



Track maintenance and road rail vehicles - Collision avoidance and proximity warning



Operations Standard



This Australian Standard® AS 7479 Track maintenance and road rail vehicles - Collision avoidance and proximity warning was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Australian Rail Track Corporation	AusSafe Consulting	BHP
Blue Electronics	Freight Quip	John Holland
KiwiRail	Laing O'Rourke	Public Transport Authority WA
Queensland Rail	Rio Tinto	Roy Hill
Select Plant Hire	TasRail	Varley Group
V/Line		

The Standard was approved by the Development Group and the Operations Standing Committee in January, 2020. On January 24, 2020 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard

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 comment 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.



Deb Spring

Chief Executive Officer
Rail Industry Safety and Standards Board

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Approval

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Objective

This Standard provides direction to rail transport operators (RTOs) and their contractors of the application of collision avoidance and proximity warning technologies to control the risks imposed by maintenance vehicles operating near other vehicles or nearby workers. These technologies can be fitted to track maintenance vehicles or RSWs and automatically enact intervention and collision avoidance measures and/or provide a warning to the operator or workers to undertake intervention and/or collision avoidance measures.

Compliance

There are two types of control contained within Australian Standards developed by RISSB:

1. Requirements.
2. Recommendations.

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 recognise 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.

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.

Controls in RISSB standards address known railway hazards are addressed in Appendix A.

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1 Scope and general

1.1 Introduction

A range of safety measures are applied to ensure a worksite in the rail corridor is safe, so far as is reasonably practicable (SFAIRP). These include the application of:

- the network owner's safeworking rules and procedures,
- safety management systems,
- relevant RISSB Standards,
- controls developed through a risk assessment,
- the wearing of personal protective equipment (PPE).

This Standard focuses on the application of collision avoidance and proximity warning technology to reduce the likelihood of collisions between vehicles or between vehicles and rail safety workers (RSWs). These technologies should be considered, and where practical, be applied along with the safety measures outlined above.

Collision avoidance technology generally relates to devices fitted to a track maintenance vehicle operating on an open network where the speed environment is relatively fast. These devices warn a driver/operator of a track maintenance vehicle of an impending collision with another vehicle or RSW. Depending on the level of integration with the parent vehicle, steps to avoid a collision will either be automatic, or semi-automatic, where the driver/operator will need to act on the warning.

Proximity warning technology generally relates to a situation where there are multiple vehicles and RSW and the speed environment is relatively slow. The devices can be fitted to either or both track maintenance vehicles and RSWs. They provide a warning to the operator and/or the RSW of the approach of a vehicle into their work area, or that the RSW is entering an unsafe area created by the vehicle's movements. The operator and/or the RSW applies corrective action to remedy the situation.

1.2 Scope

This Standard applies to RSWs and all track maintenance vehicles, including:

- (a) road rail vehicles (RRVs),
- (b) vehicles involved in the construction and maintenance of rail infrastructure including track or overhead wiring within the rail corridor.

It applies to:

- (a) open line running,
- (b) occupations/possessions,
- (c) maintenance yards,
- (d) sidings, and
- (e) the transfer of track maintenance vehicles between worksites.

It is acknowledged that the application of collision avoidance and proximity warning technologies is difficult in some low speed circumstances and this Standard does not apply to:

- (a) off track maintenance (except off track plant operating within the rail corridor either in or close to the danger zone),