

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The questions and answers will not be published but factsheets are available for each module to cover the topics.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

### Other categories held:

No concessions available

### Needs only to book:

No concessions available

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 completing work *(Preparation)*

Topic scoring information: 0 correct answers required out of 2 questions presented to pass

- Ride on rollers fall into the category of compaction equipment and, in the construction sector, usually consist of a ride-on machine fitted with an articulated chassis equipped with smooth drum rollers. Types used for earthworks activities can consist of a forward-mounted drum and pneumatic tyres to the rear which have the ability to work on inclines and rough terrain and can be fitted with a sheepsfoot drum. Three-drum' rollers can still be found within the road building and highway maintenance sectors. Incidents are common with ride-on rollers, with the commonest causes being instability and overturning, and striking others. The aim of this factsheet to make operator aware of issues that have occurred and what should be taken into account when travelling and operating a roller.
- As with all plant and equipment, pre-use checks that conform to manufacturers' requirements need to be carried out. Failure to do so has caused a near-miss or injuries when a roller's performance has deteriorated or a component has failed. If a fault or defect is noticed, the operator must report it immediately and not use the roller until they are authorised to do so. Even if they consider the fault to be minor, the operator should still seek expert advice as it could be a significant but not visible fault, or a minor fault that could get worse during the working day.
- The reversing of vehicles is still a significant factor in accidents, injuries and fatalities in the workplace. Rollers are fitted with a reversing warning system and one of the essential checks that should be taken by the operator is both the correct function of the alarm and that is sufficiently audible or loud enough for, those behind the roller. A safety stop button is a common feature on rollers and depressing the button immediately cuts the engine, which further stops transmission drive. This should be checked for correct operation as part of the pre-use checks.
- When they are being transported to a site, the majority of rollers – being articulated – should have had the articulation bar connected. This locks the chassis in a straight line during transport and should be removed before the roller is driven off the transporting vehicle.
- One method of compaction is via the weight of the roller acting through the drum onto the ground. If a roller is parked and left on soft ground, the machine can sink. This can both damage the ground and leave the roller unable to move unless it is towed by another machine.

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

Topic scoring information: 3 correct answers required out of 6 questions presented to pass

- The reversing of vehicles is still a significant factor in accidents, injuries and fatalities in the workplace, so reversing warning systems need to be fully functioning. Guidance recommends that the reversing of vehicles is, as the first course of action, eliminated. Where this is not reasonably practicable, and rollers need to reverse as part of their compacting duties, then other measures must be taken with the next step being to minimise any reversing to within a segregated, controlled area where pedestrians or other worker movements are kept to a minimum.
- At the end of a run and before reversing, the roller driver must ensure that no vehicles or personnel are going to be in the path of the reversing roller. When reversing, all-round vision must be maintained at all times. If a co-worker or supervisor has stopped and approached the roller to speak to the operator, the operator should ensure that the co-worker is well clear of the roller's operating area before moving off again.
- If the travel route for the roller takes place on a site where there is pedestrian movement, the planning of any travel routes should be planned to ensure that pedestrians are segregated from the roller to avoid any contact. Planning should also take into account changes in the road or work surface, particularly in wet weather, as both off-road travel routes and work areas can become slippery and firm ground turn into soft ground. For example, even if a roller is travelling along an incline within the limits set by the manufacturer, it could slide if the ground is wet.

- Good practice, as well as manufacturers' recommendations, normally specifies that the engine of most plant is switched off when the operator exits the cab or seating area. This prevents an operating or transmission lever being accidentally moved, which would cause unintentional movement of the roller if the engine was left running. If a roller was parked near to an occupied trench with the engine running, not only could exhaust fumes enter the trench but also the static weight of the roller could place additional side stress on the trench edge and cause it to collapse.
- The majority of ride on rollers have a hydraulically operated transmission. If transmission components are incorrectly adjusted, a running engine can cause the roller to creep forward even if its transmission lever or pedal is in the neutral position. The hydraulic transmission also means that if the operator selects reverse whilst the roller is still moving forward, the roller can very suddenly decelerate and stop, which can cause an injury to the operator.
- A rolling specification would normally be devised and for which the operator would need to follow. The rolling specification would determine the amount of amplitude required, with low amplitude settings normally specified when a heavier material is being compacted on thin ground layers. The operator needs to select the appropriate settings and follow the stipulated number of passes.
- Before any material is to be compacted, the area should be checked to ensure there are no voids or soft, weak areas as these have caused smaller rollers to overturn. When using vibration during the compacting process, operators need to be aware that the use of vibration close to an unsupported edge has caused rollers to, in effect, vibrate towards the edge and slide off it, causing it to overturn.

## Stability and overturning *(Stability)*

Topic scoring information: 4 correct answers required out of 7 questions presented to pass

- Ride on rollers are fitted with a roll over protective structure (ROPS), which is either the cab itself or an overhead frame. If the roller does roll over onto its side, the ROPS frame can minimise, but not eliminate, injuries to an operator providing they are wearing a seatbelt and they keep their limbs (arms, legs) within the confines of the operating station, particularly if the roller does not have an enclosed cab.
- Manufacturers normally indicate the maximum gradient allowed when travelling up, down and across inclines. One cause of instability is where the roller is being driven along a slope for which if too steep, the roller's centre of gravity exceeds the width of the drum and can cause an overturn. Narrow drum rollers are particularly susceptible to sideways overturns even on gentle inclines and they can also become unstable on rough surfaces and soft ground. Another cause of many overturns is that an operator has travelled too fast for the site conditions. Manufacturers' requirements for inclines must be followed at all times.
- Travelling around a site presents a variety of hazards both for the operator and others. For example, travelling near to a trench can cause its sides to collapse. This may only overturn the roller and could also damage services in the trench and even bury persons working within the trench.
- Manoeuvring a roller up a small ramp, for example onto a raised kerb to compact a pathway, has caused injuries when the roller has rolled over either because an unsuitable ramp was being used, or because the roller travelled up the ramp too fast, overshot the pathway and fallen down an embankment. A safe access area should be sought and, if required, ramps must be constructed of suitable materials that have sufficient strength to take the roller's weight – timber ramps can break due to the weight of the roller. The roller should be driven forward and slowly up the ramp but if there is a drop on the other side, a safer access area should be sought and used.