

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The questions and answers will not be published but factsheets are available for each module to cover the topics.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

Other categories held:

Forward tipping dumper

Needs only to book:

Dump truck

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

Preparation for work *(Preparation)*

Topic scoring information: 0 correct answer required out of 1 question presented to pass

- Rear tipping dump trucks are a common feature on most construction and related sites. They transport large volumes of materials safely and efficiently from a loading area to a tipping area. Rear tipping articulated dump trucks in general have carrying capacities from around 14 tonnes up to around 50 tonnes, although rigid chassis types have carrying capacities well in excess of that. Driving a fully loaded dump truck can be hazardous for which correct and thorough preparation is essential for all plant, including rear tipping dump trucks, to ensure they are able to work safely and efficiently. Failure to properly check the dump truck before work could lead to injuries because faults can affect both the performance and safety of the dump truck.
- Defects noted by the operator, even if they consider them to be insignificant, must be reported otherwise the fault could get rapidly worse during the working day. For example, if the operator notices an oil leak from underneath the dump truck, they must report it immediately as they may not be sufficiently qualified or experienced to decide whether it is safe to use.
- Regular cleaning of the cab glass and mirrors should be undertaken before work starts as clear vision is an essential part of safe operations. Some of the cab glass on certain types of dump trucks can be difficult to reach, such as the front screen, which means the operator needs to plan the task, for example by using proper guardrail-equipped access steps, so that a fall from height can be avoided or minimised. This also applies when checking the dump truck for work as some checks may mean that the operator has to climb onto parts of the machine, such as the wheels or mudguards, and again they could slip or fall.

Working safely and with others *(Working safely)*

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

- Planning of work should take into account the optimum size of dump truck required. Where a loading machine such as an excavator is too large for the specified dump truck, the risk of overloading is high, which could cause an incident such as overturning, particularly when it is travelling and turning. Where a dump truck is considered to be too large for the work or is working in a restricted area – particularly on smaller sites – loading can take longer and the operator may need to undertake additional manoeuvring. This is inefficient, can damage the working surface and can cause the dump truck to strike other machines or structures.
- Due to their large size, dump trucks have a number of blind spots when the operator is in the driving seat. Accident statistics indicate that one of the highest risks of a person on foot being struck by a truck is when the machine is pulling away. Operators need to make proper checks to ensure that no one is in the vicinity of the machine before they move.
- Dump trucks are required to transport materials over a wide variety of terrain and over long distances, including soft ground, inclines and rough terrain which can present particular hazards for the dump truck operator. The work site should be planned so that travel routes from the loading point to the tipping point minimise, as far as is reasonably practical, the need to travel on poor terrain or steep inclines.
- The planning of haul routes needs to take into account other factors, such as pedestrians, who need to be segregated from the dump truck's travel route to avoid a collision. Planning should also take into account changes in the ground surface, particularly in wet weather, as the haul routes can become slippery and firm ground turn into soft ground.
- Where the haul route passes close to the edge of an embankment, a suitable barrier should be provided to prevent or minimise the truck from going over the edge. Tipping loads into a trench or over an edge is a particular hazard for dump truck operators as machines have fallen over slope edges or into pits because a prevention system, such as stop blocks or earth berms, has not been used.
- The operator needs to be in a safe place during the loading operation. In most dump trucks, the cab itself is usually approved as a falling objects protective structure (FOPS) or part of its tipping body may be the means of protection. This enables the operator to remain in the cab during loading and to move the machine immediately once loading has finished. If the operator chooses not to stay in the cab, they must be well clear

of the loading operation so not to be struck by the loading machine and any overspill, or by other nearby moving vehicles.

- When the dump truck operator leaves the seat of the dump truck, they must ensure that the parking brake is applied, the transmission is in neutral and the engine is switched off. This ensures that the truck cannot move unintentionally, as accidents have occurred when the operator has accidentally moved a transmission or gear lever into drive, causing the machine to move unintentionally.
- Tipping loads requires care on the part of dump truck operators. When loads are being discharged from the body it is important, and recommended by nearly all manufacturers, that the dump truck is parked on firm, flat and level ground and that the hand/parking brake is applied.

Reversing issues *(Travelling)*

Topic scoring information: 1 correct answer required out of 2 questions presented to pass

- Reversing vehicles are still a significant factor in accidents, injuries and fatalities in the workplace. Guidance recommends that the reversing of vehicles is, as the first course of action, eliminated. Where this is not reasonably practicable, such as in dump truck operations where reversing up to a tipping point is required, then other measures must be taken. The next step is to keep any reversing to a minimum and within a segregated, controlled area where pedestrian movement is restricted.
- One instance where the operator, even with reversing aids, would have a blind spot is when they are reversing the truck and turning on full lock, as the outer radius or opposite side of the turn would be out of vision. Operators need to ensure the area is clear before reversing and seek assistance if required.
- As dump trucks by their design have limited vision from the operator's seat, additional vision aids such as mirrors and CCTV systems are fitted to assist in providing all-round vision. However each vision aid can have limitations which operators need to be aware of. For example, CCTV systems are commonly used but can be ineffective in strong sunlight. Mirrors for reversing are now mainly the convex type, as they provide a wider field of vision compared with conventional mirrors.
- Radar systems that detect the movement of other plant, vehicles or persons are becoming common on dump trucks. However, they can be triggered by objects outside the danger or working area, with the result that some operators may ignore warning signals. Furthermore, most systems allow the sensitivity to be adjusted and in confined or congested areas, the operator may have excessively reduced the sensitivity in order to avoid false readings from objects outside the working area. This means it may not pick up objects or structures directly behind the machine. Operators need to follow the radar systems manufacturer's recommendations for adjusting radar sensitivity and not rely on just one type of visual or electronic aid.

Stability issues *(Stability)*

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

- The majority of dump truck cabs are approved roll over protective structures (ROPS) so that, in the event of the machine rolling over, the ROPS cab can minimise, but not eliminate, injuries to an operator, providing the seatbelt is being worn.
- Dump trucks can be unstable during operation so they require planning and care by the operator both before and during work. In principle, the machine's weight is biased towards its front, counteracting the load in the body. As a body is raised to discharge a load, particularly where it is overloaded, weight transfers to the rear of the machine, making it less stable. This means that the operator must take care when discharging loads and needs to operate all controls smoothly and only whilst on firm, level ground. If the dump truck is leaning to one side when it is discharging a load, the truck can tip over sideways as the centre of gravity is raised when a loaded body is raised and exceeds the wheel track (the distance between each set of wheels). Tipping downhill on a slope also can cause the dump truck to tip up rearwards as the load can exceed the counterbalanced effect of the truck.

DUMP TRUCK

- Manufacturers issue guidance on the maximum gradient that the dump truck can travel on –up and down as well as along the slope – and on how the dump truck should be travelled up and down the slope. The direction of travel can vary depending on the severity of the slope but, in principle on steep slopes, a loaded dump truck must reverse up a steep slope and drive down it, keeping the body facing the hill. The opposite generally applies when the dump truck is unladen – the machine is driven up a slope and reversed down it. It is important, however, for the operator of each type of dump truck to consult the operator's manual before starting work.
- When travelling on haul roads between the loading and tipping points, care must be taken to avoid potholes and raised bumps because even small ones, particularly when the dump truck is travelling at speed, can cause it to become unstable or lose its direction of travel. A loaded dump truck will generally be less stable than an unladen one because of the higher centre of gravity. This means that steering and braking actions need to be smooth, particularly when the dump truck is on inclines and turning sharply around tight corners. When travelling on temporary haul roads, operators need to maintain a reasonable distance from the edge of the road, as the sides have been known to collapse when the truck passes near the edge, causing it to overturn.