

# Technical Test Theory

## Motorised Scraper A24



No.	Question
1	What THREE main duties of the Health and Safety at Work Act must employees follow?
2	How are scrapers rated?
3	Many scrapers have differential locking systems. How can this help production?
4	Using the Operator's Manual, state the cold-starting procedure for the machine. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.
5	On start up, the air pressure on the machine is low. What actions must the operator carry out before work and during work?
6	What factors determine the shoring/supporting requirements of a trench?
7	Why should different soils be segregated during excavating?
8	How can a qualification or card benefit a plant operator?
9	If checking the oil level using a dipstick, why must gloves be worn?
10	During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.
11	Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or principal contractor.
12	Apart from the operator, who else may need to use the machine's Operator's Manual?

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13	When travelling on wet clay or rock, what effect does this have on the scraper?
14	Why should fill areas be convex in shape?
15	Describe one action to be taken to protect the formation in inclement weather.
16	To assist in ejecting sticky material from the scraper bowl, describe the actions that may be taken.
17	What problems and hazards can soft ground cause to a loaded scraper?
18	Give an advantage of an auger- or elevator-type scraper over a conventional scraper.
19	Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
20	The operator is asked to excavate a new area. State FIVE different requirements that must be considered or implemented before work commences.
21	Name one purpose of the apron?
22	What are the possible outcomes of facing prosecution for not complying with legislation and regulations?
23	Give THREE possible reasons why scrapers should not stray off the designated haul routes.
24	What particular and specific hazards can affect the stability of the machine when working on old industrial (brownfield) sites?

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25	Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
26	The operator has to use a new model of scraper that they are unfamiliar with. What do Regulations (i.e. PUWER 98) and other guidance require the operator to have?
27	If a yellow-coloured marker tape is unearthed during excavating, which TWO types of services could this indicate?
28	In what situation does a hard hat NOT need to be worn when operating a scraper?
29	On scrapers, steering is achieved by actuating hydraulic rams which are 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?
30	Give TWO reasons why operators should excavate ground in layers.
31	What is the purpose of a roll or ROPS frame?
32	When MUST a banksman/signaller be used before moving a scraper?
33	a) Name THREE purposes of the raised lugs on tyres and b) what can happen to the scraper if the lugs are severely worn?

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34	Give TWO examples of where The Work at Height Regulations may apply to scraper operations.
35	What is meant by 'pump loading'?
36	Why should a scraper be re-fuelled at the end of the day?
37	a) What determines the minimum distances that any part of plant and machinery has to be kept from over head electricity lines and b) explain why a distance should be kept.
38	Explain the difference between: a) a 'stockpile' and b) a 'borrow pit'.
39	Give TWO reasons why the scraper operator should have an understanding of the type of material being loaded.
40	If the machine is being travelled on 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?
41	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?
42	What is the meaning of this hand signal (being demonstrated by the Tester)?
43	a) What is the minimum distance allowed near open trenches when travelling with a scraper and b) explain why?
44	What is the definition of, or how can a hazard be described?
45	Why are plant operators generally regarded as 'safety-critical' workers?

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46	What does the Health and Safety at Work Act require employers to do with regards specifically to plant?
47	If setting up to excavate in a confined area, name TWO things that should be taken into account before starting.
48	Describe TWO actions to be taken if the scraper becomes 'bogged' down on the fill.
49	Using the Operator's Manual, state the figure for the tyres' operating pressure. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.
50	a) Give ONE advantage and b) TWO disadvantages of rear-mounted cameras.
51	What is the nearest distance allowed to gas pipes when excavating with the machine?
52	Explain the difference between: a) struck and b) heaped capacities.
53	On a twin-engine scraper, how should the engine's speed be set whilst driving around corners?
54	a) State the purpose of a retarder and b) the possible consequences of not using it when required.
55	Why must the seat belt be worn, even with the cab door closed?
56	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?
57	What is the purpose of a risk assessment?

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58	Apart from wear, why else would the cutting edge be changed?
59	Name THREE conditions that mirrors on the machine must be in.
60	List SIX typical subject areas that should be covered in a site induction.
61	a) What is the purpose of a Method Statement and b) what is required of the operator?
62	If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.
63	Many scrapers 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?
64	Many models of scrapers are fitted with a suspended seat. a) What is its function and b) how should the seat be set to be effective?
65	When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
66	Give THREE reasons that may cause the machine to roll over.
67	Where should the scraper's Operator's Manual be kept and why?
68	Name FOUR different types or levels of disciplinary actions or sanctions that can be applied (by employers and judicial bodies) to operators of plant who do not comply with, or follow legislation and regulations.
69	Which two points on a site represent the haul distance?