

Proposal to develop an apprenticeship standard

L2: Construction Equipment Maintenance Mechanic

Trailblazer name

Construction Equipment Engineering

Trailblazer reference number

TB0124

Title of occupation

Construction Equipment Maintenance Mechanic

UOS reference number

ST0805

Core and options

No

Level of occupation

Level 2

Route

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Typical duration of apprenticeship

None

Target date for approval

01 January 2019

Resubmission

No

Occupational profile

This occupation is found in...

the construction, plant and tool hire industry as well as allied industries such as rail plant, demolition and quarrying that use construction-based equipment.

The broad purpose of the occupation is...

to service, maintain and repair the wide range of construction-based equipment used within the construction and allied industries such as mobile cranes, excavators, disc cutters, crushers, demolition plant, road-rail equipment, water pumps, telescopic handlers etc. so that they function correctly, safely and efficiently, allowing construction and other projects to be carried out efficiently and on time. This occupation provides a vital support service that is crucial to the prosperity of the country through completion of vital infrastructure projects such as (nuclear) power generation, roads, rail, airports etc.

The construction equipment mechanic will check, service and undertake basic fault finding activities and would either through their own fault-finding activities or through given

instructions, remove, dismantle, repair, assemble and refit a plethora of components, and ensure that the item of plant is fully functional prior to handover to the operational side.

Construction equipment mechanics work not just within construction but also work in other areas including quarrying, demolition, utilities (water/gas/electric etc.), piling, rail, waste/landfill, housing, highways etc.

In their daily work, an employee in this occupation interacts with...

Customers, Members of the public, Supervisors, Co-workers, Other trades/occupations, Supporting occupations, Managers, Suppliers, Safety professionals, Manufacturers, Administration staff. In most cases the mechanic is mobile and working on-site undertaking maintenance activities in all weathers and seasons. The work would include weekends and could involve night work to cover breakdowns on night projects such as roadworks, rail maintenance projects etc.

Construction related environments including site-based, mobile, workshop based in and outdoors in all seasons

An employee in this occupation will be responsible for...

ensuring they have the right tools and resources such as oils, lubricants and parts for each task, analysed problems or defects, have identified any repair issues and undertaking maintenance tasks whilst applying the correct manufacturer's technical information required and in conformance with legislative requirements. They will work under generic supervision either within a workshop or on site but be expected to be both autonomous and the technical focal point during any maintenance activity.

Transferability

The Institute expects that being competent in the duties you have listed in this proposal will mean that an individual will be able to undertake the occupation in all relevant types of employer. Please outline the steps you have taken to ensure that this will be the case.

The duties listed have been mapped against the National Occupational Standards for Construction Plant Maintenance designed by employer groups and apply across the scope of equipment and specialisms of construction and allied employers. Employers involved with the working group include those from the cranes/lifting, small plant and tools, demolition, construction contracting, road/rail plant, earthmoving, piling, extractives, concrete pumping, plant hire (medium/large plant).

Stand-alone occupation

Please confirm that the proposed apprenticeship relates to a stand-alone occupation and explain how it will fit in with any associated apprenticeship standards.

An apprenticeship in construction plant maintenance engineering is a long and established route of training and supplying skilled individuals (700 per annum) directly into the construction and allied industries such as quarrying. All versions of construction equipment mechanic apprenticeship such as the construction civil engineering plant maintenance version has enjoyed healthy support from construction equipment sector employers and a traditional route of providing skilled maintenance staff to function at all levels in this sector. The

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construction and allied environments are unique, highly safety regulated work places where those outside of construction with mechanical-type skills are unable to transition to this occupation and industry without requiring substantial and sufficient retraining. We have viewed other standards related to mechanical-based occupations but none are sufficient for our industry or for the volumes of apprentices who traditionally enter our industry. Our industry rarely employs those from other industries and those employed as construction mechanics stay within this industry for their working career. In fact, the construction equipment sector, like other trades is currently in a process whereby an ageing, existing maintenance workforce is diminishing due to retirement and the sector needs to attract new intakes not only to replace existing staff but also to provide a platform for progression to supervisory and management levels, another potential area of impending staff shortage with this sector offering jobs-for-life

We propose to submit a bid for a level 3 technician trailblazer for those who have the responsibilities of commissioning, supervising and mandatory legislative inspections on construction-based equipment.

Duty	Criteria for measuring performance	OTJ training (days)
Prepare the working area, including workshops and on site, to carry out maintenance and commissioning activities on construction-based equipment.	In conformance with legislation, contractual requirements, given instructions, job specification	3
Identify, handle and store the required resources, materials, tools and equipment necessary to maintain and commission construction-based equipment	In conformance with manufacturer's criteria, health and safety requirements and organisational requirements for each activity	3
Configure, position, set, rig and prepare the plant or equipment so that typical components can be removed or accessed.	Configured, set, positioned etc. according to manufacturer's requirements, in compliance with relevant legislation, health and safety requirements and given timescales	4
Detach and remove the full range of powered and non-powered components and ancillary equipment from construction-based equipment.	Configured according to manufacturer's requirements, in compliance with relevant legislation, health and safety requirements and given timescales	4
Dismantle worn, damaged, unserviceable or faulty parts, components and equipment	According to manufacturer's requirements, given instructions, health and safety requirements and given timescales	5
Overhaul, repair, renovate or restore worn, damaged or faulty parts, components and equipment	According to manufacturer's requirements, given instructions, health and safety requirements and given timescales	12
Replace and reinstate new and repaired worn, damaged or faulty parts and equipment	According to manufacturer's requirements, given instructions, health and safety requirements and given timescales	4
Assemble, connect, attach and refit a comprehensive range of new or repaired construction-based equipment components and ancillary equipment	According to manufacturer's requirements, health and safety requirements, given instructions and timescales	4
Carry out static and operational checks on repaired construction-based equipment to identify faults and ensure full safe functional activity prior to handover and re-commissioning to operation	In compliance with manufacturer's requirements and data, contractual requirements, given instructions, environmental and health and safety requirements.	4
Carry out visual inspections on construction-based equipment both in a workshop, facility and site-based environments to identify potential issues and problems	According to manufacturer's requirements and data, contractual requirements, given instructions, legislative requirements	6
Carry fundamental testing activities on construction-based equipment both in a workshop, facility and site-based environments to identify faults and ensuring correct and safe functional effectiveness	Meeting manufacturer's requirements and data, contractual requirements, organisational expectations, given instructions and environmental and legislative requirements	7
Produce one-off components against given information and specifications that requires fabrication and welding activities	Given specifications such as drawings or templates and other forms of relevant data.	8
Repair and modify new and existing components from construction-based equipment which requires heating, welding and brazing	Conforming with given specifications from various data source such as drawings, templates and manufacturer's information.	8
Install and commission construction-based equipment in preparation for operational activities	According to manufacturer's requirements and data, contractual requirements, given instructions and health and safety requirements	5

Duty	Criteria for measuring performance	OTJ training (days)
Undertake fundamental fault-finding and diagnostic activities to identify existing problems on construction-based equipment.	In accordance with manufacturer's requirements and data, contractual requirements and given instructions, health and safety criteria	6
Convey reports of work activities using a range of methods to customers or employers and complete organisational reports to confirm work completion and identifying aspects of the work undertaken	In accordance with organisational and contractual requirements, clear and relevant communication methods used.	3
Source, extract, identify, interpret and apply technical information from workshop-type manuals, electronic information, given verbal information, organisational and manufacturers' literature and documentation - both on and off-line	Application of extracted and interpreted specifications so that organisational and contractual specifications are met.	4
Service a range of construction-based plant, tools and equipment	In accordance with manufacturer's servicing schedules and organisational requirements.	10

Chairs

Ed Hudson (Liebherr GB Ltd)
Rob Allen (Clee Hill Plant Ltd)

Facilitators

Peter Brown (Construction Plant-hire Association)

Employer members

Name	Employer
10. John Foster S	Steve Foster Craners
11. Dave Holder L	HTC Wolffkran
12. Richard Carter L	Eagle Plant
13. Jane Confrey L	Clancy Docwra
14. Stuart Holmes L	Day Group
15. Paul Holmes L	Wirtgen
16. Nicola Wood L	Hope Cement
17. Phil Boniface L	Hanson
18. Nathan Upchurch L	Volvo
19. Andrew Turner L	Camfaud
1. Bob Harper L	A Plant
20. David Brown L	William Birch
21. Steve Smith L	Chepstow International Plant
22. Andy Stewart L	Fox (Owmbly) Ltd
23. Aiden Earp L	Qunito Crane Hire
24. Carl Hassell L	Roger Bullivant
25. Mark Jones L	AFI Group
26. Peter Issit L	Crowland Cranes
27. Adam Revell L	Lavendon Group
2. Dean Watkins S	CRH Plant
3. Graham Weights L	Ainscough Cranes
4. Ian Bredbury L	Hanson
5. Simon Smith L	Long Water Gravel
6. Scott Butler L	Selwood
7. Holly Price L	Keltbray

Name	Employer
8. James Wright L	A P Webb
9. Gillian Roberts L	Speedy Hire

Other members

Name	Employer
Anthony Elgey	MP Futures
Christopher Bushell	NCC
Neil Hartis	CITB
Peter Brown	CPA
Simon Keane	Reaseheath College