

0171-28 Level 2 Technical Certificate in Land-based Engineering

2022

Qualification Report

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Foreword

Results August 2022

As you will likely be aware, Ofqual has announced that grading for General Qualifications this summer will be more generous than prior to the pandemic. This is partly due to managing the impact of disruption and learning loss on learner performance and also managing fairness between learners in different years who had different methods of determining their grades. Therefore, for A levels and GCSEs, grading will seek a midway position between 2019 and 2021, meaning, in general, results will be somewhat higher than prior to the pandemic. This year, 2022, is a transitional year and outcomes and standards will likely return to pre-pandemic levels in 2023.

Similarly, for Vocational and Technical Qualifications (VTQs), this summer will be a transitional year and Ofqual has now been clear that for VTQs “we should expect that this summer’s results will look different, despite exams and assessments taking a big step towards normality.” Ofqual has published a blog [What’s behind this summer’s VTQ results](#)

In acknowledgement of the disruption to learning and to support fairness for all learners certificating this summer (some of whom will be competing against learners taking General Qualifications for the same progression and higher education opportunities), we will be taking loss of learning into consideration, whilst still acknowledging the need to uphold the validity of the qualifications. On this basis, we have made the decision to apply a form of ‘safety net’ through some additional ‘generosity’ to both the theory examinations and synoptic assignments within our Technical Qualifications wherever appropriate, (noting that it may not be appropriate to apply where there is a clear impact on knowledge and skills to practice, particularly health and safety requirements or other relevant legislation). We are therefore also reviewing candidate work a few marks below (equivalent to 5% of maximum marks) the Pass and Distinction notional boundaries – the boundaries used during the awarding process as the best representation of maintaining the performance standard from 2019.

The reason for lowering boundaries, where appropriate, by 5% of the maximum marks available, is that it is broadly commensurate with the level of generosity learners are likely to see in General Qualifications at level 2 and level 3. Providing that senior examiners can support the quality of learners’ work seen below the notional boundaries and agree it is sufficient to maintain the integrity, meaning and credibility of the qualifications, the grade boundaries will be lowered across the full set of grades – e.g Pass, Merit, Distinction and Distinction Star.

Given the circumstances, this is the best approach to take into account the disruption to teaching and learning across every learner in a fair and transparent way, and at the same time maintain the integrity and meaning of qualifications. This approach helps to level our Technical Qualifications awarding approach with that adopted for General Qualifications and other qualifications awarded in England and in the wider UK.

Spring examination series 2022

Having taken this decision, we are also mindful of learners who have taken components in **Spring 2022** and believe they should also have access to the same level of generosity. For these learners, we wish to adopt a similar approach. Therefore, for learners taking Technical Qualification assessments in spring there will be similar generosity, through the addition of 5% of the maximum mark available for the assessment. It is a different mechanism to that we are using for the summer assessments but provides the same level of generosity to those learners taking assessments in the summer.

Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

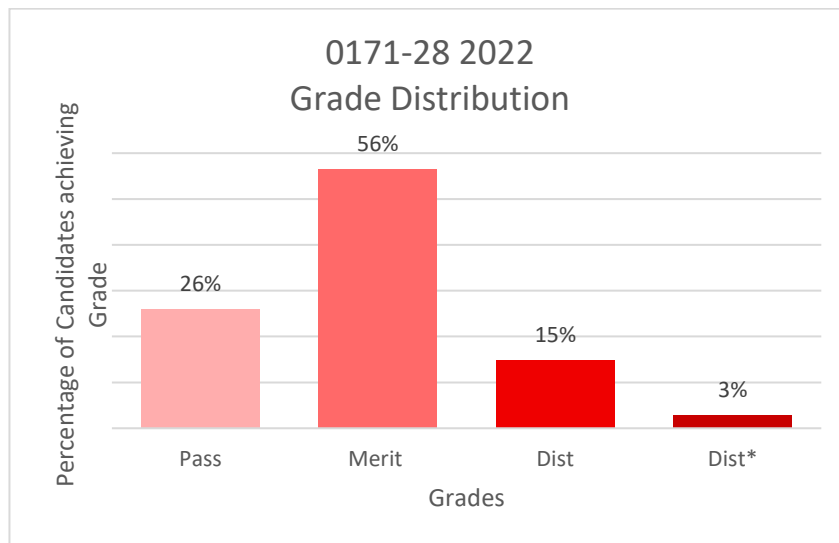
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2022 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments:

- 0171-523/023 Level 2 Land-Based Engineering – Theory exam
 - March 2022 (Spring)
 - June 2022 (Summer)
- 0171-024 Level 2 Land-Based Engineering – Synoptic Assignment

Qualification Grade Distribution

The approximate grade distribution for this qualification is shown below:



This data is based on the distribution as of 22/08/2022.

Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

Theory Exam

Grade Boundaries

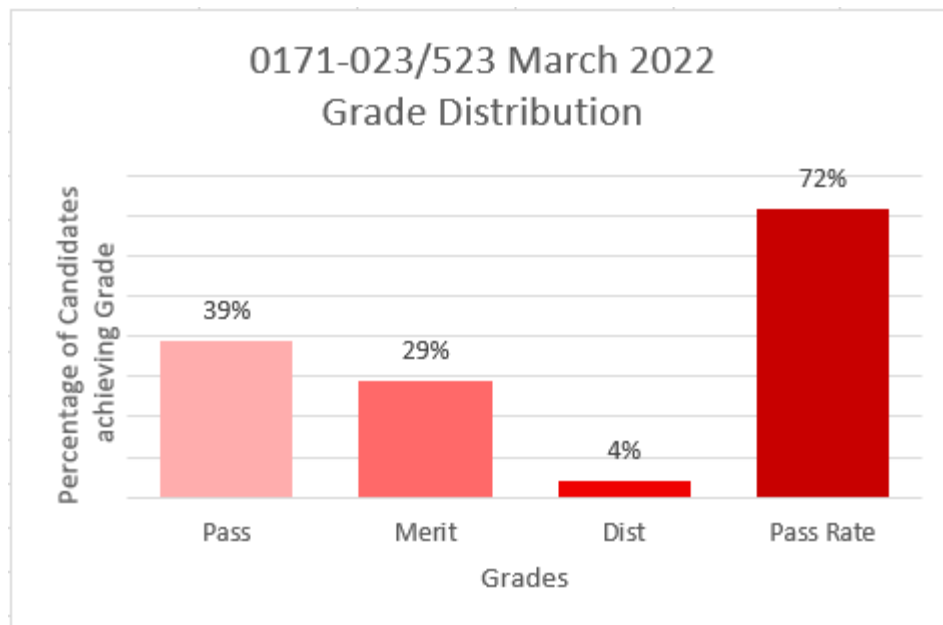
Assessment: 0171-023/523
Series: March 2022 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	50
Pass mark	25
Merit mark	32
Distinction mark	40

The generosity applied to the summer assessments will also retrospectively be applied to candidates who achieved their best result in spring. 5% of the base mark of the assessment will be added to their score rather than applied to boundaries.

The graph below shows the approximate distributions of grades and pass rate for this assessment, it does not account for any marks that have been amended due to generosity:

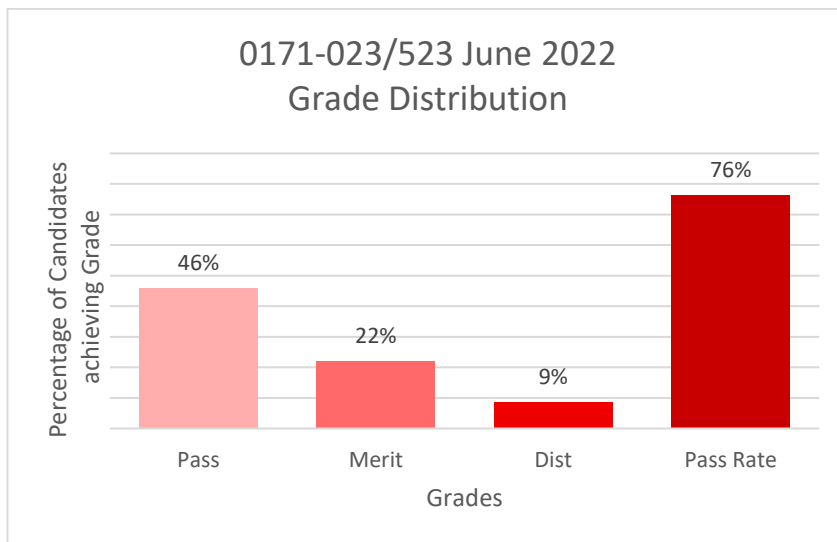


Assessment: 0171-023/523
Series: June 2022 (Summer)

Below identifies the final grade boundaries for this assessment:

Total marks available	50
Pass mark	22
Merit mark	29
Distinction mark	37

The graph below shows the approximate distributions of grades and pass rate for this assessment using the above boundary marks:



Chief Examiner Commentary

0171-023/523 Level 2 Technical Certificate in Land-Based Engineering - Theory exam

Series 1 – March 2022

Overall, candidates' performance was good and comparable to past series. The paper showed the same characteristics of those sat in the previous series in terms of range, suitability, and level. Candidates, on the whole, demonstrated strong recall when identifying components across all topic areas. Candidates' knowledge and understanding of health and safety (Q24) was strong, however, there was a general trend of inaccuracy when responding to questions specifically around testing tasks (Q17 and Q25).

Candidates were able to identify machinery correctly (Q34) and demonstrated knowledge and understanding of warning lights and symbols (Q6 and Q39). The high scoring candidates demonstrated the ability to recall knowledge across all the topic areas demonstrating their breadth of understanding. A particular area of strength across all candidates was evident within the topic areas of electrics and hydraulics (Q16 and Q22).

Candidates did demonstrate weakness in identifying both electrical and hydraulic symbols (Q27). This was a change to the previous series where this was a particularly strong area. Many of the high scoring candidates did not access marks from questions around testing procedures and tooling used for test processes.

Candidates were set applied knowledge questions (Q41 to Q50) based around the service and repair of a mower conditioner. They were given a scenario and various technical information to assist in their responses. High scoring candidates performed well demonstrating an understanding of terminology and applying a high level of logic. Mid-range performers accessed marks on a far less regular basis, however, were still able to demonstrate a good level of knowledge and understanding particular around the health and safety elements of the task.

Centres are continuing to prepare students to a good standard as demonstrated by the continued overall pass rate. To enhance this preparation further candidates would benefit from having a wider breadth of knowledge around hydraulic and electrical symbols. Engine component identification is strong, however, increasing candidates' awareness of component function would increase their breadth of knowledge further. Continuing to focus on basic diagnostic processes and tooling will also benefit candidates in future series.

Past papers and marking schemes are available on the City and Guilds website which should be used for exam practice.

City & Guilds also offers a technical exam guide to support the work on the exam technique.

All documents are available to download from [Technicals in Agriculture and Land-based Engineering qualifications and training courses | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com/qualifications/0171-023/523/level-2-technical-certificate-in-land-based-engineering)

Past papers and marking schemes: Documents – Level 2 – Assessment materials – Past Papers tabs

Exam guide: Documents – Level 2 – Assessment materials

Series 2 – June 2022

Candidates' overall performance was below that of previous series. There were no particular areas or themes that stood out as demonstrating weaker performance, however there was a general trend of inconsistency in candidates' knowledge and understanding across all areas being examined. The cohort was unable to answer a number of questions that were fundamental to level 2. This had an impact on the overall performance of this cohort in comparison to candidates who completed comparable papers in past series.

As in past series, candidates performed well in questions around the safe operation of machinery and those covering health and safety. The majority of candidates were successful in accessing marks by identifying components and specific tooling used for common tasks. Candidates who accessed higher marks across the paper tended to perform well in the scenario question when they were required to apply knowledge and refer to information which was supplied within the questions text. High scoring candidates were able to identify the function of components on a more regular basis compared to middle and lower scoring candidates. Low scoring candidates found questions difficult when engineering terminology was used, particularly when a fault or a cause of a fault were involved.

Candidates across the cohort struggled with questions which required a deeper knowledge and understanding and/or applied logic. A sporadic spread of marks across these questions indicated a lack of knowledge and understanding, particularly in areas relating to engine emissions, electrical and hydraulic systems and components. Further weaknesses were evident across both the high and low scoring candidates in the identification of symbols, both hydraulic and electrical, and in questions with basic diagnostic processes.

High scoring candidates performed well on the applied knowledge questions at the end of the paper. The higher scoring candidates were able to access higher marks when required to compare information from engine tests against expected manufacturers' results to give an indication of where faults may lie. Low scoring candidates struggled to make the link between the information given in the question and what to compare it to from manufacturers' specifications given. The vast majority of candidates were able to identify common machinery used with the agricultural sector and had a strong grasp of the safe working practices expected within a workshop environment.

Centres continue to prepare candidates well in areas of health and safety, component identification and, in the main, components' functions too. However, in this series candidates demonstrated a lack of knowledge around electrical and hydraulic component symbols. Candidates would benefit from an increased amount of time developing the knowledge and understanding of emissions and the systems used to control emissions as this was an area candidates found challenging.

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Past papers and marking schemes: Documents – Level 2 – Assessment materials – Past Papers tabs

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Synoptic Assignment

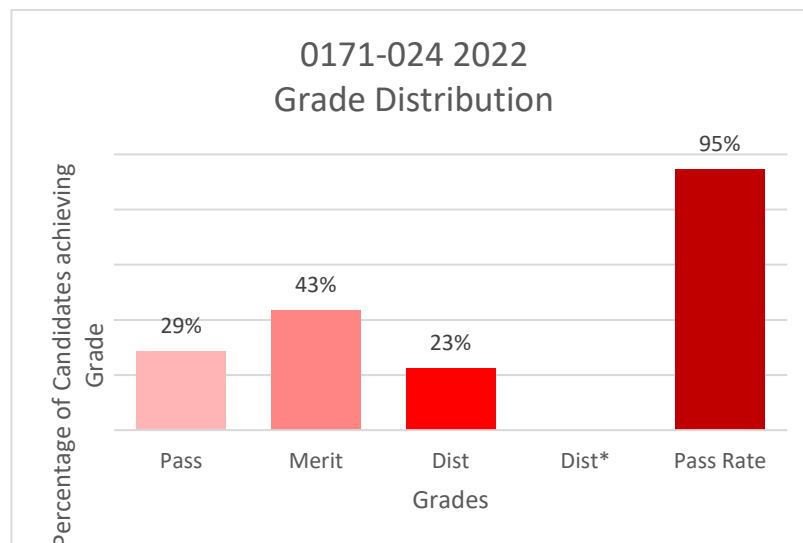
Grade Boundaries

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0171-024
Series: 2022

Total marks available	60
Pass mark	23
Merit mark	33
Distinction mark	43

The graph below shows the approximate distributions of grades and pass rate for this assessment:



Principal Moderator Commentary

Candidates' work seen this year shows a wider range of abilities compared to previous years with some candidates unable to achieve the required standard. On the whole, candidates were reasonably well prepared for the synoptic assignment and were aware of what was required to complete each task to industry standard.

As would be expected, there was some variation in the standard of practical work by candidates and a greater variation in the level of knowledge and understanding. Candidates generally completed the practical service tasks well and, in most cases, selected the correct tools and used them well. Candidates also generally worked in a safe logical way. However, candidates demonstrated weaknesses when it came to observations and the identification of wear and faults. Major faults were often not identified by candidates.

In many cases, the fabrication task was a particular area of weakness, with the work being inaccurately marked out and the final item poorly finished. Centres would perhaps benefit from spending more curriculum time on this area of the syllabus in the future.

Across all tasks within the synoptic assignment, more able candidates were able to distinguish themselves by demonstrating a good work ethic and a greater attention to detail.

Centres are asked to be mindful of the final submission date. Centres are reminded that candidates' synoptic assignments may be uploaded in advance of this deadline as soon as work is completed. This would support the moderation process to ensure that any errors are promptly flagged up and that centres have the opportunity to correct errors well in advance of the final submission dates.