Ride-on Roller

A31

Technical Test – Theory

Roles and responsibilities

1. What is the definition of, or how can a hazard be described?
A
2. What is the purpose of a risk assessment?
A
3. List SIX typical subject areas that should be covered in a site induction.
A
4. What THREE main duties of the Health and Safety at Work Act must employees follow?
A
5. What does the Health and Safety at Work Act require employers to do with regards specifically to plant?
A
6. a) What is the purpose of a Method Statement and b) what is required of the operator?
A
7. Name FOUR different types or levels of sanctions that can be applied to plant operators who do not comply with, or follow legislation and regulations.
A
8. Plant operators are generally regarded as 'safety-critical' workers. What does this mean?
A

continued...

Roles and responsibilities continued	9. Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
	A
	10. In what situation does a hard hat NOT need to be worn when operating a ride-on roller?
	A
	11. The operator has to use a new type of ride-on roller that they are unfamiliar with. What do Regulations (i.e. PUWER 98) and other guidance require the operator to have?
	A
	12. What are the possible outcomes if being prosecuted for not complying with legislation and regulations?
	A
	13. How can a qualification or card benefit a plant operator?
	A
	14. Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or main contractor.
	A
Preparing for work	15. Where should the ride-on roller's Operator's Manual be kept and why?
	A
	16. If the operator has to fill the fuel tank, state TWO precautions to ensure cleanliness of the system.
	A
	For questions 17 and 18 the Operator's Manual for the machine being used for the test MUST be available for reference by the candidate
	17. Using the Operator's Manual, state the procedure for positioning and adjusting the scraper bars. **For tyred machine, state the tyres' operating pressure.**
	A
	18. Using the Operator's Manual, state the cold-starting procedure for the machine.
	A

continued...

Preparing for work continued	19. On articulated ride-on rollers, steering is achieved by actuating a hydraulic ram (or rams) which is controlled by turning the steering wheel. a) How does the engine supply the oil flow and b) what happens to the steering when the engine stops?
	A
	20. If checking the oil level using a dipstick, why must gloves be worn?
	A
	21. Apart from the operator, who else may need to use the machine's Operator's Manual?
	A
	22. What is the purpose of a ROPS cab or frame?
	A
	23. During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.
	A
Travelling and manoeuvring	24. On articulated ride-on rollers, the two halves of the chassis can oscillate (or twist). What is the purpose of this?
	A
	25. The roller has to be travelled up a slope. What should be checked before starting?
	A
	26. What problems and hazards can soft ground cause to a ride-on roller?
	A
	27. a) What is the minimum distance allowed near open trenches when travelling with a ride-on roller and b) explain why.
	A
	28. If the machine is being travelled or working on the public highway, including adjacent pavements and verges, the Road Traffic Act applies. a) What type of licence and which class should the operator hold and b) what is the minimum age allowed?
	A

continued...

Travelling and manoeuvring continued	29. If travelling on wet soils, what effect does this have on the ride-on roller?
	A
	30. Why must the seat belt be worn at all times, even though a ROPS frame is fitted?
	A
	31. Give THREE possible reasons why ride-on rollers should not stray off the designated travel routes.
	A
Setting up for work	32. If setting up to work in a pedestrianised area, state THREE factors that need to be taken into account.
	A
	33. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on wooden poles and b) explain why a distance should be kept.
	A
	34. Before starting work, name SIX checks that should be made to the compacting area.
	A
Working tasks	35. When working in a confined area or space, what danger can be present with an articulated ride-on roller with regards to steering?
	A
	36. When working in a confined area or space, name THREE hazards that can occur.
	A
	37. What are the TWO aims of compaction?
	A

continued...

Working tasks continued

38. What is meant by deadweight rolling?
A
39. Why should the vibration system not be engaged whilst the roller is stationary on soft ground?
A
40. What is generally accepted as a rolling pass?
A
41. Where should the first pass be made if rolling a cross-fall or camber?
A
42. When would a low frequency amplitude (or vibration) generally be used?
A
43. By how many times is a vibratory pass more effective than a deadweight pass?
A
44. Name FOUR factors that determine the number of rolling passes.
A
45. In general, what types of material are usually used as a sub-base?
A
46. What is regarded as the commonest cause for poor compaction?
A
47. What is meant by consolidation?
A
48. What thickness of soil should be compacted before another layer is laid?
A
49. If compacting on a gradient: a) what is the rolling procedure and b) explain why.
A
50. What is the meaning of this hand signal (being demonstrated by the Tester)?
A

Completing work	51. Before leaving the cab or seat for a rest break, after parking and switching off the machine, what final action must be carried out?
	A
Shutdown	52. When parking the machine at the end of the shift, name THREE places where the ride-on roller should NOT be parked.
	A
	53. Why should a ride-on roller be re-fuelled at the end of the day?
	A
	54. The operator has been asked to drive the machine onto a transporter/trailer. a) Who is responsible for the loading operations and b) state FOUR actions to be considered by the operator before loading commences.
	A

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Technical Test – Practical

RESOURCES

	Required
Machine	• Ride-on Roller
Area	• (Option 1) Single straight run for compacting, with hard-standing, kerbed edge on one side and an unsupported edge on the opposite side OR • (Option 2) Several straight runs for compacting, with hard-standing, kerbed edge on one run and an unsupported edge on another run PLUS • A radius for compacting, with supported edges PLUS • A length of uneven ground and a gentle gradient (for travelling purposes)
Other equipment	• Material for compacting • Items/objects to create restrictions for manoeuvring
Notes	• The machine selected for the test must be in serviceable condition, fitted with a seatbelt and ROPS frame/cab, and conform with current legislation • The operator's manual must be with the ride-on roller • The single straight run (Option 1) must be at least 20 metres in length and 3 x the drum width. 15 metres of each run must be uncompacted and the remaining may form part of the hard standing • Each straight run (Option 2) must be at least 20 metres in length and 1.5 x the drum width of the roller respectively. 15 metres of each run must be uncompacted and the remaining may form part of the hard standing • The radius must have a curve of between 5 and 10 metres and 3 x the drum width and at least 3 kerb lengths of straight run at each end • The radius must form part of one of the straight runs • The material selected for compacting must clearly show areas compacted by the roller such as overlaps and direction changes • The uneven ground must be safe for travelling on but be of a nature that forces the candidate to travel a slow speed • The test is designed to reflect general granular sub-base type compaction, not bitumen rolling

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Technical Test – Practical

ACTIVITY

	Instructions
Sequence	• Activity 1 must be undertaken at the start of the test • Activities 2, 4 and 5 can be undertaken in any order during the test • Activity 6 must be undertaken at the end of the test The test must be completed within a given time. The specifications' section gives further information.
Preparing for work	1 Complete all manufacturers' pre-start and running checks and prepare the ride-on roller for travel
Travelling & manoeuvring (refer to specifications)	2 Travel to the work area and: – pass through a restriction (in forward and reverse) – drive up and down the gradient – drive on the uneven ground
Setting up for work	3 Prepare an exclusion zone and set the ride-on roller for the relevant work
Working tasks (refer to specifications)	4 Compact the straight run or runs. Several objects must be placed centrally on one of the runs (simulating ironwork) 5 Compact the radius
Shutting down	6 Park the ride-on roller and carry out shut-down and securing procedures
Notes	• Compaction must take place up to the supported and unsupported edges, although the closeness will be dependent upon the roller and material type • For the purposes of the test, an overlap will be constituted as no more or less than one quarter of the overall drum width • For the purposes of the test, a pass is constituted as compacting in one direction and returning in the same track • If the machine is hot, checks unable to be carried out (i.e. coolant) may be assessed by the Tester using verbal questions
	Activity measurements
Travel restrictions	• 500 mm
Compacting duty	• Three passes. The initial pass without vibration and the remaining passes with vibration (if fitted)
Test timings	• The test must be completed within 1 hour and 15 minutes

CP CONSTRUCTION PLANT
CS COMPETENCE SCHEME

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Technical Test – Practical

Basic details		
	Test ref.	Candidate name
	Tester name	Candidate ref.
	Tester ref.	Date of test
	Make and model	Start time of test
		Duration

MANDATORY	Correctly carried out during the test?	Y / N
Preparing	1 All pre-start and running checks (or responses to relevant questions)	
Travelling	2 Seatbelt worn	
	3 Roller set for travel	
	4 Restrictions and hazards cleared	
	5 Control maintained when travelling on uneven ground	
	6 Control maintained when travelling on gradient or ramp	
Setting up	7 Compacting area checked, segregated and clear of hazards prior to work	
	8 Sited and set for compacting duties	
Working	9 Start position for rolling pass	
	10 Travel speed during compaction	
	11 Avoided stopping on uncompacted material	
	12 Compacted in straight lines (straight runs only)	
	13 Stopping points staggered	
	14 Safe distance from sides of unsupported edges maintained	
	15 Overlapped spread material when compacting	
	16 All areas compacted to given specification as per activity measurements	
Shutdown	17 All shutdown and securing procedures	
Other	18 Legislation, manufacturers' and health and safety requirements complied with	
	19 Test completed within the given time	
	All of these items must be awarded	Achieved / Not achieved

FAULTS	Candidate incorrectly carried out the following:	Fault	Mark	Penalty
Travelling	1 Ride-on roller mounting and dismounting		1	
	2 Full observation before moving and reversing		3	
	3 Full observation whilst travelling and reversing		2	
	4 Travel speed matching ground type and conditions		1	
Working	5 Control of throttle /speed selection		1	
	6 Deploying of vibration system (if available)		1	
	7 Overlap of passes by correct amount		2	
	8 Repositioning/turning on compacted/hard standing areas		2	
	9 Impacting supported edges		2	
	10 No scuffing of the surface		2	
	11 Minimising short working cycles		2	
	12 Smooth use of steering and hydraulic controls		2	
	Not exceeded 8 penalties	Total penalties		
		Achieved / Not achieved		

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Technical Test – Practical

Tester observations	.....

Sign off	I confirm that I have carried out the Practical Technical Test in accordance with CPCS requirements and that the candidate has: Achieved ☐ Not achieved ☐ **Candidate signature:** ..... **Tester signature:** .....

CITB-ConstructionSkills Grant claim details	Grant is only payable for the award of a full Technical Test or Advanced Technical Test pass (both practical and theory elements to a maximum of 2 categories in any Grant Scheme year) in accordance with the full Grant Scheme rules. Employer **does not** intend to claim a Technical Test pass grant ☐ No further information required Employer **does** intend to claim a Technical Test pass grant ☐ Please complete additional fields below **CITB-ConstructionSkills Levy Grant Registration Number (7 digits)** ☐☐☐☐☐☐☐ **Employer Name** ..... **Employer Postcode** .....

Internal use	