drawbar' type mirrors.

The above information is provided by the UKMHA as guidance and, where applicable, takes account of current best practice and our interpretation of current legislation.

However, the UKMHA accepts no responsibility for the recommendations, advice, statements, opinions and conclusions set out above, either expressly or by implication.

No warranty or representation of assurance, in respect of the accuracy or validity of the same is given.

The information in this Technical Bulletin has been assembled and interpreted to give forklift 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 UKMHA will not accept liability for any problem arising as a result of the content of this document. Fact Sheets, containing abridged information on a variety of subjects are made available from the UKMHA website [here](#).

Published by UKMHA – UK Material Handling Association

34B Kingfisher Court,
Hambridge Road,
Newbury,
Berkshire RG14 5SJ

01635 277570
info@ukmha.org.uk
www.ukmha.org.uk