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

2023

Qualification Report

Contents

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.

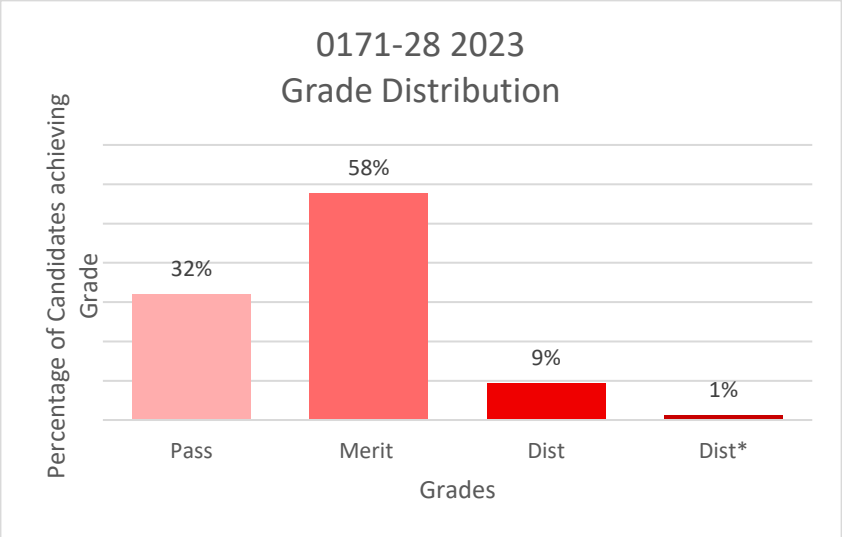
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2023 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 2023 (Spring)
    - June 2023 (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 21/08/2023.

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

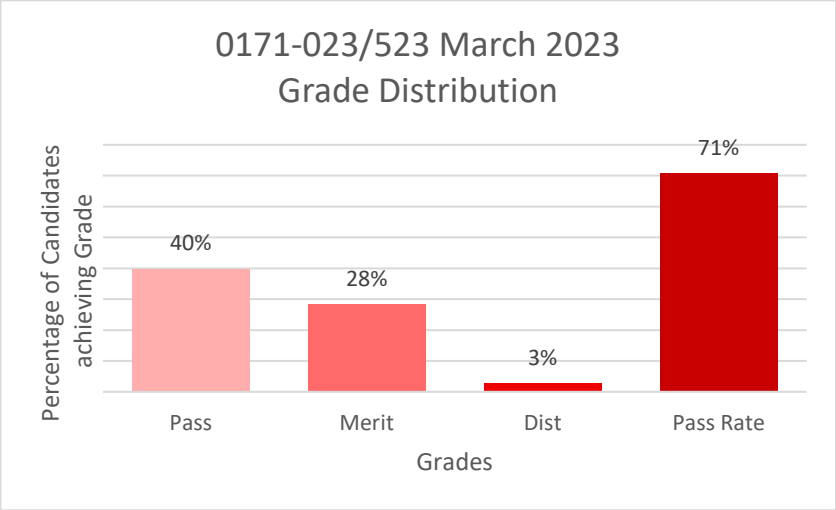
Grade Boundaries

Assessment: 0171-023/523
Series: March 2023 (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 graph below shows the approximate distribution of grades and pass rates for this assessment:

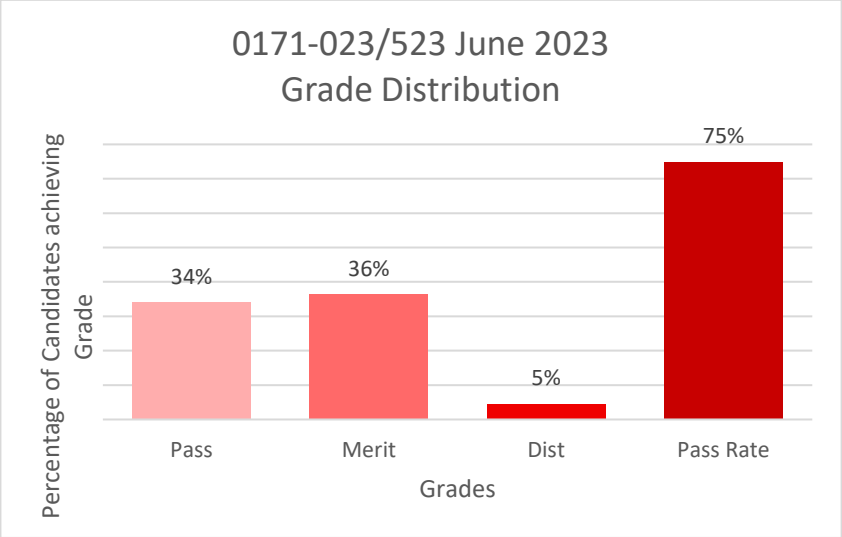


Assessment: 0171-023/523
Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment:

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

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 2023

The March 2023 paper exhibited similar characteristics of those sat in previous series with commonality across the range, suitability and level. Overall, candidates' performance was comparable with the March 2022 series; candidates demonstrated strong recall when identifying fundamental components in most topic areas and there was evidence of strong knowledge and understanding relating to health and safety. Candidates were, however, unable to identify common electrical and hydraulic symbols, something which differs from previous series where candidates tended to respond well to this area.

Following previous trends, candidates were able to identify machinery and demonstrated good knowledge of what warning lights in different systems indicate. High scoring candidates were able to show breadth and depth of knowledge, as they performed well across all identification questions and accessed marks on a regular basis when responding to AO2 questions.

Candidates across the cohort showed gaps in knowledge and understanding when faced with electrical questions. This was particularly evident when required to recall electrical units of measure and when identifying electrical symbols. A similar trend could be seen across the hydraulic questions too, when asked to identify symbols and common components which may wear during use. As was the case with other series, candidates' performance demonstrated a lack of knowledge and understanding of emission control systems and recall of common terminology, and there was little understanding of what specific systems were reducing in the exhaust system.

Candidates were set applied knowledge questions based around the diagnostic process for finding faults on a starting and charging system. They were given a scenario which provided information gathered from tests and the manufacturer's specification for comparison. High scoring candidates performed well, demonstrating a depth and breadth of understanding and a knowledge of occupational terminology. They were able to apply a consistent level of logic. Lower scoring candidates did access marks within this section, however there were inconsistencies in comparison to the higher scoring candidates.

Centres are continuing to prepare students to a good standard, and this is supported by the overall pass rate. To allow for further enhancements, candidates would benefit from a greater depth of knowledge around electrical and hydraulic systems. In particular, the identification of common symbols used within workshop manuals and the basic diagnostic tasks carried out on a regular basis within the sector. Knowledge and understanding of engines and their components are strong, however greater breadth of emission control and aftertreatment systems would be beneficial.

All documents are available to download from Technicals in Agriculture and Land-based Engineering qualifications and training courses | City & Guilds (cityandguilds.com)

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

Series 2 – June 2023

The June 2023 paper exhibited similar characteristics of those sat in previous series with commonality across the range, suitability and level. Overall, candidates' performance was above that of previous series. There was no areas or themes that stood out as stronger, rather just a greater breadth of knowledge and understanding across the cohort. Across the paper, each question was answered correctly by more than half the cohort, other than in few questions where applied knowledge was required.

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 where able to identify the function of components on a more regular basis than middle and lower scoring candidates. Low scoring candidates seemed to find questions where engineering terminology was used more challenging, particularly when involving a fault, a cause of a fault or a process of repair/testing.

Candidates across the cohort found questions which required a deeper knowledge and understanding and/or applied logic more challenging. A sporadic spread of marks across these questions indicated a lack of knowledge and understanding, particularly in areas relating to electrical symbols.

High scoring candidates performed well on the applied knowledge questions at the end of the paper. The higher scoring candidates were able to access greater marks when required to compare information from transmissions and were able to identify components more consistently. Low scoring candidates struggled to make the link between the information given in the images and the question being asked, demonstrating a lack of understanding.

This paper contained several differentiating questions. These questions did show a distinct difference between candidates. These tended to be applied knowledge questions. In comparison to previous series candidates did not identify symbols as well on this paper as other cohorts have in the past.

Centres are continuing to prepare students to a good standard, and this is supported by the overall pass rate. However, in this series candidates demonstrated a lack of knowledge around electrical component symbols. Candidates would benefit from centres increasing the time spent developing the knowledge and understanding of electrical systems and some of the basic tests and repair processes which are used on these systems.

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)

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

Synoptic Assignment

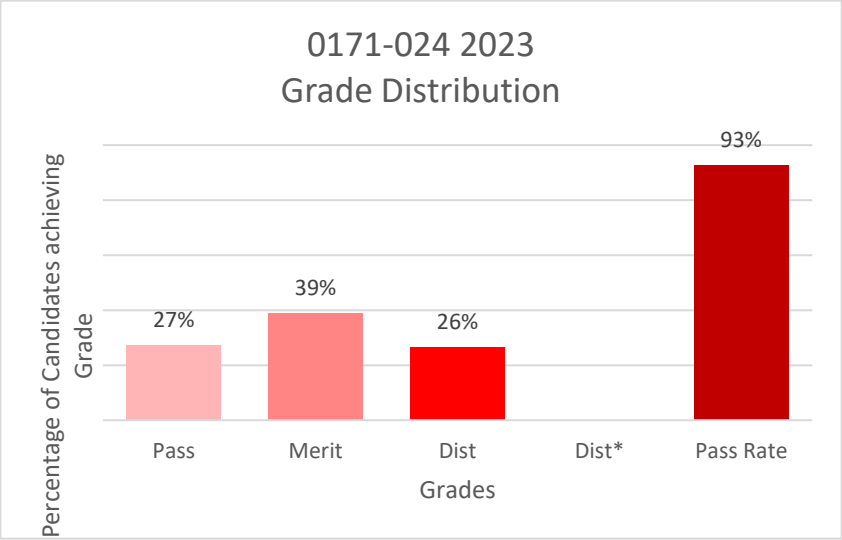
Grade Boundaries

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

Assessment: 0171-024
Series: 2023

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 wide range of abilities but is comparable to previous years with some candidates unable to achieve the required standard whilst others excel. 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.

Across all the tasks, higher performing candidates tended to have a better work ethic and a greater attention to detail.

Across the different centres, the majority of candidates seen during centre visits were diligent and professional in their approach to the tasks. Centres should be proud of what the candidates have achieved.

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.

Centres are asked:

- To include areas for improvement on the Candidate Record Form (CRF) unless the mark awarded is in the excellent band.
- To carefully check the addition of the total marks on the CRF.
- To annotate on candidate's work, incorrect statements and the quality of the work, e.g. areas which are good or lacking detail.
- When using dictation software to carefully check what has been typed.
- To upload all the forms and evidence as one document.