

# CPCS renewal test factsheet



## Introduction to the CPCS renewal test

The industry-led CPCS Management Committee has determined that key safety-related knowledge must be checked on each category prior to the renewal of a CPCS Competent Operator (blue) card. The CPCS renewal test is the means by which blue cardholders will be tested on topics that reflect safety issues identified through consultation, that occur regularly on site.

For each topic identified there is a set of questions, from which a number will be included in the test and for which supporting information is provided in this factsheet. Each test will ask a total of 15 questions selected randomly to ensure all topics are covered.

The test will cover all categories within the scheme through modules. Some modules have been devised to cover a range of similar CPCS categories.

The CPCS renewal test is available on the CITB-ConstructionSkills Testing Services platform alongside the Health, safety and environment test.

The questions and answers will not be published but factsheets are available for each module to cover the topics.

## How to use this factsheet

Prior to taking the test, cardholders are advised to carefully study the factsheet, which will prepare them in deciding the correct answer or answers to each given question. Correct answers are based on legislation or good practice adopted, in the majority of cases, by the construction and allied sectors.

It is acknowledged that variations may occur depending on the nature of the operation or on how the machine is used. However the correct answer to each question is based on common practices or manufacturers' requirements for the majority of machine types within each module, and applies to this test irrespective of how a machine may be used within a particular activity or sector. It is important, therefore, that this factsheet is studied carefully.

The questions are selected randomly and will not appear in the order that topics appear in this factsheet.

If the card holder does not answer all the questions correctly, the score report issued after completing the test will indicate the topic areas in which the questions were answered incorrectly. The cardholder should, prior to retaking the test, re-study all topic areas.

## Scoring the test

To be successful in this module, cardholders need to correctly answer a minimum of 12 out of the 15 questions presented. However, because many of the questions are safety-related, in the majority of cases, a minimum number of questions per topic need to be answered correctly. Failure to do so, even if the overall minimum number of correct answers has been reached, may mean that the cardholder is unsuccessful on the test.

The top of each topic states the number of questions that will be presented for each topic and the minimum number of questions that must be answered correctly in order to pass the test.

## Concessions

To avoid duplication of questions where similar categories are held, booking concessions are provided. This means that, if several similar categories are held, only one module needs to be booked. The following chart indicates if there is a booking concession for this category.

Concessions are provided to holders of the category of Masted forklift truck.

### Other categories held:

Telescopic handler

### Needs only to book:

Telescopic handler

**Note:** *The above concessions are an outline of what tests you may have to book; please refer to Module matcher for details of full concessions where more than one category is held.*

This factsheet has been designed to highlight only topics that have been identified through industry consultation area with safety issues or where good practice is often not complied with. The questions within the CPCS renewal test for this category also reflect this.

It is not intended as a training tool and cannot list all essential knowledge and understanding for this category. Operators must always follow manufacturers' requirements, industry good practice and be aware of their own limitations with the machine, and seek further guidance and help where needed.

Further information about the CPCS renewal test can be found at [www.cskills.org/cpcs](http://www.cskills.org/cpcs)

## Preparation and fitting attachments *(Preparation)*

Topic scoring information: 1 correct answer required out of 3 questions presented to pass

- Masted forklifts (excluding telescopic handlers) come in a variety of types including industrial counterbalanced, side loader, reach truck and rough terrain. All are equipped with a hydraulically operated and tilting mast that allows loads to be lifted, carried and placed at height. This factsheet covers all these types, although the rough terrain version is the most commonly used within the construction and allied sectors.
- As with all plant and equipment, thorough pre-use checks must be undertaken which follow manufacturer's requirements. This information is usually found within the operator's manual, which should be with the machine, or on decals placed around the machine. Checks on the mast and forks are one of the many checks that should be taken before work starts. The forks are prone to wear, particularly through misuse, with wear mainly occurring at the heel, or back end, of the forks. This is a potential weak area and as one or both forks may bend or break, the wear must be measured against manufacturer's specifications. Checks also need to be made to the lift chains in the mast and must be of equal length, as unequal length chains could result in a load being lifted that is not level laterally.
- Where the operator notices a fault or is unsure whether the machine is safe to use, they must report any fault or defects immediately and place the forklift out of service. Using a machine with a defect, such as a leaking tilt hydraulic ram, could become rapidly worse during use and, although an operator may decide that the fault is minor and the forklift can be used, they may not be sufficiently qualified or experienced to make that judgement.
- Incidents have occurred with forklifts where the tyres, particularly the front set, are of different sizes or of different load-bearing capacities. This is usually because the tyres have been changed due to wear or damage, but they have not been replaced with the correct types. Different sized front tyres mean that the forklift may not be level when picking and placing loads, especially at height, so it may become unstable.
- Some masted forklifts use attachments such as buckets and clamps. The operator must have had relevant training on both how to safely and correctly fit the attachment, and how the attachment must be used.

## Working safely and with others *(Working safely)*

Topic scoring information: 2 correct answers required out of 4 questions presented to pass

- The majority of forklift operations occur within congested and confined areas where there are movements of other machines, vehicles and people for which the operator must be aware of these movements when operating the machine. Statistics show that collisions with pedestrians form a large part of forklift-related incidents. Where pedestrians need to share the same route as forklifts, or any plant or vehicle, then a segregated walkway needs to be provided.
- Reversing any forklift is hazardous. The operator must ensure that the route they intend to take is clear of people and vehicles before they move. Operators should check all mirrors, then look over both shoulders before moving, and maintain all-round vision, looking particularly in the direction of travel. When travelling in the workplace, an appropriate speed must be kept for the conditions and environment, in order to allow the operator time to react to situations, such as slowing down if a pedestrian crosses the path of the forklift. If the operator brakes sharply, there is the additional danger, apart from possible collision, in that any load could slide from the forks.
- Masted forklifts operate in a variety of places which can contain overhead hazards such as power lines. Guidance from the Health and Safety Executive indicate that the machine must be a minimum distance of 9 metres, plus the full operating height of the mast, from any power lines mounted on wooden poles.
- Operators regularly need to leave the operating seat to, for example, make adjustments to the forks for different types of loads. In all cases, the forklift's handbrake must be applied, transmission put in neutral and the engine switched off before the operator leaves their seat. It has been known for a transmission lever to be inadvertently knocked into drive when the operator exits the seat, causing unintended machine movement.

## Lifting loads and using attachments *(Working tasks)*

Topic scoring information: 1 correct answer required out of 3 questions presented to pass

- Before any load is lifted, the operator needs to know the weight of the load, and to what height it can be safely lifted which is provided by the machines rated or lift capacity chart or decal. Using a forklift where the maximum lifting capacity is regularly reached for the desired height increases the risk of overloading the machine and can become unstable. The weight of any load is determined by its size and density – for example, a pack of house bricks will be heavier than a same-sized pack of aerated breeze-type blocks – meaning that operators can't establish the weight of a load by size, height, width and length alone.
- The operator must also be able to determine the load centre (the point that the load is in balance), and compare it with the forklift's load centre as indicated in the rated or lift capacity chart. In most cases, the load centre of a forklift is usually 500mm from the face of the forks, although some are rated at 600mm. If the centre of gravity of the load is more than the machine's load centre, the carrying capacity must be reduced for the reach and height.
- Before a load is lifted, both the forklift and load need to be on level ground to prevent damage to the load or supporting pallet where the forks are not level. Forks should be spaced so that they are equidistant, or of equal width, from the forklift's centre line, and spaced so that a load is fully supported, particularly if it is on a wooden pallet. Fork spacings that are too wide or too narrow can lead to an unsupported or unstable load.
- During all lifting and placing operations, the handbrake must be applied each time the machine is stopped and hydraulic functions used. Where operators have relied on holding the machine using the footbrake, especially when raising or lowering the mast, machine movement has occurred when their foot has slipped off the footbrake.

## Stability

Topic scoring information: 3 correct answers required out of 5 questions presented to pass

- Masted forklifts overturn when they become unstable for a wide range of reasons, and operators need to understand the conditions that can cause instability, both longitudinally (front and rear) and laterally (sideways). Before any load is carried, the operator must check the manufacturer's maximum rated capacity for the machine, the load centre that applies and where any de-rating must be undertaken. Where a large load is to be carried and the centre of gravity of that load exceeds the machine's load centre, then the carrying capacity must be reduced.
- Longitudinal stability of a forklift is maintained by the counterbalance effect, which is when the weight towards the rear of the machine overcomes the weight of the load on the forks. Increasing the load on the forks reduces the counterbalance effect, making the machine less stable. If a load is placed where the forklift is facing downhill on a slope, the counterbalance effect is also reduced due to a movement of the forklift's centre of gravity and this could cause longitudinal instability.
- Raising a load can further affect stability. If a load is raised to full height with full back tilt of the mast applied, the machine's centre of gravity moves both upwards and rearwards. If a load is lifted and the forklift is leaning sideways, the machine is less stable. The higher the load is lifted, the greater the risk of the forklift turning over sideways. No loads should be lifted unless the forklift is level and the ground firm and stable enough to support the weight of the forklift and load.
- Carrying a load suspended from the forks can be hazardous and the effect of any load swing can cause the forklift to exceed safe limits which can be caused by travelling and turning too quickly, or external factors such as the effects of the wind on loads having a large surface area. Travelling with suspended loads can restrict forward vision, for which measures must be taken such as travelling in reverse and with suitable assistance.
- Even if travelling unladen or with light loads, forklifts have rolled over when the operator has turned too sharply, with instability increasing as speeds increase. Travelling with a raised load greatly increases instability, particularly on uneven ground and also when turning, even if a turn is undertaken gently and on

level ground. Where a load needs to be placed at height, the forklift must be on firm level ground and facing the placing point prior to raising the load.

- Travelling up and down slopes requires care and for which certain requirements need to be followed. In the first instance, the operator needs to know the maximum gradient of the slope the forklift can be travelled on, and the direction of travel, which can differ depending on whether it is carrying a load or is unladen. In principle, if the forklift is carrying a load up an incline then it would normally be driven forwards up the slope and reversed down the slope. If unladen, the opposite applies – the forklift is reversed up the slope and driven down the slope. When driving up a slope with a load, the mast needs to be slightly tilted back and the forks and load kept just clear of the ground but as low as possible.