

# Piling Rig

**A47**

Bored below 15 tonnes

Technical Test – Theory

Roles and responsibilities	1. What is the definition of, or how can a hazard be described?
	<b>A</b>
	2. What is the purpose of a risk assessment?
	<b>A</b>
	3. List SIX typical subject areas that should be covered in a site induction.
	<b>A</b>
	4. What THREE main duties of The Health and Safety at Work Act must employees follow?
	<b>A</b>
	5. What does The Health and Safety at Work Act require employers to do with regards specifically to plant?
	<b>A</b>
	6. a) What is the purpose of a Method Statement and b) what is required of the operator?
	<b>A</b>
	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?
	<b>A</b>
	8. Rig operators are generally regarded as 'safety-critical' workers. What does this mean?
	<b>A</b>

*continued...*

Roles and responsibilities continued	9. Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
	<b>A</b>
	10. In what situation does a hard hat NOT need to be worn when operating a piling rig?
	<b>A</b>
	11. The operator has to use a new model of rig that they are unfamiliar with. What do Regulations (i.e. PUWER 98) and other guidance require the operator to have?
	<b>A</b>
	12. What are the possible outcomes if being prosecuted for not complying with legislation and regulations?
	<b>A</b>
	13. Give TWO examples of where The Work at Height Regulations may apply to piling rig operations.
	<b>A</b>
Preparing for work	14. How can a qualification or card benefit a rig operator?
	<b>A</b>
	15. Name THREE ways that a rig operator can contribute in ensuring repeat business with the client or main contractor.
	<b>A</b>
	16. Where should the Operator’s Manual be kept and why?
	<b>A</b>
	17. List FIVE checks that should be made to the tracks and running gear.
<b>A</b>	
	18. What is the purpose of a roll or ROPS frame?
	<b>A</b>
	19. What are the THREE actions or stages that a rig operator undertakes during pre-use inspections?
<b>A</b>	

*continued...*

Preparing for work continued	<b>For questions 20 and 21 the Operator’s Manual for the machine being used for the test MUST be available for reference by the candidate</b>
	20. Using the Operator’s Manual, state the figure for setting the track tension.
	<b>A</b>
	21. Using the Operator’s Manual, state the cold-starting procedure for the machine.
	<b>A</b>
	22. A piling rig has been delivered to site, assembled and configured for work. What must be carried out before piling starts and by whom?
	<b>A</b>
	23. If checking the oil level using a dipstick, why must gloves be worn?
	<b>A</b>
	24. When using a CFA type, what is the purpose of the leaders?
	<b>A</b>
	25. How is drive transmitted to the short auger?
	<b>A</b>
	26. Why is bored piling more suitable for use within urban areas?
<b>A</b>	
27. What is the purpose of a cofferdam?	
<b>A</b>	
28. Apart from the operator, who else may need to use the machine’s Operator’s Manual?	
<b>A</b>	
29. What is the purpose of counterweight(s) on the rig?	
<b>A</b>	
30. During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.	
<b>A</b>	

Travelling and manoeuvring	31. If both travel levers are pushed forwards when the track motors are in front of the cab, in which direction would the machine move?
	<b>A</b>
	32. If the rig has to cross the public highway, the Road Traffic Act applies. a) What type of licence and which classes should the operator hold and b) what is the minimum age allowed?
	<b>A</b>
	33. a) What is the minimum distance allowed near open trenches when travelling the rig and b) explain why.
	<b>A</b>
	34. When MUST a banksman or signaller be used before moving a rig?
	<b>A</b>
Setting up for work	35. Why must the seat belt be worn when travelling, even with the cab door closed?
	<b>A</b>
	36. a) Which part of the rig applies loading or pressure to the ground and b) name TWO ways that pressure can be reduced.
	<b>A</b>
	37. What checks and procedures need to be made before a 'permit to dig' can be issued?
	<b>A</b>
Setting up for work	38. Wind speeds can be variable throughout the working day. What action must be taken to ensure safe working conditions are maintained?
	<b>A</b>
	39. When working in a confined area or space: a) what danger can be present with regards to the counterweight of the machine, b) what is the recommended minimum distance and c) what measures must be implemented if the gap is less?
<b>A</b>	

*continued...*

Setting up for work continued	40. If setting up to pile near a pedestrianised area, state THREE factors that need to be taken into account.
	<b>A</b>
	41. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on metal pylons when setting up the machine and b) explain why a distance should be kept.
	<b>A</b>
Working tasks	42. Name THREE different types of bored piling methods.
	<b>A</b>
	43. Give THREE reasons that may cause the rig to overturn.
	<b>A</b>
	44. If radios are to be used during the piling operations, what FIVE actions and checks must be made by the rig operator before use?
	<b>A</b>
	45. During the piling operation, part of the task cannot be carried out as detailed in the method statement. a) What initially must happen to the piling operation and b) who authorises any changes?
	<b>A</b>
	46. What is the function of the shoe (end-cap) as used in CFA piling?
	<b>A</b>
	47. How is a rotary auger of a bored rig cleaned?
	<b>A</b>
	48. What size is the controlled or restricted zone around a CFA drilling operation?
<b>A</b>	
49. What is the purpose of a double rotary head?	
<b>A</b>	
50. What is meant by a 'contiguous pile line'?	
<b>A</b>	

*continued...*

Working tasks continued	51. Explain the purpose of the casings when piling.
	<b>A</b>
	52. What is the purpose of an oscillator?
	<b>A</b>
	53. When are the auger gates allowed to be opened in the middle of a CFA operation?
	<b>A</b>
	54. What is the purpose of a 'Tremie' pipe?
	<b>A</b>
	55. On CFA rigs, at what height should the auger be stopped when cleaning spoil from the auger?
	<b>A</b>
Completing work	56. If the words STOP NOW are given to the rig operator by radio during the lift, what action must the operator take?
	<b>A</b>
	57. a) What is meant by the lifting capacity of the rig and b) who determines it?
Shutdown	<b>A</b>
	58. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
	<b>A</b>
Shutdown	59. When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
	<b>A</b>
	60. 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.
	<b>A</b>

Shutdown continued	61. 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?
	<b>A</b>
	62. Why should the rig be re-fuelled at the end of the day?
	<b>A</b>