



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline  
Engineering Standard

Category  
Rolling Stock

# General WOS 01.010

Applicability

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

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## WOS 01.010 - Introduction

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### [1]

### General

- 1.1 Australian Rail Track Corporation has established interface requirements pertaining to vehicles operating on the Australian Rail Track Corporation network. These requirements are covered throughout this manual under common and specific interface requirements.
- 1.2 An interface standard is one covering the interfaces between the rolling stock and its operating environment. That is for example, the wheel/rail interface, the vehicle and vehicle envelope interface, the vehicle noise and its environmental surroundings, etc.
- 1.3 When the words “shall” or “must” are used in this document, the requirements shall be read as mandatory for vehicles operating on the Australian Rail Track Corporation network.  
  
When the word “should” is used in this document, the requirements shall be read as recommended.  
  
When the word “may” is used in this document, the requirements shall be read as advisory.
- 1.4 The requirements of this manual will apply to new and substantially modified vehicles. Older rolling stock that is operating on the Australian Rail Track Corporation network as at August, 1997 or elsewhere may not fully comply with the requirements of these Units but will be assessed considering the design and proposed use of the vehicle(s).
- 1.5 In these units, the terms “owner” and “operator” are used. They refer to the owner of the rolling stock and the operator using that rolling stock. These may or may not be the same organisation.

### [2]

### Vehicle design

- 2.1 Vehicle design must generally comply with the requirements of the ROA Manual of Engineering Standards and Practices unless otherwise stated in this Rolling Stock Operation Standard Manual.
- 2.2 The ROA Manual of Engineering Standards and Practices was produced primarily to cover new or substantially modified vehicles operating in interstate service. Where the requirements of the ROA Manual of Engineering Standards and Practices are considered inadequate, additional requirements and or supplementary information is provided in this Rolling Stock Operation Standard Manual. Where requirements specified in this manual differ from those of the ROA Manual of Engineering Standards and Practices, this Rolling Stock Operation Standard Manual shall take precedence.

- 2.3 The design of any vehicle shall take into account the requirements of the Occupational Health and Safety Act.
- 2.4 The design of any vehicle shall take into account and demonstrate compliance with the requirements of all environmental legislation, in particular those requirements relating to noise, vibration, exhaust emissions and discharge of waste
- 2.5 Vehicles that do not comply with these Units may be permitted to operate subject to review by the Australian Rail Track Corporation

### **[3] Vehicles operating on the Australian Rail Track Corporation network**

- 3.1 Only vehicles accepted by the Australian Rail Track Corporation and registered with an accredited owner/operator by the Department of Transport will be permitted to operate on the Australian Rail Track Corporation network.
- 3.2 Vehicle owner/operators shall be responsible for registering each vehicle type they wish to operate with the Department of Transport.
- 3.3 Vehicle owner/operators shall be responsible for obtaining vehicle acceptance by the Australian Rail Track Corporation.
- 3.4 Vehicle owner/operators must consult with the Environment Protection Authority Pollution Control and Australian Rail Track Corporation on the environmental standards that do or will apply to a vehicle type, and shall demonstrate compliance with the appropriate standards and regulations thereby nominated, prior to operation of the vehicle on the Australian Rail Track Corporation network. The same environmental standards will apply to the same vehicle type, irrespective of the owner/operator, except where a vehicle type has been substantially modified from its original configuration.
- 3.5 Vehicles to be fully accepted on to the Australian Rail Track Corporation network, must have relevant operating details published in the ARTC Train Operating Conditions manual. (For interim or conditional acceptance see clause 3.6 below.)
- 3.6 Vehicles not published in the Train Operating Conditions manual shall not be operated or moved on the Australian Rail Track Corporation network unless special approval in the form of a Rova Mech is issued. This approval is required for any movement including that of vehicles undergoing tests.

### **[4] Acceptance of new vehicles**

- 4.1 To apply for new vehicle acceptance the owner/operator shall complete the appropriate Vehicle Information Pack shown in the appendices of this manual and submit it to the Australian Rail Track Corporation.
- 4.2 Where testing is to be conducted on the vehicle/s refer to section [5] below.
- 4.3 Details of accepted vehicles will then be published in the ARTC Train Operating Conditions manual along with any special operating conditions.

**[5]**

**Testing of vehicles**

5.1 Testing of any vehicle/s on the Australian Rail Track Corporation network shall not be carried out without the prior approval of the Australian Rail Track Corporation and the issuance of an appropriate Rova Mech approval.

5.2 New or substantially modified vehicles shall successfully undergo type testing in accordance with the guidelines and tests specified in this manual and the applicable environmental standards, with the following tests being conducted prior to acceptance, to confirm safe operation and compliance with the appropriate environmental requirements.

**5.2.1 Static tests**

- Rolling stock static outline
- Weight and wheel load distribution
- Twist test, that is wheel unloading due to track twist
- Swing test for bogie/body clearance
- Static brake performance

All of the static tests in 5.2.1 must be satisfactorily completed before the vehicle will be permitted to move on the Australian Rail Track Corporation network.

**5.2.2 Dynamic tests**

- Brake performance
- Ride quality and stability up to 110% of maximum design speed
- Rolling stock kinematic outline test
- Noise level and ground borne vibration

The Australian Rail Track Corporation reserves the right to have a representative present for each of the above tests. The Australian Rail Track Corporation also reserves the right to request the owner/operator to conduct further testing if it is suspected that the vehicle performance has deteriorated.

**5.2.3 Environmental tests**

- Environmental testing shall be completed in accordance with the applicable standards to ensure that the vehicle complies with the environmental requirements imposed by the Australian Rail Track Corporation and the Environment Protection Authority, as appropriate.
- Noise level testing shall be in accordance with the procedures specified in WOS 01.150, and where appropriate, the Environment Protection Authority Pollution Control Approval or other noise limit specification for the rolling stock.

- 5.3 Once the Australian Rail Track Corporation is satisfied with the performance of the vehicle/s, further testing may be carried out at the discretion of the owner/operator but only with prior notification and agreement of Australian Rail Track Corporation.
- 5.4 For vehicles tested on the Australian Rail Track Corporation network or tested on other rail systems, the test results for those tests as listed above shall be submitted, using the appropriate Vehicle Information Pack, to the Australian Rail Track Corporation for assessment.