



Level 2 NVQ Diploma in Engineering Maintenance and Installation **ENGINEERING**

Qualification Specification

Overview

This qualification has been developed to enable learners to demonstrate competence in their engineering maintenance occupation.

Typical Job

Engineering technician. The qualification is applicable to a wide variety of engineering maintenance occupations within the sector, dependent on the pathway chosen.

Qualification code:	501/0147/X
Level:	2
Total qualification time:	630
Guided learning hours:	239 (min) 351 (max)
Credits:	63
Minimum age:	16

Issue 3.0



Purpose of the qualification

This qualification is a National Vocational Qualification (NVQ). It involves the skills and knowledge needed for occupations in engineering maintenance including the ability to organise work and identify and prevent problems. NVQs are based on national occupational standards, which the learner must meet to be competent in a particular task. The achievement of NVQs will encourage an employee to value their contribution to the workplace, and it will develop their skills and potential within the engineering maintenance field.

What could this qualification lead to?

On completion of this qualification it can form part of an apprenticeship framework at Level 2, provide a base for other Level 2 qualifications, and progression to a range of Level 3 qualifications and also employment.

Entry Requirements

Learners must have the potential to achieve the assessment criteria set out in the units. There are no entry qualifications required by learners to undertake this qualification unless this is a legal requirement of the process or the environment. Assessment is open to any learner who has the potential to achieve the assessment criteria set out in the assessment routes.

How is the qualification achieved?

The learner must present evidence (portfolio) which clearly shows they have met the assessment criteria and learning outcomes. The learner must achieve the mandatory and optional units relevant to their pathway (occupational role).

What will be assessed?

All evidence submitted by the learner against the assessment criteria.

How will it be assessed?

Evidence for this qualification will be assessed in accordance with the SEMTA engineering assessment strategy, which has been created from engagement with stakeholders (employers etc.) in the engineering sector.

The qualification is not graded and only a pass can be achieved – which indicates the learner's occupational competence.

Structure of the EAL Level 2 NVQ Diploma

This qualification can be obtained by following any one of the following pathways. The learner is required to complete the mandatory assessment routes, and may also be able to choose from a selection of optional assessment routes.

Pathway ENA: Mechanical Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All three of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/005	Carrying Out Fault Location on Mechanical Equipment	2	26	49	K/600/5674
QENM2/006	Carrying Out Maintenance Activities on Mechanical Equipment	2	35	98	J/600/5679

Plus one assessment route from the following :

QENM2/007	Restoring Mechanical Components to Usable Condition by Repair	2	23	77	F/600/5681
QENM2/008	Carrying Out Scheduled Maintenance Activities on Mechanical Equipment	2	19	56	D/600/5686

Pathway ENB: Electrical Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion Of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/009	Carrying Out Fault Location on Electrical Equipment And Circuits	2	26	49	M/600/5689
QENM2/010	Carrying Out Maintenance Activities on Electrical Equipment	2	35	98	L/600/5697

Plus one assessment route from the following:

QENM2/011	Carrying Out Modifications or Rewiring Electrical Circuits	2	20	49	R/600/5703
QENM2/012	Carrying Out Scheduled Maintenance Tasks on Electrical Equipment	2	19	56	D/600/5705

Pathway ENC: Electronic Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion Of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/013	Carrying Out Fault Location on Electronic Equipment and Circuits	2	26	49	T/600/5709
QENM2/014	Carrying Out Tests on Electronic Equipment and Circuits	2	20	49	T/600/5712
QENM2/015	Carrying Out Repairs to Electronic Equipment	2	23	77	R/600/5717

Pathway END: Fluid Power Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/016	Carrying Out Fault Location on Fluid Power Equipment and Circuits	2	26	49	R/600/5720
QENM2/017	Carrying Out Maintenance Activities On Fluid Power Equipment	2	35	98	K/600/5724
QENM2/018	Carrying out scheduled maintenance tasks on fluid power equipment	2	19	56	T/600/5726

Pathway ENE: Services Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/019	Carrying Out Fault Location on Service Systems and Equipment	2	26	49	J/600/5729
QENM2/020	Carrying Out Scheduled Maintenance Tasks on Service Systems and Equipment	2	19	56	J/600/5732
QENM2/021	Carrying Out Maintenance on Water Distribution Systems and Equipment	2	35	98	R/600/5734
QENM2/022	Carrying Out Maintenance on Emergency Power Generation Equipment	2	35	98	D/600/5736
QENM2/023	Carrying Out Maintenance on Workplace Environmental Control Equipment	2	35	98	K/600/5741
QENM2/024	Carrying Out Maintenance on Heating and Ventilation Equipment	2	35	98	F/600/5745
QENM2/025	Carrying Out Maintenance on Air Conditioning and Ventilation Equipment	2	35	98	F/600/5759
QENM2/026	Carrying Out Maintenance on Gas Distribution Equipment	2	35	98	H/600/6063

Pathway ENE: Services Maintenance - Cont

Plus one assessment route from the following:

QENM2/027	Carrying Out Maintenance on Compressed Air Equipment	2	35	98	M/600/6065
QENM2/028	Carrying Out Maintenance on Process Control Equipment	2	35	98	T/600/6066
QENM2/029	Carrying Out Maintenance on Instrumentation And Control Equipment	2	35	98	Y/600/5475
QENM2/030	Carrying Out Maintenance on Industrial Refrigeration Equipment	2	35	98	J/600/5505
QENM2/031	Carrying Out Maintenance on Environmental Control Equipment	2	35	98	A/600/5517

Pathway ENF: Communication-Electronics Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/032	Carrying Out Fault Location on Communication-Electronic Systems	2	26	49	D/600/5526
QENM2/033	Carrying Out Scheduled Maintenance on Communication-Electronic Systems	2	19	56	M/600/5532

Plus one assessment route from the following:

QENM2/034	Carrying Out Repairs to Communication-Electronic Systems	2	23	77	R/600/5538
QENM2/035	Carrying Out Modifications to Communication-Electronic Systems	2	20	49	K/600/5545
QENM2/036	Carrying Out Tests on Communication-Electronic Systems	2	20	49	T/600/5550
QENM2/037	Carrying Out the Configuration of Communication-Electronic Systems	2	20	49	Y/600/5556
QENM2/038	Assisting In The Installation of Communication-Electronic Systems	2	48	161	H/600/5589

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Pathway ENG: Servicing Stairlifts

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/039	Carrying Out Fault Location on Stairlift Equipment	2	26	49	M/600/5594
QENM2/040	Carrying Out Servicing Activities on Stairlift Equipment	2	19	56	L/600/5604
QENM2/041	Restoring Stairlifts to Service by Replacing or Repairing Components	2	23	77	D/600/5607

Pathway ENH: Servicing Service Lifts

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/042	Carrying Out Fault Location on Service Lifts	2	26	49	M/600/5613
QENM2/043	Carrying Out Servicing of Service Lift Equipment	2	19	56	F/600/5616
QENM2/044	Restoring Service Lifts to Service by Replacing or Repairing Components	2	23	77	J/600/5620

Pathway ENI: Installing Stairlifts

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/039	Carrying Out Fault Location on Stairlift Equipment	2	26	49	M/600/5594
QENM2/045	Installing Stairlifts	2	42	161	Y/600/5623

Pathway ENJ: Installing Service Lifts

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/042	Carrying Out Fault Location on Service Lifts	2	26	49	M/600/5613
QENM2/046	Installing Service Lifts	2	42	161	M/600/5627

Pathway ENK: Equipment Installation

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: One of the following assessment routes must be taken:

QENM2/047	Assisting In the Installation of Mechanical Equipment	2	48	161	M/600/5630
QENM2/048	Assisting In the Installation of Electrical/Electronic Equipment	2	48	161	F/600/5633
QENM2/049	Assisting In the Installation of Equipment to Produce an Engineered System	2	48	161	T/600/5399
QENM2/050	Assisting In the Installation of Instrumentation and Control Equipment	2	48	161	M/600/5403
QENM2/051	Assisting in the Installation of Fluid Power Equipment	2	48	161	T/600/5404
QENM2/052	Assisting in the Installation of Process Controller Equipment	2	48	161	J/600/5407
QENM2/053	Assisting in the Installation of Emergency Electrical Power Generation Equipment	2	48	161	J/600/5410
QENM2/054	Assisting in the Installation of Environmental Pollution Control Equipment	2	48	161	D/600/5414
QENM2/055	Assisting in the Installation of Workplace Environmental Control Equipment	2	48	161	K/600/5416
QENM2/056	Assisting in the Installation of Heating and Ventilation Equipment	2	48	161	T/600/5418

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Pathway ENK: Equipment Installation (cont)

QENM2/057	Assisting in the Installation of Air Conditioning and Ventilation Equipment	2	48	161	T/600/5421
QENM2/058	Assisting in the Installation of Compressed Air Equipment	2	48	161	J/600/5424
QENM2/059	Assisting in the Installation of Waste/Foul Water Distribution Equipment	2	48	161	L/600/5425
QENM2/060	Assisting in the Installation of Fresh Water Distribution Equipment	2	48	161	D/600/5428
QENM2/061	Assisting in the Installation of Refrigeration Equipment	2	48	161	K/600/5433

Pathway ENL: Installing Lifting Platforms

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/062	Carrying Out Fault Location on Lifting Platforms	2	26	49	F/600/5437
QENM2/063	Installing Lifting Platforms	2	42	161	J/600/5438

Pathway ENM: Servicing Lifting Platforms

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/062	Carrying Out Fault Location on Lifting Platforms	2	26	49	F/600/5437
QENM2/064	Carrying Out Servicing of Lifting Platforms	2	19	56	R/600/5443
QENM2/065	Restoring Lifting Platforms to Service by Replacing or Repairing Components	2	23	77	M/600/5451

Pathway ENN: Assistive Technology Systems and Equipment Maintenance

Mandatory assessment routes: All three assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QENM2/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QENM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QENM2/003	Working Efficiently and Effectively in Engineering	2	5	25	Y/601/5052

Optional assessment routes: All of the following assessment routes must be taken:

QENM2/004	Handing Over and Confirming Completion of Maintenance or Installation Activities	2	18	35	D/600/5669
QENM2/066	Carrying Out Fault Location Activities on Assistive Technology Systems and Equipment	2	26	49	F/600/5454
QENM2/067	Carrying Out Scheduled Servicing Activities on Assistive Technology Systems and Equipment	2	19	56	L/600/5456
QENM2/068	Carrying out Maintenance and Repair Activities on Assistive Technology Systems and Equipment	2	35	98	R/600/5460