

Soil/Landfill Compactor

A32

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 (by employers and judicial bodies) 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 compactor?
	A
	11. The operator has to use a new model of compactor 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 (by judicial bodies) for not complying with legislation and regulations?
	A
	13. Give TWO examples of where The Work at Height Regulations 1995 may apply to compactor operations.
	A
	14. How can a qualification or card benefit a plant operator?
	A
	15. Name THREE ways that a compactor operator can contribute in maintaining business with the client or contractor.
	A
	Preparing for work
A	
17. If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.	
A	
	18. What is the purpose of a roll or ROPS frame?
	A

continued...

ing for work contin	For questions 19 and 20 the Operator's Manual for the machine being used for the test MUST be available for reference by the candidate
	19. Using the Operator's Manual, state the procedures for cleaning the radiator.
	A
	20. Using the Operator's Manual, state the cold-starting procedure for the machine.
	A
	21. Name: a) FOUR health hazards that are particular to landfill areas and b) what precautions may be taken.
	A
	22. If checking the oil level using a dipstick, why must gloves be worn?
	A
	23. a) What is meant by blade capacity and b) how is it determined?
	A
	24. What are the TWO aims of compaction?
	A
	25. What is the purpose of the 'striker bars'?
	A
	26. Name three different types of landfill methods.
	A
	27. What is the result of well compacted fills?
	A
	28. What is meant by 'inert waste'?
	A

continued...

Preparing for work continued	29. On soil compaction, what type of soil is a sheepsfoot compactor best suited to?
	A
	30. Which main component parts of the compactor is subject to trash or waste build-up?
	A
	31. Apart from the operator, who else may need to use the machine's Operator's Manual?
	A
Travelling and manoeuvring	32. Describe one method that keeps debris from sticking to the wheel tips.
	A
	33. During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.
	A
	34. Most compactors have an articulated chassis that swivels or pivots in the centre. One pivot plane or angle (looking from the top) provides the steering (articulation), what is the function of the other pivot plane or angle i.e. looking from the front (oscillation)?
	A
	35. a) Give ONE advantage and b) TWO disadvantages of rear mounted cameras.
	A
36. Name THREE conditions that mirrors must be in, on the machine.	
A	
37. Why must the seat belt be worn, even with the cab door closed?	
A	
38. What problems and hazards can soft ground cause to a loaded compactor?	
A	

continued...

Travelling and manoeuvring continued	39. a) Name THREE purposes of the raised tips on the wheels and b) what can happen to a compactor if they are severely worn?
	A
	40. a) What is the minimum distance allowed near any open trenches when travelling with a compactor and b) explain why.
	A
	41. On articulated compactors, 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	
42. Give THREE reasons that may cause the compactor to tip over sideways.	
A	
Setting up for work	43. Before manually changing any blade: a) where should the blade be positioned (in relation to the ground) before removing the final pin and b) why?
	A
	44. What is the recommended maximum slope ratio?
A	
45. Why should the compactor operator have an understanding of the type of material being moved and spread?	
A	
Working tasks	46. When working in a confined area or space, name THREE hazards that can occur.
	A
	47. What are the purposes of the refuse screen mounted on top of the blade?
	A
48. When would a 'U' blade be used over a straight blade?	
A	

continued...

Working tasks continued	49. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on wooden poles when working and b) explain why a distance should be kept.
	A
	50. If fitted, what can the float function on the blade allow?
	A
	51. Wherever possible, why should the compactor be aligned before making the next pass or cut?
	A
	52. What is the ideal thickness to spread and compact material during each phase?
	A
	53. What could happen if incompatible waste was mixed?
	A
	54. What determines the number of passes?
	A
Completing work	55. Why is moisture a benefit to soil and material compaction?
	A
Shutdown	56. When pushing material, why should the blade be feathered before reaching the end of the run?
	A
Completing work	57. What is the recommended depth of earth cover which is spread over a compacted waste area at the end of the day?
	A
Shutdown	58. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
	A
Shutdown	59. Many compactors have a turbo-charged engine. a) What is the normal procedure before switching off the engine after working and b) what happens if the procedure is not followed?
	A

continued...

Shutdown continued	60. When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
	A
	61. 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
	62. If the operator has loaded the machine onto a transporter/trailer on behalf of a driver, what checks must be carried out before they leave the cab?
	A
63. Why should a compactor be re-fuelled at the end of the day?	
A	

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Technical Test – Practical

RESOURCES

Required

Machine	<ul style="list-style-type: none"> • Soil/Landfill Compactor fitted with a standard blade
Area	<p>Landfill compactor:</p> <ul style="list-style-type: none"> • Landfill type ground, clear of hazards which must include: <ul style="list-style-type: none"> – sloping face for waste depositing – rough terrain <p>Soil compactor:</p> <ul style="list-style-type: none"> • Level ground, clear of hazards which must include: <ul style="list-style-type: none"> – rough terrain – slope or slopes
Other equipment	<ul style="list-style-type: none"> • Items to create restrictions for manoeuvring • Delivery of relevant spreadable material or materials
Notes	<ul style="list-style-type: none"> • The machine selected for the test must be in serviceable condition and conform with current legislation • The operator's manual must be with the compactor • Soil compactor – The slope must have at least an 18% (1:5.5) incline with sufficient manoeuvring room at the top, or a straight ramp with an up and down route with a flat area at the summit

ACTIVITY

Instructions

Sequence	<ul style="list-style-type: none"> • Activity 1 must be undertaken at the start of the test • Activities 2 and 4 can be undertaken at any time during the test • Activity 6 must be undertaken at the end of the test <p>The test must be completed within a given time. The specifications' section gives further information.</p>
Preparing for work	1 Complete all manufacturers' pre-start and running checks and prepare the compactor for travel
Travelling & manoeuvring (refer to specifications)	2 Travel to the work area and: <ul style="list-style-type: none"> – travel up and down the slope (soil compactor only) – pass through a restriction (in forward and reverse) – travel over rough terrain
Setting up for work	3 Prepare and set the compactor for the relevant work
Working tasks (refer to specifications)	4 Spread dumped loads in even layers on the sloping face (Landfill compactors) or on a level area (Soil compactors)
Completing work	5 Form a cover over the spread material and level
Shutting down	6 Park the compactor and carry out shut-down and securing procedures
Notes	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 800 mm
Compacting duty	<ul style="list-style-type: none"> • Spread material to be compacted using a minimum of 3 passes
Work efficiency	<ul style="list-style-type: none"> • Machine to be operated at 75% of maximum working capacity and using full loads on the blade
Test timings	<ul style="list-style-type: none"> • The test must be completed within 1 hour and 45 minutes

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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 Compactor set for travel		
	3 Restrictions cleared		
	4 Encountered hazards cleared		
Setting up	5 Control maintained when ascending and descending inclines		
	6 Allocated area checked and clear of hazards prior to compacting		
Working	7 Full blade loads maintained		
	8 Starting position and gear/speed selection		
	9 Avoided stopping on uncompacted material		
	10 Even spread of material maintained		
	11 Bulk items placed at bottom of slope		
	12 Blade lowered and adjusted smoothly during work		
	13 Overlapped spread material		
Completing	14 Compacted to given specification		
	15 Cover material evenly spread and consistent		
Shutdown	16 All shutdown and securing procedures		
Other	17 Legislation, manufacturers' and health and safety requirements complied with		
	18 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	Compactor mounting and dismounting		1	
	2	Full observation before moving and reversing		3	
	3	Full observation whilst travelling and reversing		2	
	4	Travel speed matching to the ground type and conditions		1	
Working	5	Control of throttle and speed selection		2	
	6	Siting and setting for compacting		2	
	7	No evidence of windrows		2	
	8	Feathering out at the end of a pass		1	
	9	Overrunning after dumping load		2	
	10	Minimising short working cycles		2	
	11	Smooth use of steering and hydraulic controls		1	
	12	Sequence of using steering/hydraulic controls		1	
Not exceeded 8 penalties			Total penalties		
			Achieved / Not achieved		

