

RISSB

RAIL INDUSTRY SAFETY AND STANDARDS BOARD

STANDARDS

AS 7510.2

Braking Systems

Part 2: Hauled Rolling Stock



Australian
STANDARD

AS 7510.2 PREVIEW ONLY

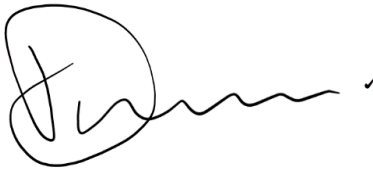
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The Rolling Stock Standing Committee verified that RISSB's accredited process was followed in developing the product, before the RISSB Board approved the document for publication.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comments on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.



Damien White
Chief Executive Officer
Rail Industry Safety and Standards Board

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Approval

Name	Date
Rail Industry Safety and Standards Board	25 November 2024

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Preface

This standard was prepared by the Braking Systems – Part 2: Hauled Rolling Stock Development Group, overseen by the RISSB Rolling Stock Standing Committee.

Objective

The objective of this Standard is to provide safety benefits in that proper braking performance contributes to the prevention of collisions or derailments of railway rolling stock by providing controls for known hazards.

This standard describes minimum standards for brake performance, features and compatibility for the braking systems of hauled Freight and Passenger Rolling Stock.

This Standard is intended to compliment the rolling stock compliance certification process outlined in AS 7501, including all vehicle types such as new, modified and heritage rolling stock.

Compliance

There are four types of provisions contained within Australian Standards developed by RISSB:

- (a) Requirements.
- (b) Recommendations.
- (c) Permissions.
- (d) Constraints.

Requirements – it is mandatory to follow all requirements to claim full compliance with the Standard. Requirements are identified within the text by the term 'shall'.

Recommendations – do not mention or exclude other possibilities but do offer the one that is preferred. Recommendations are identified within the text by the term 'should'.

Recommendations recognize that there could be limitations to the universal application of the control, i.e. the identified control is not able to be applied or other controls are more appropriate or better.

Permissions – conveys consent by providing an allowable option. Permissions are identified within the text by the term 'may'.

Constraints – provided by an external source such as legislation. Constraints are identified within the text by the term 'must'.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities or interfacing organisations where the risk may be shared.

RISSB Standards address known hazards within the railway industry. Hazards, and clauses within this Standard that address those hazards, are listed in Appendix C.

Appendices in RISSB Standards may be designated either "normative" or "informative". A "normative" appendix is an integral part of a Standard and compliance with it is a requirement, whereas an "informative" appendix is only for information and guidance.

Commentary

Commentary C PREFACE

This Standard includes a commentary on some of the clauses. The commentary directly follows the relevant clause, is designated by 'C' preceding the clause number and is printed in italics in a box. The commentary is for information and guidance and does not form part of the Standard.

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Section 1 Introduction

1.1 Purpose

The purpose of this Standard is to describe the requirements for brake performance, features and compatibility for the braking systems of hauled freight and passenger rolling stock.

1.2 Scope

This Standard applies to hauled freight and passenger rolling stock that is:

- a) new;
- b) modified rolling stock affecting braking system compliance; and
- c) is to operate in a network in which it has not previously operated.

Commentary C1.2-1

It is recognized that across the ANZ rail industry, existing hauled rolling stock can have braking system requirements different to this Standard due to the age of the fleets and the previous organisational structures (e.g., fully integrated state government owned and operated railways). These differences can be a result of braking system requirements designed to earlier standards such as previous versions of AS 7510.2, the Railways of Australia manual or legacy standards from prior organisational structures.

It is also recognized that modifications conducted on existing hauled rolling stock affecting braking system compliance defined in this Standard, could only affect certain requirements and the RSO may deem full compliance with the requirements of this Standard not practical to achieve.

An example of these types of modifications can be a change of end cock, installation of a different handbrake or replacement of a legacy brake valve with an updated/modern version.

For guidance on assessing the compliance requirements for modifications conducted on hauled rolling stock, the derogation process as defined in AS 7501 is a recommended method of assessing non-conformances to mandatory requirements where it is deemed not practicable to change the design in order to comply with the requirements.

This scope of this Standard covers:

- d) the design and construction of brake systems including automatic air brake and ECP brake systems with a standard brake pipe pressure of 500 kPa; and
- e) the maintenance of the brake systems including automatic air brake and ECP brake systems.

Commentary C1.2-2

Some networks operate with brake pipe pressures which deviate from the standard brake pipe pressure of 500 kPa (e.g., New Zealand operates with a brake pipe pressure of 550 kPa). In such cases, all the requirements of this Standard may not apply, but items from this Standard can be applied to such networks as deemed appropriate.

Locomotives and trains that use standard unmodified AAR pneumatic brake equipment are not covered.

The operation of rolling stock, including network safeworking rules and route standards, is not covered.

This Standard is not specifically intended to cover rolling stock used on light rail and cane railways, but items from this Standard may be applied to such systems as deemed appropriate by the relevant RSO and/or RIM.