

0171-016/516 – Level 3 Land-based Engineering – Theory Exam (1)

March 2023

Examiner Report

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Introduction

This document has been prepared by the Chief Examiner, it is designed to be used as a feedback tool for centres to use in order to enhance teaching and preparation for assessment. It is advised that this document be referred to when preparing to teach and then again when candidates are preparing to sit examinations for City & Guilds Technical qualifications.

This report provides general commentary on candidate performance and 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 the **March 2023** examination series. It will explain aspects which caused difficulty and potentially why the difficulties arose, whether it was caused by a lack of knowledge, incorrect examination technique or responses that failed to demonstrate the required depth of understanding.

The document provides commentary on the following assessment:
0171-016/516 Level 3 Land-based Engineering – Theory Exam (1).

Theory Exam – March 2023

Grade Boundaries and distribution

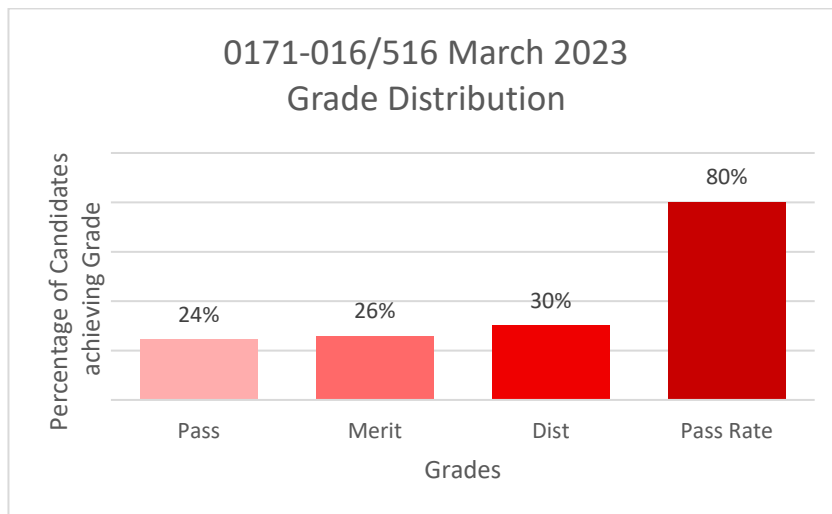
Assessment: **0171-016/516**

Series: **March 2023**

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

Total marks available	60
Pass mark	24
Merit mark	32
Distinction mark	41

The graph below shows the approximate distribution of grades and pass rates for this assessment:



Chief Examiner Commentary

General Comments on Candidate Performance

Assessment component: 0171-016/516

Series 1 (March)

Overall, candidates' performance on the March 2023 paper demonstrated an improvement compared to previous series. Responses showed strong levels of recall, particularly in areas of hydraulics, and indicated that candidates were better prepared to provide more in-depth answers. However, as has been the case in all previous series, most candidates were unable to expand on their knowledge and understanding of electrics.

Most candidates showed a good level of recall throughout the paper, with particular strengths evident in areas such as braking systems. Candidates also demonstrated a strong understanding of hydraulics, accessing marks by giving a good level of detail in their answers. One further area which attracted good responses was in the extended response question.

Candidates demonstrated weaknesses in their electrical knowledge. When required to carry out an electrical calculation, most candidates stated the incorrect formula and responses showed a lack of understanding of the electrical diagram provided. Many candidates were unable to access marks in some areas as they did not attempt to provide answers, especially when responding to questions concerning electronic terminology and components. Candidates showed inconsistent knowledge of abbreviations relating to specific components of electronic systems. Applied knowledge of alternator components and their internal operation was also limited.

The extended response question required candidates to discuss the processes for diagnosing a fault on a four-wheel drive axle and to recommend repair procedures. There was an improvement in performance compared to previous years, with most candidates providing a logical process of diagnostics and repair to achieve middle band marks. Candidates who achieved higher marks provided a larger range of solutions and evidenced a greater depth of reasoning and logic for the recommendations made. Candidates who achieved marks in the lower mark band outlined very basic processes that lacked technical detail and understanding of the system components. These responses were often given as a narrative list of checks that should be carried out, and inspection of components and relevant repair procedures were not discussed.

Centres are advised to help candidates develop their knowledge and understanding of electrics, with particular focus on electronic terminology, principles and components. Candidates will also benefit from further practice in exam techniques to ensure that they read and fully understand what the question is asking before attempting to answer. As part of this, it would be beneficial to become more familiar with the command verbs and to understand the differences in how to respond to 'describe' and 'explain' questions.

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/technical-qualifications)

Past papers and marking schemes: Documents – Level 3 – Assessment materials – Past Papers tabs

Exam guide: Documents – Level 3 – Assessment materials