



**INSTITUTE OF THE  
MOTOR INDUSTRY**

## **QUALIFICATION SPECIFICATION**

**IMI Level 2 Certificate in Service and Maintenance Engineering  
(VRQ)  
OFQUAL NO: 601/0532/X**

**IMI Level 2 Diploma in Service and Maintenance Engineering  
(VRQ)  
OFQUAL NO: 601/0542/2**

**September 2017 (v1)**

**Note:**

This guide should be read in conjunction with the:

- Candidate Assessment Summary (for the relevant qualification)
- Support Materials (for the relevant qualification)
- and the IMI Operating Manual for Approved Centres



## CENTRE INFORMATION

Please be aware that any **legislation** referred to in this qualification may be subject to amendment/s during the life of this qualification. Therefore IMI Approved Centres must ensure they are aware of and comply with any amendments, e.g. to health and safety legislation and employment practices.

Please be aware that **vehicle technologies** referred to in this qualification reflect current practice, but may be subject to amendment/s, updates and replacements during the life of this qualification. Therefore IMI Approved Centres must ensure they are aware of the latest developments and emerging technologies to ensure the currency of this qualification.

Please note: the relevance of the information contained in the **unit content** will vary depending upon the vehicle types being worked upon. The unit content is for guidance only and is not meant to be prescriptive.

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## CONTACT SHEET

Learner Name:	
Learner Registration No:	
Learner Address:	
Learner Tel No:	
Learner Email:	
Employer Contact:	
Employer Name & Address:	
Employer Tel No:	

Please complete as appropriate:	
Witness Name:	Witness Name:
Witness Job Title:	Witness Job Title:
Witness Signature:	Witness Signature:
Witness Name:	Witness Name:
Witness Job Title:	Witness Job Title:
Witness Signature:	Witness Signature:
Assessor Name:	Assessor Name:
Assessor Signature:	Assessor Signature:
Assessor Name:	
Assessor Signature:	
Internal Quality Assurer Name:	Internal Quality Assurer Name:
Internal Quality Assurer Signature:	Internal Quality Assurer Signature:



**QUALIFICATION SPECIFICATION:  
IMI LEVEL 2 SERVICE AND MAINTENANCE ENGINEERING QUALIFICATIONS (VRQ)**

## Introduction

IMI has published this qualification specification as required by the Office of Qualifications and Examinations Regulation (Ofqual), to set out:

- the qualifications' objectives
- any other qualification that a learner must have completed before taking the qualifications
- any prior knowledge, skills or understanding which the learner is required to have before taking the qualifications
- units that a learner must have completed before the qualifications will be awarded, and any optional routes
- any other requirements that a learner must have satisfied before the learner will be assessed, or before the qualifications will be awarded
- the knowledge, skills and understanding that will be assessed as part of the qualifications (giving a clear indication of their coverage and depth)
- the method of any assessment and any associated requirements relating to it
- the criteria against which learners' level of attainment will be measured
- any specimen materials
- any specified levels of attainment.

## IMI Awarding Body/Organisation

The IMI was set up in 1920 to serve the developing motor industry. The IMI is now the only organisation representing individuals of all vocations and status within the industry, and plays the leading role in advancing the quality and integrity of the profession. The IMI has been committed to vocational qualifications since 1985.

IMI is now the leading awarding body for the retail motor industry. We offer an unrivalled range of motor industry qualifications that demonstrate knowledge, skills and competence, the foundation of a successful career. IMI is the UK's only awarding body that is focused on the motor industry and closely related sectors.

IMI is recognised as an Awarding Organisation by Ofqual, the regulator for qualifications, examinations and assessments in England, by Qualifications Wales as the regulator for qualifications in Wales and CCEA Regulation as the regulator for qualifications in Northern Ireland. This allows IMI to approve assessment centres, i.e. colleges, training providers and employers to run these qualifications for potential learners.

IMI representatives, i.e. external quality assurers, visit its approved centres to ensure that they are working to regulations.

IMI contact details, are as follows:

IMI  
Fanshaws  
Brickendon Lane  
Brickendon  
Hertford  
SG13 8PQ

Tel: 01992 511521

email: [info@theimi.org.uk](mailto:info@theimi.org.uk)  
<http://www.theimi.org.uk/awarding>



### **IMI Complaints and Appeals Procedure**

The IMI procedures for complaints and appeals are open to each centre, prospective centres, their staff and all learners. The procedures are designed to resolve disputes arising from the following activities:

- assessment and verification practice or decisions
- centre approval decisions
- claims for certification
- or any other complaint a learner may have

**Note to assessors:** Learners must have access to the IMI Guidance for Candidates which contains the IMI complaints and appeals procedure.

### **Centre Recognition and Approval**

Centres wishing to offer these qualifications must first be approved by IMI.

Centres must adhere to the information in this document, and the IMI operating manual. Further details on the approval process and the operating manual are available at <http://awarding.theimi.org.uk>



## Level 2 Service and Maintenance Engineering Qualifications

IMI offers the following Level 2 Technical Awards (vocationally related qualifications) in Service and Maintenance Engineering.

**Technical Awards** are broad, high-quality level 1 and level 2 qualifications in non EBacc subjects that equip students aged 14-16 with applied knowledge and associated practical skills not usually acquired through general education.

These qualifications are approved by the DfE for inclusion in the list of qualifications that count in the 2017, 2018 and **2019** Key Stage 4 Performance Tables.

These qualifications support young people to:

- develop a broad understanding of the engineering sector, with only a limited requirement for specialist knowledge and practical skills;
- acquire a significant core knowledge which spans the engineering sector, as well as providing the opportunity to develop their academic and study skills to support progression onto further qualifications and potential employment;
- study subject matter that is appropriate for a qualification for this age group. These qualifications were developed specifically for 14-16 year olds, however they are also suitable for learners post 16.

Ofqual Qualification No.	Qualification Title	GLH	TQT
601/0532/X	<b>IMI Level 2 Certificate in Service and Maintenance Engineering</b> <a href="http://awarding.theimi.org.uk/Qualifications/IMIAL-Level-2-Certificate-in-Service-and-Maintenance-Engineering-VRQ">http://awarding.theimi.org.uk/Qualifications/IMIAL-Level-2-Certificate-in-Service-and-Maintenance-Engineering-VRQ</a>	Min GLH= 228	260
		<b>Mean GLH= 274</b>	
		Max GLH= 320	
601/0542/2	<b>IMI Level 2 Diploma in Service and Maintenance Engineering</b> <a href="http://awarding.theimi.org.uk/Qualifications/IMIAL-Level-2-Diploma-in-Service-and-Maintenance-Engineering-VRQ">http://awarding.theimi.org.uk/Qualifications/IMIAL-Level-2-Diploma-in-Service-and-Maintenance-Engineering-VRQ</a>	Min GLH= 274	318
		<b>Mean GLH= 337</b>	
		Max GLH= 400	

IMI is approved and accredited to offer these Level 2 Service and Maintenance Engineering VRQs by the Office of Qualifications and Examinations Regulation (Ofqual). Therefore the qualifications appear on The Register of Regulated Qualifications.

The Register contains details of Recognised Awarding Organisations and Regulated Qualifications in England (Ofqual), Wales (Welsh Government) and Northern Ireland (CCEA Regulation). For further information visit: <http://register.ofqual.gov.uk/>

These qualifications are on the **Regulated Qualifications Framework (RQF)**. Qualifications on the RQF are grouped together according to their difficulty. They are given a level from entry level to level eight. The levels are based on the standards of knowledge, skill and/or competence needed for each qualification.

Note: Qualifications at the same level can be very different in terms of content and the length of time they take to complete.



## Department for Education (DfE) Technical Guidance for Technical Awards for 14-16 Year Olds and Performance Tables

Following on from the recommendations in the Wolf Review of 14-19 education, the Department for Education (DfE) in England published technical guidance for the development of qualifications for 14-16 year olds and performance tables.

Therefore, in addition to these qualifications being accredited by the Office of Qualifications and Examinations Regulation (Ofqual), they have also been developed to meet the DfE criteria, and explicitly include the following characteristics:

- a. declared purpose;
- b. size;
- c. appropriate content;
- d. external assessment;
- e. synoptic assessment;
- f. grading.

### a. Declared Purposes (as published on our website)

#### **IMI Level 2 Certificate in Service and Maintenance Engineering (VRQ) (601/0532/X)**

##### ***Who is this qualification for?***

This qualification is primarily developed for schools and colleges to deliver to learners aged in the 14-16 age group with an interest in the service and maintenance engineering industry, but without a clear idea of the job role they wish to undertake in the future. It is therefore designed to provide learners with the opportunity to experience an introduction to a wide range of disciplines associated with the service and maintenance engineering sector including:

- mechanical engineering
- electrical engineering
- automotive engineering
- vehicle maintenance and repair
- design and manufacturing
- fabrication and welding
- vehicle paint spraying

This Certificate size qualification will allow learners to gain a broad knowledge of this industry sector whilst also allowing them to study an increased GCSE commitment or other vocational qualifications.

##### ***Who might be interested in taking this course?***

There are **no formal entry requirements** for this qualification and learners are not expected to have any prior knowledge or experience, however an interest in the subject area is advisable. The content level of this qualification would be similar to the study required for GCSE grades A\*- C.

##### ***What will the student study as part of this qualification?***

The content of this qualification has been designed to give the learners a broad understanding of the service and maintenance engineering sector, whilst also providing the opportunity to acquire a small number of specialist practical and technical skills.

The learners will acquire a significant core knowledge which spans the service and maintenance engineering sector, as well as providing the opportunity to develop their academic and study skills to support progression onto further qualifications and potential employment.

The mandatory, core and self development units help build this broad understanding, whilst the specialist units will allow for a limited amount of specialist knowledge to be gained and the limited development of specialist practical skills.

The mandatory units cover health & safety and engineering foundation skills required to work in a service and maintenance engineering discipline including engineering maths and science. The core units develop project planning skills and are essential for the learner to bring the learning journey together through the use of synoptic assessment.





## Qualification Specification: Level 2 Service and Maintenance Engineering (VRQs)

The self development units focus on employability skills including problem solving, preparation for work and knowledge of environmental issues.

The range of optional specialist units provide the learner with the flexibility to acquire specialist knowledge and practical skills in a number of service and maintenance engineering disciplines including; machining engineering materials, internal combustions engines, computer aided design, hydraulic and pneumatic systems, new technologies in the engineering industry and electrically propelled vehicle maintenance.

As a result, learners successfully completing this qualification will acquire significant core knowledge and practical skills which spans the service and maintenance engineering sector.

### ***Which subjects will complement this course?***

This qualification is designed to be focused on the taught content and is linked to core GCSE curriculum areas in maths and science and their application in the service and maintenance engineering industry.

This qualification will help develop the learners' academic and study skills, therefore supporting their progression onto technical level qualifications such as automotive engineering, mechanical engineering, electrical engineering and design engineering and/or intermediate or advanced apprenticeships in these areas.

## **IMI Level 2 Diploma in Service and Maintenance Engineering (VRQ) (601/0542/2)**

### ***Who is this qualification for?***

This qualification is primarily developed for schools and colleges to deliver to learners aged in the 14-16 age group with an interest in the service and maintenance engineering industry, but without a clear idea of the job role they wish to undertake in the future. It is therefore designed to provide learners with the opportunity to experience an introduction to a wide range of disciplines associated with the service and maintenance engineering sector including:

- mechanical engineering
- electrical engineering
- automotive engineering
- vehicle maintenance and repair
- design and manufacturing
- fabrication and welding
- vehicle paint spraying

This Diploma sized qualification offers a broader and more in depth choice of study in this industry sector and extends their focused development of their core knowledge and skills in this area when compared to the certificate sized qualification.

### ***Who might be interested in taking this course?***

There are **no formal entry requirements** for this qualification and learners are not expected to have any prior knowledge or experience, however an interest in the subject area is advisable. The content level of this qualification would be similar to the study required for GCSE grades A\*- C.

### ***What will the student study as part of this qualification?***

The content of this qualification has been designed to give the learners a broad understanding of the service and maintenance engineering sector, whilst also providing the opportunity to acquire a small number of specialist practical and technical skills.

The learners will acquire a significant core knowledge which spans the service and maintenance engineering sector, as well as providing the opportunity to develop their academic and study skills to support progression onto further qualifications and potential employment.

The mandatory, core and self development units help build this broad understanding, whilst the specialist units will allow for a limited amount of specialist knowledge to be gained and the limited development of specialist practical skills.

The mandatory units cover health & safety and engineering foundation skills required to work in a service and maintenance engineering discipline including engineering maths and science. The core units develop project planning skills and are essential for the learner to bring the learning journey together through the use of synoptic assessment.

The self development units focus on employability skills including problem solving, preparation for work and knowledge of environmental issues.



The range of optional specialist units provide the learner with the flexibility to acquire specialist knowledge and practical skills in a number of service and maintenance engineering disciplines including; machining engineering materials, internal combustions engines, computer aided design, hydraulic and pneumatic systems, new technologies in the engineering industry and electrically propelled vehicle maintenance.

As a result, learners successfully completing this qualification will acquire significant core knowledge and practical skills which spans the service and maintenance engineering sector.

**Which subjects will complement this course?**

This qualification is designed to be focused on the taught content and is linked to core GCSE curriculum areas in maths and science and their application in the service and maintenance engineering industry.

This qualification will help develop the learners' academic and study skills, therefore supporting their progression onto technical level qualifications such as automotive engineering, mechanical engineering, electrical engineering and design engineering and/or intermediate or advanced apprenticeships in these areas.

**b. Size**

The size of qualifications that count in the approved list must be a minimum of 120 GLH.

IMI have developed two qualifications at Level 2 which exceed this size, irrespective of the optional units selected.

**c. Appropriate Content**

The content of these qualifications has been designed to give the learners a broad understanding of the engineering sector. The mandatory, core and self development units help build this broad understanding, whilst the specialist units will allow for a limited amount of specialist knowledge to be gained and the limited development of specialist practical skills.

These qualifications are designed to be focused on the taught content and are aligned to a number of progression routes in engineering, as well as linking to core GCSE curriculum areas in maths and science.

**d. Assessment**

**External Assessment**

All qualifications appearing in the published list of qualifications approved for inclusion in the Key Stage 4 performance tables, must also have a minimum amount of content subject to external assessment.

IMI has therefore developed a number of online tests to cover the four mandatory units within each qualification, each consisting of 30 questions, and spanning the breadth of the content for each of these mandatory units.

The external assessment accounts for 150 guided learning hours (GLH), which is more than the stated requirements in the DfE technical guidance.

**Internal Assessment**

In addition to the externally set and externally marked online tests, all units have sample assessments provided by IMI. These may be used as they are or adapted for use by centres.

It is also acceptable for an approved centre to develop their own combination practical task/written assessments, in the place of the IMI samples provided. However the content and assessment method of the centre devised assessment must be *agreed in writing* with an IMI external quality assurer *prior to use*.

**d. Synoptic Assessment**

The DfE have specified that synoptic assessment must be used within qualifications approved for 14-16 year olds and which appear on the approved list of qualifications for Key Stage 4 Performance tables. Synoptic assessment is defined by Ofqual as, *“a form of assessment which requires a candidate to demonstrate that s/he can identify and use effectively in an integrated way an appropriate selection of skills, techniques, concepts, theories, and knowledge from across the whole vocational area, which are relevant to a key task.”*



Qualification Specification: Level 2 Service and Maintenance Engineering (VRQs)

Synoptic assessment for these IMI qualifications will therefore be achieved through completion of the project planning unit (ET213), which will ensure that, irrespective of the optional units chosen, a holistic approach to assessment can be undertaken. Examples of where evidence can be obtained for the synoptic assessment for all units can be found in [Appendix A \(Level 2 Cross Mapping for Synoptic Assessment Evidence\)](#) of this document. Centres should be aware of this when delivering the qualification, so that learners can apply their learning in a suitable way.

**f. Grading**

The DfE have specified that grading must be applied to the qualifications approved for 14-16 year olds and for those which appear on the approved list of qualifications for Key Stage 4 Performance.

Grading for these IMI qualifications is achieved through a combination of results from multiple choice online tests, and the project planning unit.

Multiple choice on line tests (OLT) will be graded as follows:

- 60% to 74% = Pass
- 75% to 84% = Merit
- 85% or above = Distinction

The project planning unit (ET213) will be graded using Pass, Merit and Distinction, determined by detailed guidance within the project brief provided.

The overall qualification grade will be calculated using arithmetical means based on the grades achieved.

To support centres with calculating an overall grade, the IMI have produced a 'grading spreadsheet' which is available under the documents section of Centres Hub. The overall grade will then need to be selected when submitting the claim on Web Portal 2. When completing the document, it is important that the learner's destination code is entered in the appropriate area shown on the grading spreadsheet.

Centre Name		IMI Level 2 Service and Maintenance								Destination Codes:			
Candidate Name		Online Test Score								Note: 'Pass', 'Merit' or 'Distinction' Required			
Candidate No'		ET 211 OLT	Grade	ET 212 OLT	Grade	ET 214 OLT	Grade	ET 216 OLT	Grade	ET 213 Project	Overall Grade	Qualification Completion Date	Learner Destination Code
EXAMPLE	1234ABCD	60	Pass	65	Pass	75	Merit	90	Distinction	Distinction	Merit	16th May 2016	03
			Fail		Fail		Fail		Fail	Fail	FAIL		
			Fail		Fail		Fail		Fail	Fail	FAIL		
			Fail		Fail		Fail		Fail	Fail	FAIL		
			Fail		Fail		Fail		Fail	Fail	FAIL		
			Fail		Fail		Fail		Fail	Fail	FAIL		

Centres will be required to retain records of completed grading spreadsheets for each cohort of learners and upload these into Centres' Hub at the point of claiming under the centres documents tab. All uploaded documents must be saved detailing the qualification title and date of claim. These will also need to be made available to your EQA on request.



## DfE Approved Performance Tables List

These qualifications are approved by the DfE for inclusion in the list of qualifications that count in the 2017 and 2018 Key Stage 4 Performance Tables alongside full course GCSEs, established iGCSEs, AS levels and other Level 3 qualifications.

**Note:** The DfE have specified that each qualification will count for one GCSE in the KS4 performance tables, irrespective of its size.

For the full approved lists:

2017:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/448760/Technical Awards 2017 list July 2015.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/448760/Technical_Awards_2017_list_July_2015.pdf)

2018:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/546041/14-16 qualifications technical guide 2017 and 2018 performance tables.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/546041/14-16_qualifications_technical_guide_2017_and_2018_performance_tables.pdf)

2019:  
<https://www.gov.uk/government/publications/2019-performance-tables-technical-and-vocational-qualifications/2019-school-performance-tables-technical-and-applied-qualifications>

For details on comparing different types of qualifications, including levels, see:  
<http://www.qaa.ac.uk/en/publications/documents/qualifications-can-cross-boundaries.pdf>



## Level 2 Service and Maintenance Engineering Units

This specification document contains the Level 2 Certificate's and Diploma's structures (*pages 21 and 22*, these include each unit's IMI unit reference code, Ofqual unit I.D no., guided learning hours (GLH); and assessment methodology.

**Note:** The IMI unit reference code is the same, where applicable, as the unit's online test number.

IMI Level 2 Service and Maintenance Engineering Certificate and Diploma have a common structure. They consist of four types of unit: Mandatory units, Core units, Self Development units; and Specialist Optional units. The units combine requirements for both knowledge and skills.

Mandatory units are those which are considered to be essential for learners to achieve. The mandatory units cover health & safety, engineering foundation skills, and the units required to work in an engineering discipline.

Core units are essential for the learner to achieve, particularly the project planning unit (ET213), in order to bring the learning journey together through the use of synoptic assessment (see [Appendix A: Level 2 Cross Mapping for Synoptic Assessment Evidence](#), page 94).

Self Development and Specialist Optional units have been included to provide flexibility within the qualification chosen.

Please note: A minimum number of units are required to be achieved from the optional units in both qualifications. It is also the case that there is not a maximum amount of units required for a qualification.

Each unit is written in a specific way, as follows:

The **unit reference** is IMI code for the unit and, where applicable, also the unit's on line test number.

The **unit title** is a concise, but explicit description of what the unit covers.

The RQF has 9 **levels**, from entry level to level eight. These qualifications are at **level 2**.

The **guided learning hours** are an indication to assessors/tutors of how long each unit will take to deliver. (These times allow for teaching supported by practical task and training.)

Please note that the guided learning hours should be viewed flexibly, as they will be dependent on the experience of the learner.

The **unit rationale** is a short description of what the unit covers and what the learner will achieve.

The **learning outcomes** and **content** set out what learners are expected to know, understand and/or be able to do.

**Note:** IMI has developed a **Candidate Assessment Summary** document for assessors and internal quality assurers to complete as the learner achieves each unit. The Candidate Assessment Summary (or an approved equivalent) must be used throughout the learner's qualification. This document can be found in the Qualification section of centres hub.



## IMI Service and Maintenance Engineering Assessment Methodology

### Learners must:

1. pass the IMI set and marked online tests for the Mandatory units only (**One retake opportunity only**)
2. complete the IMI set project for Core unit ET213 'Undertake a Project in the Engineering Environment', which amalgamates the qualification's synoptic assessment requirement (**One retake opportunity only**)
3. pass the IMI sample combination assessments for all Mandatory units and the Specialist and Self Development units selected by the learner

IMI approved centres are responsible for adopting learning and assessment strategies to help the learner throughout their qualification. It is essential that delivery of the qualification is designed to allow each learner to develop a broad understanding of the engineering sector, whilst still allowing for the development of a limited amount of specialist knowledge and practical skills.

Learners will be taught in school/college/training centre workshop, and may spend time in the workplace as part of their course, i.e. work experience.

### IMI Set Online Tests (Mandatory Units only)

The learner is required to take IMI set online tests for each of the following units:

- Level 2 mandatory units: ET211, ET212, ET214 and ET216

Each test consists of 30 multiple choice or 'true or false' questions. IMI provides and marks these online tests through its website, <http://awarding.theimi.org.uk>

The tests are graded as follows:

Pass – 60% to 74%

Merit – 75% to 84%

Distinction – 85% and above

The duration of all unit tests is 60 minutes.

**Learners are permitted to use calculators during ET214 on-line test only.**

**Note:** The qualification structure tables in this specification document list the unit reference numbers for the units, which are also the units' on line test numbers.

In accordance with DfE instructions, learners who have failed to reach the required standard or are deemed to have underperformed have **only one retake opportunity** for each online test. This retake may be taken a minimum of 48 hours after the first attempt.

**Full guidance on the use of online assessment can be found in the IMI Operating Manual.**

If you need any further assistance, please call IMI Qualification Services on tel.: 01992 511521.

**Note: Centre devised alternatives to the IMI online test are NOT permitted.**



## **IMI Set Project (Core Unit ET213): Level 2**

This project measures the learner's application of knowledge and practical skills in a holistic manner. This project encompasses the synoptic assessment element of the qualification and brings together the learning journey.

Evidence for this project is gained from the theoretical and practical work carried out during the delivery of the qualification along with research, self study and blended learning. [Appendix A](#) (*Level 2 Cross Mapping for Synoptic Assessment Evidence page 94*) of this document shows examples of where evidence can be gained.

The project must be marked by an IMI approved assessor from the approved centre. The project will be graded Pass, Merit or Distinction from the evidence presented and marked against the grading matrix that can be found in [Appendix B](#) (*Project Grading Criteria ET213 page 96*) of this document.

To ensure consistency of approach, the project will be sampled by an IMI external quality assurer during their regular monitoring visits to the approved centre (see IMI Operating Manual for monitoring procedures).

## **IMI Sample Combination Assessments (Mandatory, Specialist and Self Development Units): Sample**

IMI has created a set of sample combination assessments (practical task and/or written assessments) to be completed by learners for each of their selected units. These assessments are designed to ensure rigour and quality of assessment by measuring the learner's underpinning knowledge and skills.

These sample assessments comprise of various combinations of practical tasks and/or written assessments, mostly accompanied by assessor observation and oral questioning.

General guidance for learners completing the assessments is shown on the front cover of each assessment. Please note that all written assessment for the Specialist units in Group D have sample solutions/marketing schemes supplied by IMI. The pass mark for each of the written assessments is stated in the mark scheme. These sample solutions can be found at the back of the Assessment document. An example of the front sheet for a typical written assessment is shown on the next page.

Assessor feedback/observation boxes are supplied to provide assessors with an area where they can record their observations of the learner for each practical task. These boxes can be used flexibly, at the assessors' discretion.

All assessments must be recorded and marked by an IMI approved assessor from the approved centre. They will form part of the centre's internal quality assurance process.

To ensure consistency of approach, the assessments will be sampled by an IMI external quality assurer during their regular monitoring visits to the approved centre (see IMI Operating Manual for monitoring procedures).

## **Centre Devised Assessment**

It is acceptable for an approved centre to develop their own combination practical task/written assessments, in the place of the IMI samples provided. However the content and assessment method of the centre devised assessment must be agreed, in writing, with an IMI' external quality assurer **prior to use**.



Front Sheet for Written Assessments

**ET212 : Engineering Tools and Equipment Used in an Engineering Maintenance Environment**

Level: 2	Unit Ref: ET212	Assessment No:
Unit Title:	Engineering Tools and Equipment Used in an Engineering Maintenance Environment	
Candidate Name:		Ref No:

**INSTRUCTIONS FOR LEARNERS – PLEASE READ CAREFULLY**

**Ensure that your name and candidate number are written clearly on all your answer sheets.**

1. This assessment may be completed in your own handwriting or if you prefer you may use a word- processor.
2. The standard of presentation, neatness and accuracy of your answers will be taken into account when marking your work.
3. Your assessor will brief you about this assessment prior to starting.
4. To complete some aspects of the assessment you may need to refer to textbooks, vehicle manufacturers' data and workshop manuals.
5. Please show all your workings out in your answers.
6. Pass Mark is 60%. Each question has been given a pass mark that must be achieved.

**This assessment forms part of your overall assessment for this unit and may be shown to the external quality assurer when he/she visits your college or training centre. Failure to present your assessment on time may affect the marks you can achieve for your work.**

Date of issue for this assessment:	
Date for completion of this assessment:	

**Important notes:**

1. You should attempt all questions.
2. Please read each question carefully.
3. Ensure you write the number of each question on the left-hand side of your answer sheet.





## **Additional Information for Assessors and Quality Assurers**

### **Learner Entry Requirements**

There are **no formal entry requirements** for these qualifications.

Learners are not expected to have any prior knowledge and/or experience; however an interest in the subject area is advisable.

### **Learner Induction**

Each learner must receive a face-to-face induction before commencing a qualification. The learner must be informed of which qualification they are registered for with IMI, and be made aware of the assessment methods that will be used throughout their chosen qualification.

IMI expects the approved centres to pay particular attention to the following areas during the learner's induction:

- Health and Safety
- Employment Rights and Responsibilities, including codes of conduct & anti-discrimination
- Customer Rights, including ethics
- Industry Issues, including professional organisations, and environmental & economic concerns.

All learners registered must have access to fair and proper assessment. Approved Centres must ensure that all learners have access to,

- The IMI Guidance for Candidates, which contains the IMI Complaints and Appeals Procedure

### **Health and Safety: Note to approved centres offering qualifications for pre-16 candidates**

The centre must take responsibility for the safety of the young people when delivering vocational qualifications, particularly for learners aged 14-16.

All work placements and training workshops must be risk assessed to ensure that the environment is safe and secure for 14-16 year olds prior to delivery and that due care and diligence is taken during delivery.

The risk assessment must detail how risks to learners will be minimised or alleviated. The risk assessment should ensure the placement/workshop meets legal requirements e.g., Health & Safety at Work Acts and Employer Liability Insurance. The risk assessment and work place monitoring processes must be auditable, retained by the centre to be reviewed at anytime by the IMI external quality assurer.



## IMI Administration

The **IMI Approved Centre Operating Manual** is the key source of information for approved centres offering IMI qualifications. It states clearly the roles and responsibilities of centre personnel and the policies and procedures that must be in place at the centre.

It includes details of:

- the centre approval criteria
- the administrative procedures to register learners and request certificates
- health and safety requirements
- the policy to ensure equal opportunities and access to fair assessment for all learners
- the procedures for applying for **special assessment arrangements**
- the Complaints and Appeals Procedure
- and the IMI customer service charter.

Up to date information on IMI fees and charges can be found on its website, <http://awarding.theimi.org.uk>

In brief, the **assessment requirements** for these qualifications (as specified in these guidance notes) must be met in full before a learner can be deemed to have completed the qualification. These qualifications must be **internally quality assured** in line with the approved centre's strategy for internal quality assurance.

Records of learners' progress and achievements must also be kept at the centre. Although centre records may take a variety of formats, they must be clear and concise and show unsuccessful assessments, as well as learner achievements. They must be made available to an IMI external quality assurer during routine monitoring visits; therefore providing a clear audit trail to show where, when and how learners have met the criteria.

IMI has developed a **Candidate Assessment Summary** document for assessors and internal quality assurers to complete as the learner achieves each unit. The Candidate Assessment Summary (or an approved equivalent) must be used throughout the learner's qualification. This document can be found in the Qualification section of IMI Awarding website.

IMI external quality assurers will sample learners' work during routine monitoring visits to the centre and prior to **certification** claims being made unless the centre has direct claim status (see the IMI operating manual).

**For up-to-date information, please ensure all the latest amendments are downloaded from the IMI website:**  
<http://awarding.theimi.org.uk>

IMI  
Fanshaws  
Brickendon  
Hertford  
SG13 8PQ

Tel: 01992 511521

<http://awarding.theimi.org.uk>

**Qualification Structures****IMI Level 2 Certificate in Service and Maintenance Engineering (VRQ)**  
Ofqual I.D No: 601/0532/X

In order to pass the qualification, learners must achieve the following:

**Group A:** All 4 Mandatory Units must be completed

**Group B:** The Core Unit must be completed

**Group C:** A minimum of 1 Self Development Unit must be completed

**Group D:** A minimum of 2 Specialist Units must be completed

**IMI Level 2 Diploma in Service and Maintenance Engineering (VRQ)**  
Ofqual I.D No: 601/0542/2

In order to pass the qualification, learners must achieve the following:

**Group A:** All 4 Mandatory Units must be completed

**Group B:** The Core Unit must be completed

**Group C:** A minimum of 2 Self Development Units must be completed

**Group D:** A minimum of 3 Specialist Units must be completed

**Key:**

C = Combination Assessment (Practical Task and/or Written Assessment)

P = Project (Portfolio of Evidence)

T = On Line Test

**Group A: Mandatory Units**

Unit Ref:	Unit Title and ID Number	GLH	Unit Level	Assessments		
				C	P	T
ET211	Health and Safety Practices in an Engineering Maintenance Environment (T/505/4253)	40	2	M		M
ET212	Tools and Equipment Used in an Engineering Maintenance Environment (K/505/4251)	40	2	M		M
ET214	Mathematics and Science for Engineering Technicians (L/505/4260)	40	2	M		M
ET216	Supporting Job Roles in an Engineering Environment (A/505/4254)	30	2	M		M

**Group B: Core Unit (Mandatory)**

Unit Ref:	Unit Title and ID Number	GLH	Unit Level	Assessments		
				C	P	T
ET213	Undertake A Project in the Engineering Environment (A/505/4321)	30	2		M	



**Group C: Self Development Units (Optional)**

Unit Ref:	Unit Title and ID Number	GLH	Unit Level	Assessments		
				C	P	T
PSD01	Self Development (M/505/4090)	20	1	M		
PSD02	Solving Problems In Daily Life (T/505/4091)	20	1	M		
PSD05	Preparing for Work (Y/505/4262)	20	2	M		
PSD04	Knowledge of Environmental Issues (D/505/4263)	20	2	M		

**Group D: Specialist Units (Optional)**

Unit Ref:	Unit Title and ID Number	GLH	Unit Level	Assessments		
				C	P	T
ET217	Machining Engineering Materials (M/505/4266)	50	2	M		
ET218	Forming and Joining Engineering Materials (Y/505/4293)	33	2	M		
ET219	Electrical/ Electronic Systems Maintenance 12/ 24 Volt (M/505/4302)	40	2	M		
ET220	Mechanical Systems and their Maintenance (T/505/4303)	60	2	M		
ET221	Internal Combustion Engines, Components and Systems (L/505/4307)	55	2	M		
ET223	Computer Aided Drawing in an Engineering Environment (Y/505/4309)	40	2	M		
ET124	Cycle Construction and Routine Maintenance (Y/505/4245)	26	1	M		
ET225	Metal Inert Gas (MIG) Brazing Operations (T/505/4298)	30	2	M		
ET226	Metal Active Gas (MAG) Welding Techniques (A/505/4299)	30	2	M		
ET227	Tungsten Inert Gas (TIG) Welding Techniques (H/505/4300)	30	2	M		
ET228	Hydraulic and Pneumatic Systems Principles (A/505/4304)	40	2	M		
ET229	Routine Motorcycle Maintenance (F/505/4305)	40	2	M		
ET230	Routine Vehicle Maintenance (J/505/4306)	40	2	M		
ET231	Applying Fillers and Foundation Materials (H/505/4314)	60	2	M		
ET232	Preparing Metal and Pre-Painted Surfaces (M/505/4316)	60	2	M		
ET233	New Technologies in the Engineering Industry (A/505/4318)	30	2	M		
ET234	Removing and Fitting Basic Light Vehicle Mechanical, Electrical and Trim (MET) Components and Non Permanently Fixed Vehicle Body Panels (K/505/4301)	30	2	M		
ET235	Repairing Minor Paint Defects in an Engineering Environment (T/505/4317)	60	2	M		
ET236	Electrically Propelled Vehicle Hazard Management (F/505/4319)	12	2	M		
ET237	Routine Maintenance Activities on Electrically Propelled Vehicles (T/505/4320)	16	2	M		



**Appendix A to Service and Maintenance Engineering Qualification Specification Document**

**LEVEL 2 CROSS MAPPING FOR SYNOPTIC ASSESSMENT EVIDENCE**

**MANDATORY UNITS**

	ET211					ET212				ET214					ET216			
	Learning Outcome					Learning Outcome				Learning Outcome					Learning Outcome			
	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4
ET213 L01										X					X	X	X	X
ET213 L02									X								X	
ET213 L03		X	X	X		X						X			X		X	
ET213 L04										X		X		X	X	X	X	X

**SELF DEVELOPMENT UNITS**

	PSD01			PSD02			PSD04			PSD05	
	Learning Outcome			Learning Outcome			Learning Outcome			Learning Outcome	
	1	2	3	1	2	3	1	2	3	1	2
ET213 L01	X	X	X	X	X		X			X	
ET213 L02	X			X			X	X	X		X
ET213 L03		X		X	X	X				X	
ET213 L04	X		X			X					X

**SPECIALIST UNITS**

	ET217						ET218				ET225				ET226				ET227				ET234			
	Learning Outcome						Learning Outcome				Learning Outcome				Learning Outcome				Learning Outcome				Learning Outcome			
	1	2	3	4	5	6	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ET213 L01																										
ET213 L02	X	X						X	X	X		X	X			X	X			X	X			X	X	
ET213 L03					X			X			X				X				X				X			
ET213 L04		X			X		X			X			X	X			X	X			X	X	X	X		X



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	ET219			ET220					ET228			ET229				ET230				ET221						
	Learning Outcome			Learning Outcome					Learning Outcome			Learning Outcome				Learning Outcome				Learning Outcome						
	1	2	3	1	2	3	4	5	1	2	3	1	2	3	4	1	2	3	4	1	2	3	4	5	6	7
ET213 L01								X																		
ET213 L02	X	X		X	X	X	X		X	X		X	X			X	X			X	X	X	X	X	X	
ET213 L03											X			X				X								X
ET213 L04	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X

	ET124			ET223						ET231				ET232				ET235				ET233		
	Learning Outcome			Learning Outcome						Learning Outcome				Learning Outcome				Learning Outcome				Learning Outcome		
	1	2	3	1	2	3	4	5	6	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
ET213 L01				X																				
ET213 L02	X	X			X	X	X	X	X	X	X			X	X			X	X			X	X	
ET213 L03			X	X		X	X	X				X	X			X	X			X	X			
ET213 L04	X	X			X	X	X	X	X		X		X		X		X		X		X		X	X

	ET236				ET237				
	Learning Outcome				Learning Outcome				
	1	2	3	4	1	2	3	4	5
ET213 L01									
ET213 L02	X	X	X	X	X	X	X	X	
ET213 L03			X			X	X	X	X
ET213 L04	X	X	X	X		X	X	X	X



**Appendix B: Project Grading Criteria ET213 – Undertake a Project in the Engineering Environment**

PASS	Tick (✓)	MERIT	Tick (✓)	DISTINCTION	Tick (✓)
In order to achieve a Pass grade the candidate must produce evidence that shows they have met the following Pass criteria		In order to achieve a Merit grade the candidate must complete all pass criteria and produce evidence that shows they have met the following Merit criteria		In order to achieve a Distinction grade the candidate must complete all pass and merit criteria and produce evidence that shows they have met the following Distinction criteria	
Identifies and describe the key stakeholders required for the project		Explain the importance of producing a project plan and diary and how this links to the project aims and objectives		Analyse the effectiveness of the project plan and the resources used to help in the completion of the project	
Describe the project requirements including scope, timescales, aims and objectives					
Produce a project plan and project diary					
Describe the resources required for completion of the project		Explain how the resources available will help monitor the project through to completion and the consequences of not monitoring the project			
Describe how the project will be monitored and the importance of this process					
Describe the methods of communication used during the project and how effective they were					
Produce a written report on the project with some detail and a conclusion		Produce a detailed written report on the project with a clear conclusion and recommendations		Produce a comprehensive written report on the project with a clear evaluation of what went well and any areas for improvement. A clear and concise conclusion and detailed recommendations	