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Earth-moving machinery — Operation and maintenance — Maintainability guidelines

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Australian Industry Group
Better Regulation Division — SafeWork NSW
Construction and Mining Equipment Industry Group
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Department of Regional NSW
Engineers Australia / Mining Electrical and Mining Mechanical Engineering Society
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Minerals Council of Australia
University of Queensland

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Earth-moving machinery — Operation and maintenance — Maintainability guidelines

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Preface

This Standard was prepared by the Standards Australia Committee ME-063, Earthmoving Equipment.

The objective of this document is to establish guidelines for the incorporation of design features that promote safety, efficiency, reliability and ease of maintenance and service operations on earth-moving machinery as defined in ISO 6165.

This document is identical with, and has been reproduced from, ISO 12510:2004, *Earth-moving machinery — Operation and maintenance — Maintainability guidelines*.

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Foreword

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ISO 12510 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 3, *Operation and maintenance*.

Australian Standard®

Earth-moving machinery — Operation and maintenance — Maintainability guidelines

1 Scope

This International Standard establishes guidelines for the incorporation of design features that promote safety, efficiency, reliability and ease of maintenance and service operations on earth-moving machinery as defined in ISO 6165.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6165, *Earth-moving machinery — Basic types — Vocabulary*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
test points
points which provide access to information about the status of the machine, either for routine checking of correct operation or for isolating malfunctions

3.2
service points
points which provide access for lubrication, filling, draining or similar servicing operations

4 General

Machines should be designed and built so that routine maintenance operations can be carried out safely, whenever possible with the engine stopped. Where it is only possible to undertake inspection or maintenance with the engine running, arrangements should be made to minimize the risk of contact with moving or hot parts.

Annex A gives examples of matrixes of maintainability for different categories of components and from different perspectives.

5 Location of items

5.1 Components

5.1.1 Where the visual inspection of, for example, oil levels and gauges is required, the test points should be located so that personnel can see them without the removal of panels or other components.

5.1.2 Components requiring routine servicing should be located away from parts of the machine which may have high temperatures.

5.1.3 Components needing frequent servicing or replacement should be located in accessible locations where no other components need to be removed to give access to them.