

Technical test - Practical

Demolition Plant – D90



Resources required

Machine	<ul style="list-style-type: none"> • Demolition adapted 360° excavator: <ul style="list-style-type: none"> - Fitted with the relevant attachment
Area	<ul style="list-style-type: none"> • Ground, clear of hazards which must include: <ul style="list-style-type: none"> - Level area for lifting operations (F) - rough terrain - slope or slopes - stockpile of mixed material for sorting purposes - structure for demolishing - area for attachment changing activity
Other equipment	<ul style="list-style-type: none"> • Load-carrying vehicle for material. • A replacement attachment. • Items to create restrictions for manoeuvring. • Method statement applicable to the demolishing process
Notes	<ul style="list-style-type: none"> • The machine selected for the test must meet the specifications for the required endorsement, be in serviceable condition, FOPS equipped and conform with current legislation • Endorsement B only – A standard 360° excavator with the appropriate re-handling attachment may be used • Assistance may be supplied for attachment changing • The same attachment may be used but the machine must be repositioned after removal and before re-fitting • The Operator’s manual (including the attachment) must be with the machine • Endorsement A to C only - 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 • Endorsement D & E only – A ramp having a gradient of 10 degrees and least 4 m wider than the track frame width of the machine. (Can be carried out on a smaller machine but must meet the slope requirements of Endorsement A and C) • The stockpile (for sorting purposes) must be of sufficient quantity to allow at least 30 minutes of operation

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Resources required (Continued)

<p>Notes (Continued)</p>	<ul style="list-style-type: none"> • The structure must be of sufficient content to allow at least 30 minutes of operation and be at least 30% of the attachments operated height • The nominated area must be safe and supported by an appropriate risk assessment • The load-carrying vehicle must have a minimum capacity equivalent to six full bucket loads or six times the handling capacity of the loading attachment of the machine being used for the test • The endorsement descriptions are defined as: <ul style="list-style-type: none"> - Endorsement A: Material processing – equipped with mechanical or hydraulic attachment (grab / claw) to select and stockpile like materials - Endorsement B: Up to 10 tonnes – adapted to undertake demolishing duties using relevant attachments - Endorsement C: Demolishing up to 15 metres – height that the demolishing attachment can reach and relates to the attachment to dipper pin height - Endorsement D: Demolishing up to 30 metres – known as high reach, height that the demolishing attachment can reach and relates to the attachment to dipper pin height - Endorsement E: Demolishing all heights – above 30 metres machines known usually as ultra-high reach
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Additional resources required – Endorsement F

<p>Machine</p>	<ul style="list-style-type: none"> • 360 excavator-based machine capable of lifting the requisite slung loads, fitted with check valves*, an RCI/LMI* and have a suitable lifting/accessory attachment point
<p>Loads (Optional)</p>	<ul style="list-style-type: none"> • LOAD A 1 x load, able to be slung and weighing not less than 60% of the machine’s maximum lifting/object handling capacity at full radius. • LOAD B 1 x load able to be slung being at least 3 m in length. • LOAD C 1 x load able to be placed behind a structure or below ground level
<p>Other equipment</p>	<ul style="list-style-type: none"> • Multi-legged lifting accessories suitable for each load. • Measuring tape for measuring the maximum radius of the machine • Slinger and signaller assistance • Structure or below-ground level location for placing a load out-of-sight of the operator • Items to facilitate the load handling exercise in Activity 12

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Additional resources required – Endorsement F

<p>Notes (Lifting Operations only)</p>	<ul style="list-style-type: none"> • All lifting accessories must be fit for purpose and certificated • The weight of all loads must be known • The rated load/object handling capacity chart must be available for reference by the candidate • The slinger/signaller must be certificated and competent • The width of the obstacle for Activity 12 must be minimal allowing the load to be returned to ground level before full radius is reached • The structure or below-ground level location chosen for LOAD C must be suitable for landing the load, but must be of sufficient height or depth so that the whole of the load and portion of the lower part of the lifting accessory cannot be seen from the operating position. If a below-ground landing place is chosen, it must be a safe environment for the slinger/signaller to handle the load • If a ground level structure is chosen, it must be of sufficient strength to resist movement should the load inadvertently contact the structure • Care must be taken if the machine is fitted with a quick-hitch type coupler as the accessory attachment point may extend the working radius of the machine and exceed the manufacturer’s maximum rated lift/object handling capacity • Machines being used for the test must have: <ul style="list-style-type: none"> - a boom lowering control device on the raising (main) boom cylinder(s) and meet the requirements of ISO 8643:1997 - an RCI* or LMI* • * An RCI is deemed as a device that meets the requirements of LOLER 1998 in terms of a device that provides acoustic or visual warnings which indicates to the operator when the object handling capacity or corresponding load moment is reached
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Further clarification about Demolition Plant categories and endorsements may be found at www.demolition-nfdc.com or by contacting info@demolition-nfdc.com

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Activity Instructions

Sequence	<ul style="list-style-type: none"> • Activity 1 must be undertaken at the start of the test • Activities 4 to 7 can be undertaken in any order during the test • Activity 9 must be undertaken at the end of the test
Preparing for work	<ol style="list-style-type: none"> 1. Complete all manufacturers' pre-start and running checks and prepare the machine for travel as detailed in the operator's manual which must be referred to by the candidate during the activity <ul style="list-style-type: none"> • Additional information to be identified by the candidate referring to the operator's manual. Tester to decide what information will be identified
Travelling and manoeuvring <i>(refer to activity measurements)</i>	<ol style="list-style-type: none"> 2. Travel to the work area and: <ul style="list-style-type: none"> - travel up and down the slope (relevant to each endorsement) - pass through a restriction - travel over rough terrain
Setting up for work	<ol style="list-style-type: none"> 3. Prepare and set the machine for the relevant work 4. Change the attachment to a different type
Working tasks <i>(refer to activity measurements)</i>	<ol style="list-style-type: none"> 5. Sort, segregate and form stockpiles of similar materials 6. Load sorted materials into a vehicle. 7. Demolish a structure (Endorsement C,D and E) 8. Tidy up and make safe the working area
Shutting down	<ol style="list-style-type: none"> 9. Park the machine and carry out shut-down and securing procedures
Notes	<ul style="list-style-type: none"> • If the machine is hot, any checks that are 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 (400mm for up to 10 tonne machines)
Sorting activity (5 and 8)	<ul style="list-style-type: none"> • To be carried out for a minimum time of 20 minutes
Demolishing activity (7 and 8)	<ul style="list-style-type: none"> • To be carried out for a minimum time of 30 minutes
Loading vehicle (6 and 8)	<ul style="list-style-type: none"> • Loaded to capacity

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Test timings	<ul style="list-style-type: none"> The test must be completed within 2 hours
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Activity Instructions – Endorsement F

Sequence	<ul style="list-style-type: none"> Activities 11 to 15 can be undertaken in any order during the test
Preparing for work	10. Prepare and set the machine for each lifting operation
Lifting Operations	<p>11. Lift LOAD A from minimum radius, position the load at 75% of full radius and rotate for a minimum of 180 degrees. On completion, land the load at a different radius</p> <p>12. Lift LOAD A and place at minimum radius. Reposition the load to full radius whilst following ground contours. At a point halfway along the load travel route, pass the load over an obstacle whilst following the contours of that obstacle. When at full radius, slew the load for approximately 10 degrees (left or right) and return the load to the start point following ground contours</p> <p>13. Lift LOAD A and travel for a minimum given distance following a route that includes:</p> <ul style="list-style-type: none"> - passing through a restriction - travelling over rough terrain - executing right and left-hand turns <p>14. Lift LOAD B and position the dipper arm vertically. Rotate the load for a minimum of 180 degrees and return back to the start point via the same route</p> <p>15. Lift LOAD C and place at a given point which is below ground level or behind a structure. Once landed return to the original start point</p>
Notes	<ul style="list-style-type: none"> Activities 1 and 9 need to be undertaken by existing CPCS cardholders holding Category D90 seeking Endorsement F in addition to Items 10 – 15

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Activity Measurements – Endorsement F

Load movement	<ul style="list-style-type: none"> Maximum height of underside of the load = 1 m (except Activity 12)
Load movement (Activity 12)	<ul style="list-style-type: none"> Maximum height of underside of the load from ground contours = 100 mm Maximum distance from obstacle = 500 mm
Obstacle height (Activity 12)	<ul style="list-style-type: none"> Minimum of 1 m.
Load placing (all activities)	<ul style="list-style-type: none"> 100 mm of a given position.
Travelling with load	<ul style="list-style-type: none"> At least 12 m distance
Test timings	<ul style="list-style-type: none"> The test must be completed in a total time of 2 hours and 30 minutes if combining Endorsement F with Endorsements A to E, or The test must be completed within 40 minutes if a stand-alone test for existing cardholders adding Endorsement F only

Note: The lifting operations activities must properly planned by a competent person following the requirements detailed in the Lifting Equipment and Lifting Operations regulations (LOLER) 1998.

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AN NOCN JOB CARD

Basic Details

Test ref:	Candidate name:
Tester ref:	Candidate ref:
Tester ref:	Date of test:
Endorsement: A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/>	Start time of test:
F <input type="checkbox"/>	
Make and model:	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. Restrictions cleared	
	3. Machine set for travel	
	4. Encountered hazards cleared	
	5. Boom/dipper arm position when ascending and descending inclines	
	6. Faced direction of travel whilst travelling	
Setting up	7. Allocated area checked and clear of hazards prior to carrying out the activity	
	8. Positioned and set for the activity	
Working tasks (attachment)	9. Machine disabled prior to disconnecting hydraulic hoses	
	10. Hoses removed and fitted following required sequence	
	11. Attachment prepared/positioned/supported prior to removal and fitting	
	12. Attachment removed and fitted following required sequence	
	13. Checked attachment was secure prior to use	
Working tasks (demolishing) (Endorsements B, C, D and E)	14. Functional check carried out prior to use	
	15. Checked exclusion area for size and security	
	16. Maintained check on effectiveness of exclusion zone during work	
	17. Structure demolished following method statement and given instructions	
	18. Sequence of hydraulic controls	
	19. Smooth use of all controls	
Working tasks (sorting)	20. Maintained stability of the machine	
	21. Material sorted and stockpiled into like materials	
	22. Complied with environmental requirements	
	23. Sequence of hydraulic controls	
Working tasks (loading)	24. Smooth use of all controls	
	25. Materials loaded as per given specification	
	26. Sequence of hydraulic controls	
	27. Smooth use of all controls	
	28. Vehicle evenly loaded but not overloaded	
Shutdown	29. Working areas safe and secure after work	
	30. All shutdown and securing procedures	
Other	31. Legislation, manufacturers' and health and safety requirements complied with	

All of these items must be awarded Achieved / Not achieved

Faults	Candidate incorrectly carried out the following:	Fault	Mark	Penalty
Travelling	1. Machine mounting and dismounting		1	
	2. Identify information from the Operator's Manual		2	
	3. Full observation before moving		3	
	4. Full observation whilst travelling		2	
	5. Observation before slewing upper structure		2	
	6. Drive sprockets kept to the rear when travelling		1	
	7. Travel speed matched to the ground type and conditions		1	
	8. Tight turns avoided when travelling		1	
Working	9. Material cleanly placed into the loading vehicle		2	
	10. Contact with vehicle avoided when loading		3	
	11. Use of track controls		2	
Not exceeded eight penalties		Total penalties		
<input type="checkbox"/> Achieved / Not achieved <input type="checkbox"/>				

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AN NOCN JOB CARD

Basic details – Endorsement F

Test ref:	Candidate name:
Tester ref:	Candidate ref:
Tester ref:	Date of test:
Endorsement: A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/>	Start time of test:
F <input type="checkbox"/>	
Make and model:	Duration:

Mandatory		Correctly carried out during the test?	Y/N
Preparing	32. All pre-start and running checks (or responses to relevant questions)		
	33. Machine set for travel		
Travelling with load	34. Encountered hazards cleared		
	35. Boom/dipper arm position when ascending and descending inclines		
	36. Faced direction of travel when moving		
Setting up	37. Allocated area checked and clear of hazards prior to lifting activity		
	38. Communication arrangements confirmed with slinger/signaller		
	39. Machine positioning prior to lifting loads		
	40. Machine level prior to lifting and placing loads		
Lifting operations	41. No contact between load and machine and/or other obstructions		
	42. Lifted, moved and lowered load in a controlled manner		
	43. Route assessed and travelled with the slung load in a controlled manner		
	44. Instructions conformed with		
	45. Stability of the machine maintained at all times		
	46. SWL not exceeded at any time		
	47. Load remains freely suspended (except during lifting and placing)		
Shutdown	48. Machine controls isolated when loads being attached/disconnected		
	49. Personnel clear of the 'danger' zone when lifting and moving loads		
Other	50. All shutdown and securing procedures		
	51. Legislation, manufacturers' and health and safety requirements complied with		
	52. 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 with load	12. Machine mounting and dismounting			1	
	13. Identify information from the Operator's Manual			2	
	14. Full observation before moving			2	
	15. Full observation whilst travelling with suspended load			2	
	16. Observation before slewing upper structure			2	
	17. Drive sprockets kept to the rear when travelling			1	
	18. Travel speed matched to the ground type and conditions			1	
	19. Minimising ground damage when turning with suspended load (tracked machines only)			1	
Lifting operations	20. All loads vertically lifted (load not dragged)			2	
	21. Each load lifted clear of surface and checked for integrity			1	
	22. Load swings minimised during travel and static lifts			2	
	23. Keeping load height within given tolerance			1	
	24. All loads placed at given points within the given tolerance			3	
	25. Use of steering/hydraulic controls			1	
Not exceeded eight penalties			Total penalties		
			Achieved / Not achieved <input type="checkbox"/>		

- **Mandatory Items 32, 50 and Item 11 in the faults section need not be marked if combining Endorsement F with Endorsements A to E.**
- **Existing CPCS cardholders holding category D90 seeking Endorsement F need to be measured against all marking items in Endorsement F.**
- **Mandatory Item 48 – If the candidate does not isolate the operating controls during the load attaching/detaching activity, the tester must immediately inform the candidate to do so. The candidate has the option to continue the test but be informed they have not achieved on the test at this time.**