

# Technical Test Theory

## Demolition Plant D90



AN NOCN JOB CARD

No.	Question
1	a) What must be undertaken as the first step when disconnecting a hydraulic line, and b) where can the specific information be found?
2	Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
3	The operator must be aware at all times of the operation of the attachment, and of the progress of the demolition. Give THREE examples on how they would achieve this.
4	What are the possible outcomes of facing prosecution for not complying with legislation and regulations?
5	When slewing with a load, where should the operator be looking?
6	On a semi-automatic quick-hitch attaching system: a) What is the purpose of the safety pin b) What checks MUST be made to the pin before use?
7	Explain the purpose of a lift plan.
8	If attaching accessories to a quick-hitch coupler, give TWO reasons why the coupler should be tilted in the downwards position (ram extended)?
9	Before starting work on a new structure, how should the operator familiarise themselves with the work zone?
10	The operator has to fit and use a new attachment using a quick-hitch coupler that they are unfamiliar with. What do Regulations (i.e. PUWER 98) and other guidance require the operator to have?
11	Chrysotile or white asbestos is known to be 'hydrophilic' or easily mixed with water. Therefore, what is the best control measure against fibres spreading during demolition operations?
12	Why should the jaws of a shear be kept downwards if working at height?

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13	Using the lifting capacity diagram for category A59: a) if the machine is equipped with a 2.5 m long dipper, what is the maximum lifting capacity in tonnes at a 6 m radius/reach over the sides of the track with the load at 3 m height b) in principle, if a longer dipper is fitted, what effect does that have on the lifting capacity (assuming same size attachment and machine configuration)?
14	a) What is the purpose of a Method Statement and b) what is required of the operator?
15	What could cause the hydraulic system to overheat?
16	If travelling with a load, name FIVE factors that must be taken into account by the operator before moving.
17	Why should long loads be lifted using a swivelling type lifting accessory?
18	Name FOUR load-bearing structural elements.
19	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?
20	Why are demolition plant operators generally regarded as 'safety-critical' workers?
21	When MUST a banksman/signaller be used before moving the machine?
22	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.
23	If checking the oil level using a dipstick, why must gloves be worn?

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24	If using a high-reach machine, describe FOUR considerations that must be taken into account when setting up for work.
25	What does the Health and Safety at Work Act require employers to do with regards specifically to plant?
26	If the accessory attachment point is not part of the attachment, give TWO reasons why it should be removed.
27	During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.
28	Give TWO examples of where The Work at Height Regulations may apply to demolition machine operations.
29	In demolition operations how is silica dust created or formed?
30	On high-reach machines, what should be considered when positioning the machine for work?
31	What makes up the total (or gross) weight of a load that is to be lifted?
32	List SIX typical subject areas that should be covered in a site induction.
33	Which parts of the machine is the radius (for lifting) measured from?
34	Why must the seat belt be worn, even with the cab door closed?
35	Manufacturers' lifting or object handling capacity charts apply (in all known cases) when the machine is level. What is the effect if a load is lifted or travelled facing downhill on a downhill slope?

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36	a) How does silica dust harm the body b) What symptoms can result from exposure?
37	There are five designated areas within a demolition site. Name THREE of those areas.
38	What is the main purpose of the Rated Capacity Indicator (RCI) or Load Moment Indicator (LMI)?
39	If setting up to demolish in a confined area, name TWO things that should be taken into account before starting.
40	If the machine's rated capacity/object handling capacity chart is not available for reference, what other method can be used to determine the machine's lifting capacity?
41	Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
42	When an object needs to be lifted on a site, what should be the first consideration of planning?
43	a) Give ONE advantage and b) TWO disadvantages of using cameras to monitor the work.
44	What actions should be taken to a partially demolished structure at the end of a working day?
45	What is the difference between a ROPS and FOPS structure?
46	What needs to be inspected on a quick-hitch coupler if attaching lifting accessories for the lifting of suspended loads?
47	If a hook is fitted to the machine for lifting purposes, what must be checked before use?

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48	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?
49	If both travel levers (or travel pedal for wheeled machines) are pushed forwards when the track motors (or driving wheels) are in front of the cab, in which direction would the machine move?
50	Why should linkage pins be checked on a regular basis?
51	On many demolition machines, the slew is restricted. a) What is the normal position for working? b) Explain why the slew is restricted.
52	When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
53	The operator is asked to demolish a new structure. State FIVE different requirements that must be considered or implemented before work commences.
54	If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.
55	How can a qualification or card benefit a plant operator?
56	a) Why should the slewing direction be to the left wherever possible and b) Explain why.
57	Apart from the operator, who else may need to use the machine's Operator's Manual?
58	In what situation does a hard hat NOT need to be worn when operating a demolition machine?
59	If setting up to work close to a pedestrianised area, state THREE factors that need to be taken into account.

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60	Using the Operator's Manual, state the figure for setting track tension. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.
61	Cable avoidance tools (CATs) can detect a variety of buried services. What type of material do they have limitations in locating?
62	Why should different materials be segregated during demolishing?
63	What THREE main duties of the Health and Safety at Work Act must employees follow?
64	State the purpose of the check valve(s) located on the boom cylinder rams.
65	If a trench has a depth of 2 metres: a) What is the minimum distance to maintain from the edge of the trench when working and b) explain why?
66	With regards to lifting accessories, irrespective of who supplied the accessories, what THREE factors should be ensured before the accessories are used?
67	Name FOUR hydraulically operated attachments that may be used on demolition.
68	When working in a confined area or space: a) what danger can be present with regards to the counterweight of the machine, b) when should measures be taken and c) what measures should be implemented?
69	Larger demolition machines are fitted with 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?
70	What effect can a swinging load have on the machine?
71	Why should a machine be re-fuelled at the end of the day?

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72	If loading a vehicle with material, in what circumstances can the truck/wagon driver remain in the cab?
73	What is regarded as the danger or hazard zone during a lifting operation?
74	What is the purpose of the counterweight of the machine?
75	If the structure being demolished has a basement, name two precautions to be taken to ensure the integrity of the floor slab.
76	Give FOUR reasons that may cause the machine to tip over – forwards and/or sideways.
77	If the load inadvertently or accidentally lands, what course of action should be taken?
78	a) How many types of asbestos may be commonly found in the work place? b) Name the colours.
79	What particular and specific hazards can affect the stability of the machine when working on old industrial (brownfield) sites?
80	If previously undetected asbestos is exposed when taking down a section of a building, what sequence of actions must be taken?
81	If the machine is crossing the public highway, the Road Traffic Act applies. a) What type of licence and which classes should the operator hold b) What is the minimum age allowed?
82	Before manually changing any attachment: a) where should the attachment be positioned (in relation to the ground) and b) why?
83	Accessories must only be attached to manufacturers' approved lifting points. Explain THREE possible consequences if the recommendations are not followed.

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84	Why must the controls be isolated before each load is attached or detached by the slinger?
85	When disconnecting the hydraulic hoses to change an attachment, what method should be used to ensure they are not mixed up when reconnected?
86	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.
87	On tracked machines: a) what differs between lifting over the side compared to over the front or the rear of the machine? b) Explain why.
88	Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or main contractor.
89	Explain a possible danger if the machine is demolishing on sloping ground.
90	Where should the Operator's Manual be kept and why?
91	What is the purpose of a risk assessment?
92	Explain the difference between pre-tensioned and post-tensioned members.
93	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.
94	The machine is to lift a steel beam, that has just been cut, from height using chain slings. What TWO factors need to be taken in to account during the planning stage?
95	The safe working load (SWL) or working load limit (WLL) of a multi-leg chain sling only applies in what TWO conditions or configuration?



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96	When removing and handling asbestos cement sheets, what is the minimum PPE and RPE that should be worn?
97	Describe ONE physical method of checking that an attachment is fully secured to the quick-hitch coupler prior to work.
98	Describe how exposure to asbestos fibres can cause health issues.
99	Explain ALL visual checks that must be carried out on all types of quick-hitch attachment connecting systems before use.
100	According to legislation, when are check valves and a rated capacity or load moment indicator required?
101	What are the requirements for creating a raised working platform?
102	What is the definition of, or how can a hazard be described?
103	Who determines the lifting/object handling capacity of the machine?