



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline  
**Engineering Standard**

Category  
**Rolling Stock**

# Reflective Delineators (Reflectors)

## WOS 01.I

### Applicability

<b>ARTC Network wide</b>	
<b>New South Wales</b>	✓
<b>Western Jurisdiction</b>	
<b>Victoria</b>	

Primary Source  
(RIC Standard RSU Appendix I Version 2.0)

### Document Status Record

<b>Status</b>	<b>Date</b>	<b>Prepared</b>	<b>Reviewed</b>	<b>Endorsed</b>	<b>Approved</b>
Issue 1 Revision 0	Dec 05	Standards & Systems (refer to Primary Source)	Standards & Technical Services Engineer	GM Infrastructure Strategy & Performance M Owens	Safety Committee 12/08/2004

### List of Amendments

<b>Issue</b>	<b>Date</b>	<b>Clause</b>	<b>Description</b>
1.0	07/12/2005	All	Reformatting to ARTC Standard

---

#### Disclaimer

This document is for internal use by the Australian Rail Track Corporation Ltd ("ARTC") only and may **not** be relied on by any other party. ARTC:  
1. does not accept any liability or responsibility whatsoever for this Document in respect of any use or reliance upon it by any other party; and  
2. does not provide any warranty as to the accuracy or reliability of this Document.

**Contents**

This appendix is set out as follows:

WOS 01.I – Reflective Delineators (Reflectors) ..... 3

    I[1] Introduction ..... 3

    I[2] Application..... 3

    I[3] Dimensions ..... 3

    I[4] Material and manufacture ..... 4

    I[5] Maintenance..... 4

## WOS 01.I – Reflective Delineators (Reflectors)

### I[1]

### Introduction

Reflective delineators or reflectors are mandatory equipment on new and existing locomotives, freight and passenger vehicles to facilitate recognition at night by motorists and other road users. Reflective delineators or reflectors are also mandatory equipment on track maintenance vehicles that can be coupled to and hauled in a train consist.

These requirements are identical to those specified in the Draft National Code of Practice for Railway Rolling Stock.

### I[2]

### Application

- I2.1 Reflective delineators should be fitted to both sides of locomotives, freight, service or passenger vehicles as detailed below.
- I2.2 Reflective delineators shall be fitted to vertical or near-vertical surfaces of the vehicle's permanent structure, preferably on the sole-bar, side-sill or boundary members.
- I2.3 Reflective delineators shall be applied to each side of the vehicle so that the edge closest to the end sill is still not more than 500 mm from the end of the vehicle underframe or sub-sills. Additional reflective delineators shall be applied between these, preferably at equal intervals, so that the centre-to-centre distance between adjacent reflective delineators is not less than 2.5 metres and not more than 5 metres. The intervals shall be as close to equal as is practicable within the constraints imposed by the vehicle structure.
- I2.4 The preferred vertical location of reflective delineators or reflectors is between 900 mm and 1200 mm above rail level, but in any case shall not be less than 800 mm nor more than 2000 mm above rail level (all heights are at tare in new condition). On any vehicle side, all reflective delineators should be positioned as near as practicable to the same height above rail level where permitted by the vehicle structure.
- I2.5 The design of new vehicles shall provide for the application of reflective delineators having the largest possible dimensions within the limits given below, and for reflective delineators to be located as close as possible to the preferred positions and spacing.

### I[3]

### Dimensions

- I3.1 Reflective delineators shall be rectangular strips or panels, whose height shall be within the limits of 75 to 150 mm, and whose length shall be not less than 350 mm nor more than 500 mm.
- I3.2 Wherever possible, the length of reflective delineators whose height is 100 mm or less shall be 450 mm.

---

**I[4]**

**Material and manufacture**

---

- I4.1 Reflective delineators shall be manufactured from retro-reflective material which complies with the requirements of AN/NZS 1906, latest revision. Retro-reflectivity shall be to Class 1 A.
- I4.2 The preferred colour of reflective delineators is white, with yellow as an acceptable alternative.
- I4.3 The material shall be applied with a high strength pressure adhesive backing ready for application to bare or pre-painted surfaces.
- I4.4 Reflective delineators shall be cut or stamped from rolls so that the orientation marks are in the vertical direction when the reflective delineators are applied to the vehicle sides.

---

**I[5]**

**Maintenance**

---

- I5.1 The presence, integrity and light reflective properties of reflective delineators are critical to their function as safety devices.
- I5.2 Accordingly, the cleaning of reflective delineators, the checking of their attachment to the vehicle and the replacement of damaged or missing reflective delineators shall be included as a routine task in all scheduled and corrective maintenance functions.
- I5.3 Similarly, all train inspections shall include a check on the presence and condition of reflective delineators. Vehicles shall be green-carded for attention if there are two or more reflective delineators missing from any side of a vehicle. Reflective delineators shall not be damaged or obscured by graffiti, contamination, loading, restraining equipment or other accessories.