



TS 04064:1.0
T HR RS 00815 ST
Standard

RSU Appendix A5 – Infrastructure Maintenance Vehicle Information Pack

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Document information

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Asset Management
Safety, Environment and Regulation

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Document history

Revision	Effective date	Summary of changes
1.1	21/11/2011	First issue as T HR RS 00815 ST.
1.0	07/06/2024	Renumbered as TS 04064:1.0. Version number recommenced in line with new designation. Changes to previous content include minor amendments and clarification to content, conversion of the standard to AMB format and style, updating content in line with requirements details in the standards applicable to infrastructure maintenance vehicles, and incorporating vehicle design review details.

Preface

This document contains the information pack for infrastructure maintenance vehicles that are to operate on the TfNSW Metropolitan Heavy Rail Network. This is a second issue. The changes to previous content include the following:

- updating content in line with requirements detailed in the standards applicable to infrastructure maintenance vehicles
- incorporating vehicle design review details.

The Asset Management Branch (AMB) has established the interface requirements pertaining to vehicles operating on the TfNSW Metropolitan Heavy Rail Network (formerly known as the RailCorp network).

This standard is part of the Minimum Operating Standards for Rolling Stock. This standard should be read in conjunction with the related standards, which consist of the following parts:

- TS 04052 (T HR RS 00000 ST) *RSU 000 series – Minimum Operating Standards for Rolling Stock –General Requirements*
- TS 04053 (T HR RS 00100 ST) *RSU 100 series – Minimum Operating Standards for Rolling Stock General Interface Requirements*
- TS 04054 (T HR RS 00200 ST) *RSU 200 series – Minimum Operating Standards for Rolling Stock –Common Interface Requirements*
- TS 04059 *RSU 700 series – Minimum Operating Standards for Rolling Stock – Infrastructure Maintenance Vehicle Specific Interface Requirements*
- TS 04067 (T HR RS 00820 ST) to TS 04074 (T HR RS 00890 ST) (RSU App B to RSU App I) Appendices.

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1 Scope

This standard contains forms that are required to be completed for infrastructure maintenance vehicles to be considered for authorisation to operate on the TfNSW Metropolitan Heavy Rail Network. Refer to TS TOC 1 *Train Operating Conditions (TOC) Manual – General Instructions*, which defines the areas associated with the network.

The purpose of this standard is to ensure that infrastructure maintenance vehicles operating on the TfNSW Metropolitan Heavy Rail Network meet the minimum standards to ensure compatibility with the network and its infrastructure as required by the TfNSW accreditation with the Office of the National Rail Safety Regulator (ONRSR).

2 Application

The requirements of this standard apply to all new infrastructure maintenance vehicles and substantially modified infrastructure maintenance vehicles that intend to operate on the TfNSW Metropolitan Heavy Rail Network.

Older vehicles that were operating on the TfNSW Metropolitan Heavy Rail Network as at August 1997 may not fully comply with the requirements of this standard, but they will be assessed considering the design and proposed use of the vehicle(s).

3 Referenced documents

The following documents are cited in the text. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document applies.

Transport for NSW standards

TS 00003.1 *Concessions to Transport Standards Part 1 – Concession Process*

TS 04052 (T HR RS 00000 ST) *RSU 000 Series – Minimum Operating Standards for Rolling Stock – General Requirements*

TS 04053 (T HR RS 00100 ST) *RSU 100 Series – Minimum Operating Standards for Rolling Stock – General Interface Requirements*

TS 04054 (T HR RS 00200 ST) *RSU 200 Series – Minimum Operating Standards for Rolling Stock – Common Interface Requirements*

TS 04059 *RSU 700 Series – Minimum Operating Standards for Rolling Stock – Infrastructure Maintenance Vehicle Specific Interface Requirements*

TS 04067 (T HR RS 00820 ST) to TS 04074 (T HR RS 00890 ST) (RSU App B to RSU App I) Appendices

TS TOC 1 *Train Operating Conditions (TOC) Manual – General Instructions*

4 Terms, definitions and abbreviations

The following terms, definitions and abbreviations apply in this document.

AAR Association of American Railroads

AEI automatic equipment identification

AMB Asset Management Branch

AS Australian standards

CAD computer-aided design

CG centre of gravity

ECP electronically controlled pneumatic

GVM gross vehicle mass

NDT non-destructive testing

operator the person or body who has ultimate management accountability for safe operation of rolling stock on a railway

owner the owner of the vehicles or rolling stock

RSU rolling stock unit; a term used to designate individual sections of the Minimum Operating Standards for Rolling Stock.

TfNSW Transport for NSW

TOC train operating condition

VDR vehicle design review

5 How to use this information pack

The information pack, when completed by the relevant owner or operator, provides AMB with the required information to confirm that an infrastructure maintenance vehicle is safe to operate on the TfNSW Metropolitan Heavy Rail Network. The information shall therefore be correct and error free to ensure satisfactory and timely assessment. This section provides guidance on how to populate the information pack. Any information packs that are submitted incorrectly or with missing information will be rejected.

Section 6 contains the owner, operator, and declaration details, which shall be populated for all vehicle types. Generally, the owner of the vehicle declares that the information is correct; however the declaration may be by the owner's technical representative. Section 7.1 to Section 7.2 contains general information which shall be populated for all vehicle types. Section 7.3 to Section 9.5 contains requirements as detailed in TS 04052 (T HR RS 00000 ST) applicable to infrastructure maintenance vehicles. The response for each requirement shall be reviewed and

confirmed if compliant for the vehicle type. The general layout for the information pack is as detailed by the following example:

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 430, Section 4.4	Bulk commodity vehicles fitted with bottom discharge doors are designed and maintained to prevent leakage?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

The 'Applicable operating standard' column provides the location within the *Minimum operating standards for rolling stock* where this requirement resides.

The 'Requirement' column specifies the requirement that the vehicle is required to meet.

The 'Owner/Operator' column shall be populated by the owner or operator (or their technical representative) and provides compliance information against the stated requirement. This may be in the form of a 'yes' or 'no' check box, a 'N/A' check box where the requirement does not apply to a particular type of vehicle, or may contain a field to enter a value, dimension, or other information.

The 'RSU compliance' column shall be populated by the owner or operator (or their technical representative). This column is for the AMB to review whether the 'Owner/Operator' section is compliant with the requirements. If a particular requirement is not compliant, then this column will not be checked, and the vehicle is considered noncompliant. The vehicle shall be either withdrawn, modified to be compliant, or where the configuration is deemed safe and is the only viable solution so far as is reasonably practicable, a concession request may be raised for this noncompliance. Refer to TS 00003.1 for further information. All 'RSU compliance' columns in Section 7.3 to Section 9.5 shall be populated for a vehicle to be considered compliant.

Some sections have this column labelled 'Required information' instead of 'RSU compliance'. These areas do not relate to a specific RSU clause; however the information is required by the AMB for the vehicle review. Some 'RSU compliance' checkboxes are also associated with non-clause related fields which are required for information.

The 'VDR (AMB use only)' column is part of the AMB network acceptance process and shall not be populated by anyone other than AMB.

6 Part A – Owner and operator information

Please provide information regarding the owner and operator, in Section 6.1 to Section 6.3.

6.1 Vehicle owner

Vehicle owner _____
Contact name _____
Address _____

Phone number _____
Mobile number _____
Email address _____

6.2 Vehicle operator (if different from owner)

Vehicle operator _____
Contact name _____
Address _____

Phone number _____
Mobile number _____
Email address _____

6.3 Declaration

I declare that the information submitted in this information pack,

- Please tick Part A
Please tick Part B
Please tick Part C
Please tick Part D

is correct to the best of my knowledge and has been obtained in accordance with the requirements stated in TS 04052 (T HR RS 00000 ST).

Company name _____
Contact name _____
Contact signature _____
Date _____

VDR (AMB use only) _____

7 Part B – Vehicle information and design

If the RSU compliance is not met, it is expected to be supported with evidence to show that the noncompliance is acceptable using the AMB concession process (refer to TS 00003.1).

7.1 Vehicle description

Attribute	Owner/Operator	Required information	VDR (AMB use only)
Vehicle type	_____		_____
Vehicle code or plant number	_____		_____
Brief description of vehicle	_____		_____
	_____		_____
Vehicle manufacturer	_____		_____
Year of manufacture	_____		_____
Previous code(s) (if any)	_____		_____
Vehicle number range	_____	<input type="checkbox"/>	<input type="checkbox"/>

7.2 Vehicle dimensions

Attribute	Owner/Operator	Required information	VDR (AMB use only)
* Overall length over coupler pulling faces (mm)	_____ mm		_____
* Overall length over headstocks (mm)	_____ mm		_____
* Bogie pivot centres (if fitted) (mm)	_____ mm <input type="checkbox"/> N/A		_____
* Bogie wheelbase (if fitted) (mm)	_____ mm <input type="checkbox"/> N/A		_____
* Axle spacing (if not fitted with bogies) (mm)	_____ mm		_____
Number of axles	_____		_____
* Overall width (mm)	_____ mm		_____
* Overall height (mm)	_____ mm		_____
* Coupler length (mm)	_____ mm	<input type="checkbox"/>	_____
A copy of the vehicle diagram or general arrangement showing key dimensions (as marked above with *) has been provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
Which figure below Figure 1 to Figure 11 corresponds to the vehicle?	_____ <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/> _____



Figure 1

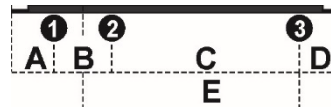


Figure 2

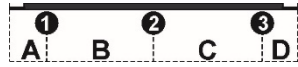


Figure 3

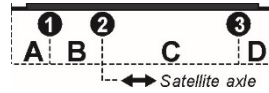


Figure 4



Figure 5

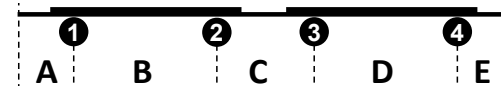


Figure 6

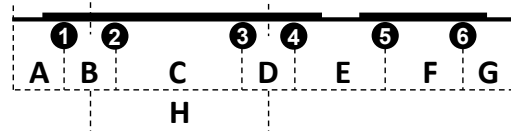


Figure 7

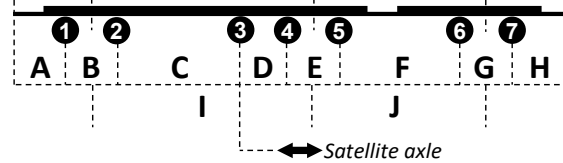


Figure 8

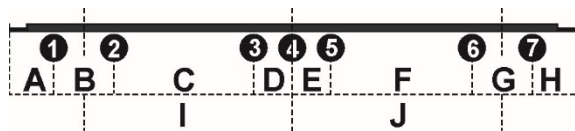


Figure 9

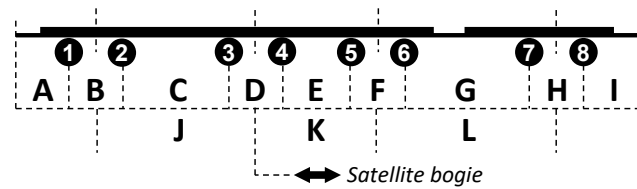


Figure 10

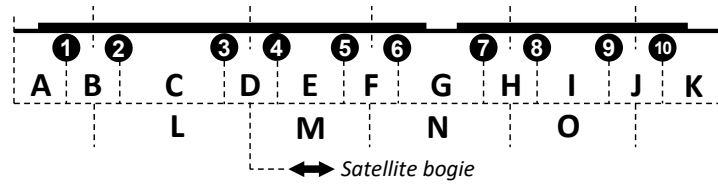


Figure 11

Provide vehicle dimensions in Table 1 in accordance with the above applicable diagram to the vehicle.

Table 1 – Vehicle axle spacing dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)
L (mm)	M (mm)	N (mm)	O (mm)							

7.3 Rolling stock outline design

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.1 RSU 110, Section 2.3	The vehicle by design complies with which rolling stock outline?	_____	<input type="checkbox"/>	_____
RSU 713, Section 9.1 RSU 110, Section 2.3.2	The vehicle complies with the rolling stock outline in tare condition, new wheels, and maximum packing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 713, Section 9.1 RSU 110, Section 2.3.2	The vehicle complies with the rolling stock outline with minimum wheel diameter and solid suspension?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Vehicle design tare mass? (t)	_____ t	<input type="checkbox"/>	_____
	Vehicle fully provisioned centre of gravity height above rail level? (mm)	_____ mm		_____
RSU 120, Section 3.8 RSU 715, Section 11.5	A bridges and structures report or letter has been submitted as per the requirements in RSU 120?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 120, Section 3.8 RSU 715, Section 11.5	The vehicle is within the bridges and structures loading limits (at the fully loaded mass)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 120, Section 3.3 RSU 715, Section 11.12	What is the maximum operating speed? (km/h)	_____ km/h	<input type="checkbox"/>	_____
RSU 715, Section 11.12	Is the maximum operating speed within the OEM design speed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	What is the maximum vehicle unsprung mass per wheel? (kg)	_____ kg	<input type="checkbox"/>	_____
RSU 120, Section 3.3 RSU 715, Section 11.4	Calculated P2 force for Class 1 track and maximum operating conditions? (kN)	_____ kN	<input type="checkbox"/>	_____
RSU 120, Section 3.3 RSU 715, Section 11.4	Calculated P2 force for Class 2 track and maximum operating conditions? (kN)	_____ kN	<input type="checkbox"/>	<input type="checkbox"/> _____

7.5 Traction details and operating conditions

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Maximum engine power? (hp)	_____ hp	<input type="checkbox"/>	_____
	Maximum power available for traction? (hp)	_____ hp	<input type="checkbox"/>	_____
	What is the type of traction system used? Please advise (electric traction motors AC/DC, hydraulic drives, mechanical driveshaft / cardan shaft from hydraulic gearbox etc).	_____ _____ _____ _____ _____	<input type="checkbox"/>	_____ _____ _____ _____ _____
RSU 718, Section 14	Is the vehicle designed to operate in a consist with multiple vehicles and together operate in a multiple unit?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	How many vehicles can be operated in a multiple unit consist?	_____ <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 718, Section 14	The driver in the lead position has full control of the brakes in all vehicles in the multiple unit consist?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 718, Section 14	The driver in the lead position has full control of the throttle in all vehicles in the multiple unit consist?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 718, Section 14	If the brakes are applied all traction in the vehicles in the multiple unit consist are cut?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
	Can the vehicle haul other vehicles?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	What is the maximum trailing load that can be hauled by the vehicle? (t)	_____ t <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 715, Section 11.12	Can the vehicle be hauled by a locomotive?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 715, Section 11.12	What is the maximum speed when being hauled by a locomotive? (km/h)	_____ km/h <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
	Appropriate procedures are in place for ensuring traction system is set for locomotive hauling?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
	What is the maximum trailing load that may be behind the vehicle when being hauled? (t)	_____ t <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/> _____

7.6 Vehicle-to-vehicle interface and coupling

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 712, Section 8.9 RSU 140, Section 5.1.1 RSU App G, Section G7/G8/G9/G10	The location of vehicle end equipment is in accordance with the requirements in section G7/G8/G9/G10 in RSU Appendix G?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 140, Section 5.1.3 RSU 285, Section 23	All vehicle-to-vehicle connections and interfaces are compatible in height, loading, and under all track curvatures and dynamic conditions are not capable of fouling or locking together?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.2 RSU 713, Section 9.2	Vehicles are fitted with bottom shelf automatic couplers with 10A contour to AAR) Standard S106?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.2 RSU 713, Section 9.2	Coupler material is cast steel to AAR or AS standards in accordance with RSU 140, Section 5.2?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.3 RSU 713, Section 9.2	Are non-standard, combined, or multi-function couplers fitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.3 RSU 713, Section 9.2	If non 10A couplers fitted, emergency couplings provided to allow coupling to 10A couplers, including BP, MR?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 140, Section 5.10 RSU 713, Section 9.2	Couplers have sufficient swing to allow coupling with short and long vehicle overhangs and to couple on curves?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.5 RSU 713, Section 9.2	Uncoupling mechanism is designed to prevent damage when loading, unloading or coupling of vehicles?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.7 RSU 713, Section 9.2	Slackless drawbars are designed to permit movement in vertical and lateral planes?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 140, Section 5.6 RSU 140, Section 5.7 RSU 713, Section 9.2	Slackless or rigid drawbars lengths comply with vehicle L/V requirements and curve negotiation specified in RSU 140?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 140, Section 5.7 RSU 713, Section 9.2	Slackless drawbars have means to prevent the system binding in curves?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 140, Section 5.7 RSU 713, Section 9.2	Slackless drawbars are designed with an assembly incorporating components for load transfer and self-adjustment of wear-induced slack without draft gear?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 140, Section 5.6 RSU 140, Section 5.7 RSU 713, Section 9.2	Slackless drawbars, rigid drawbars, and associated components are equivalent in strength to those of automatic couplers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 140, Section 5.9 RSU 713, Section 9.2	Draft gear has sufficient capacity to withstand forces equivalent to those of couplers?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.9 RSU 713, Section 9.2	Draft gear has sufficient capacity to withstand forces and shock loading due to train dynamics?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 140, Section 5.9 RSU 713, Section 9.2	What is the draft gear capacity (MN)?	MN	<input type="checkbox"/>	_____
	What is the coupler or drawbar capacity (MN)?	MN	<input type="checkbox"/>	_____
RSU 140, Section 5.11 RSU 713, Section 9.2	Coupler height is within the limits as detailed in RSU 140?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.7 Vehicle structure and body

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.9	The vehicle structure for collision members complies with RSU 713, Section 9.9 requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.9	The vehicle anti-climbers comply with RSU 713, Section 9.9 requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 715, Section 11.2 RSU 297, Section 34	A jacking point vertical load test has been carried out or simulated as per RSU 297, Section 34?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 715, Section 11.3 RSU 297, Section 34.3	A static end compression test or single vehicle impact test has been carried out or simulated as per RSU 297, Section 34.3 or 34.4?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 298, Section 35	A curve stability test has been carried out or simulated as per RSU 298, Section 35?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.3	The vehicle body is fitted with appropriate lifting points/brackets?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.3 RSU 170, Section 8.2	Do the lifting points/brackets meet the requirements of RSU 170, Section 8.2?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.3	The vehicle body is fitted with towing fixtures?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.3 RSU 170, Section 8.3	Do towing fixtures meet the requirements of RSU 170, Section 8.3?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.3 RSU 170, Section 8.4	Appropriate jacking points/pads at the side sill bogie transom area supplied?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.4	Is the cab positioned at the leading end of the vehicle, or cabs located at each end of the vehicle for travel in both directions?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 130, Section 4	Body/electrical design is compliant to EN 50153 to provide protection against direct and indirect contact with OHW.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.7 RSU 750, Section 26	Are EWP fitted, meet the requirements of AS 1418, design registered with SafeWork NSW, stability tested under the worst case loading and position?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.8	The vehicle design has considered fire, has maximised the fire resistance, and limited the use of materials that have flammability and toxicity properties in the vehicle construction?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.8 Bogies

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.8	Is the vehicle fitted with bogies?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.9 Suspension

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 711, Section 7.4.2 RSU 261, Section 10.1	Springs designed and manufactured to accepted industry standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 711, Section 7.4.2 RSU 262, Section 11.1	Appropriate suspension damping has been design/selected for the vehicle to ensure acceptable performance for twist/wheel unloading?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 711, Section 7.4.2 RSU 262, Section 11.1 RSU 715, Section 11.12	Appropriate suspension damping has been design/selected for the vehicle to ensure acceptable ride and stability up to the maximum vehicle speed (plus 10% for testing)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 711, Section 7.4.2 RSU 263, Section 12.1	Resilient suspension components have been design/manufactured to accepted industry standards and are appropriate to ensure acceptable performance for ride/twist?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 264, Section 13	Where fitted, CCSB are appropriately designed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 264, Section 13	% Load supported by CCSB?	<input type="checkbox"/> N/A		_____
RSU 264, Section 13	Maximum torque (kNm)?	<input type="checkbox"/> N/A		_____
RSU 264, Section 13	Maximum X factor	<input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 715, Section 11.7	Does the vehicle have a pivoting axle?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 715, Section 11.7	Does the pivoting axle provide sufficient travel to accommodate the required track twist?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.7	Does the pivoting axle arrangement have any bump rubbers, or other devices (springs, dampers, lockouts) that may affect the free wheel travel?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 715, Section 11.7	Does the pivoting axle arrangement have sufficient roll stiffness and roll damping in the suspension to avoid stability issues associated with traversing track irregularities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/> _____

7.10 Wheels

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 211, Section 3.2.2 RSU 711, Section 7.1	What is the new wheel diameter? (mm)	_____ mm	<input type="checkbox"/>	_____
RSU 211, Section 3.2.2 RSU 711, Section 7.1	What is the condemn wheel diameter? (mm)	_____ mm	<input type="checkbox"/>	_____
RSU 212, Section 4.3 RSU 711, Section 7.1	Does the variation in wheel diameters on an axle, bogie, and vehicle meet the requirements in RSU 212 Section 4.3?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 212, Section 4.2 RSU 211, Section 3.2.3 RSU 711, Section 7.1	What is the condemning rim thickness? (mm)	_____ mm	<input type="checkbox"/>	_____
RSU 211, Section 3.2.4 RSU 711, Section 7.1	What is the rim width? (mm)	_____ mm	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 120, Section 3.4 RSU 211, Section 3.2.2 RSU 711, Section 7.1 RSU 715, Section 11.4	What is the P/D ratio when at maximum vehicle mass and condemn wheel diameters? (t/m)	t/m	<input type="checkbox"/>	
RSU 211, Section 3.3.4 RSU 711, Section 7.1	What is the wheel tread profile?		<input type="checkbox"/>	
RSU 211, Section 3.4.2 RSU 711, Section 7.1	What is the wheel tread profile tolerance or deviation from true profile? (mm)	mm	<input type="checkbox"/>	
RSU 211, Section 3.2.1 RSU 711, Section 7.1	What standard is the wheel designed to?		<input type="checkbox"/>	
RSU 211, Section 3.2.5 RSU 711, Section 7.1	What is the wheel web shape?		<input type="checkbox"/>	
RSU 211, Section 3.3.1 RSU 711, Section 7.1	What standard is the wheel manufactured to?		<input type="checkbox"/>	
RSU 211, Section 3.4.1 RSU 711, Section 7.1	What is the surface finish of the wheel tread profile?		<input type="checkbox"/>	
	What material grade is the wheel manufactured from?		<input type="checkbox"/>	
RSU 211, Section 3.3.2 RSU 711, Section 7.1	Is the wheel material and brake blocks material compatible?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 211, Section 3.3.3 RSU App G, G11 RSU 711, Section 7.1	Are the wheels marked and identified as per RSU Appendix G, diagram G11?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.11 Axles

Applicable operating standard

RSU 711, Section 7.2
 RSU 220, Section 5

Requirement

The axle has been designed, manufactured, and operated in accordance with AS 7515?

Owner/Operator

Yes No

RSU compliance

VDR (AMB use only)

7.12 Wheel and axle assembly

Applicable operating standard

RSU 230, Section 6.2
 RSU 711, Section 7.3

Requirement

Wheel and axle assembly has been carried out to a proven industry standard?

Owner/Operator

Yes No

RSU compliance

VDR (AMB use only)

RSU 230, Section 6.3
 RSU 711, Section 7.3

Acceptable lubricant is used for pressing wheels onto axles?

Yes No

RSU 230, Section 6.4
 RSU 711, Section 7.3

Wheelsets are marked with a unique identifier for the facility assembling the wheelset, the month and year, and the unique wheelset identification number?

Yes No

RSU 230, Section 6.5
 RSU 711, Section 7.3

The wheelset assembly information in accordance with RSU 230, Section 6.5, is recorded and retained for wheelset life?

Yes No

RSU 230, Section 6.6
 RSU 711, Section 7.3

Wheelset back to back, and alignment dimensions, are within the required limits (1357 mm to 1360 mm)?

Yes No

7.13 Axle bearings

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	What is the axle bearing type (package unit bearing, axle box)?	_____		_____
	What is the bearing manufacturer?	_____		_____
	What is the bearing size?	_____	<input type="checkbox"/>	_____
RSU 240, Section 7.1 RSU 711, Section 7.4	Bearing sizes are within their design load capacity compared to the maximum vehicle mass?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 240, Section 7.2 RSU 711, Section 7.4	Bearings are a proven design and reliability for Australian mainline railway operating environment?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 240, Section 7.7.1 RSU 711, Section 7.4	Where package unit bearings are used, correctly fitting adaptors or journal boxes are being used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

7.14 Brakes system

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	What is the brake system manufacturer?	_____	<input type="checkbox"/>	_____
	The following brake types are fitted:			_____
	Automatic brake	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Straight are	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Hydraulic	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Other If other brake system is fitted, please describe the system:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
RSU 712, Section 8.1	Is the brake system a fail-safe brake system?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 712, Section 8.1	The brake system stops the vehicle safely without skidding the wheels?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 712, Section 8.5	Is a load compensation system fitted? If a load compensation system is fitted, what is the type of load compensation equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
RSU 712, Section 8.3	What type of parking brake is fitted?	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
RSU 712, Section 8.3	How many axles does the parking brake operate on?	<hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/>	<input type="checkbox"/> <hr/> <hr/> <hr/> <hr/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 712, Section 8.3	For spring parking brakes, are these held released by main reservoir pressure and have means of manually releasing?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 712, Section 8.2	For non-automatic brake systems, the parking brake is designed to meet the service brake performance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 712, Section 8.4	For automatic brake system:			
	Is the brake system relayed or non-relayed?		<input type="checkbox"/>	
	What is the type of control/triple valve?	_____	<input type="checkbox"/>	
	What is the number of vent valves fitted?	_____	<input type="checkbox"/>	
	Is a main reservoir pipe fitted and used to recharge the brake system?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 712, Section 8.1 RSU 712, Section 8.4	The brake system has been designed to be compatible with locomotives when hauled by a locomotive or when marshalled in an appropriate train consist?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 712, Section 8.4	The auxiliary reservoir has sufficient capacity to provide a brake cylinder pressure of 370 kPa/300 kPa (min/max stroke) when a full service brake reduction of 175 kPa from 500 kPa BP is applied?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.15 Brake and pneumatic equipment

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Is the vehicle fitted with tread brakes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	Is the vehicle fitted with disc brakes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	Is the vehicle fitted with drum brakes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	Is the brake rigging conventional type or bogie mounted?	_____	<input type="checkbox"/>	_____
RSU 712, Section 8.6 RSU 271, Section 15.7	All brake gear is securely mounted/supported and has safety loops or other means of security?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.6 RSU 271, Section 15.7	If there are any spring loaded type pin securing mechanisms (R clip, grip clip, lynch pin, and so on) are they only found above the axle centreline?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.6 RSU 271, Section 15.7	All split cotter pins are installed with a minimum split angle of 60 degrees?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.10 RSU 271, Section 15.8	Dummy couplings or coupling hose receptacles are fitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.6 RSU 271, Section 15.7	Brake blocks are centrally located on the wheel treads?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	What is the brake block manufacturer?	_____	<input type="checkbox"/>	_____
	What is the brake block type (model)?	_____	<input type="checkbox"/>	_____
	What is the minimum dynamic coefficient of friction of the brake blocks?	_____	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	What is the minimum static coefficient of friction of the brake blocks?	_____	<input type="checkbox"/>	_____
RSU 272, Section 16.2	What is the brake block friction type (low, medium, high, cast iron)?	_____	<input type="checkbox"/>	_____
RSU 272, Section 16.1 www.unife.org www.nicnas.gov.au	Do the brake blocks contain any materials likely to cause damage to the environment or human health or both?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 272, Section 16.1 RSU 210, Section 3.3.2	Is the brake blocks material compatible with the wheel material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All flexible coupling hoses and connections comply with the requirements of AS 2435?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All brake pipe flexible coupling hoses have an internal diameter (NB) of 35 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All main reservoir flexible coupling hoses have an internal diameter (NB) of 29 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All locomotive control flexible coupling hoses have an internal diameter (NB) of 12 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All independent brake release flexible coupling hoses have an internal diameter (NB) of 12 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All brake pipe coupling heads have a coupling head size of 32 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All main reservoir pipe coupling heads have a coupling head size of 25 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 712, Section 8.8 RSU 271, Section 15.5	All locomotive control coupling heads have a coupling head size of 19 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.8 RSU 271, Section 15.5	All independent brake release coupling heads have a coupling head size of 12 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All brake pipe coupling cocks have a nominal bore (NB) of 32 mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All brake pipe coupling cocks by design operate by application of force on the handle in the direction of rotation and stays in the selected position whilst the vehicle is in motion (by way of indent and ramp design feature)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All brake pipe coupling cocks vent on the flexible hose side when closed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All brake pipe coupling cocks conform to figure 8 in RSU 271?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All main reservoir, locomotive control and independent brake coupling cocks are approved ball type cocks with spring loaded or positively latching handles to prevent accidental operation to the closed positions?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 712, Section 8.7 RSU 271, Section 15.4	All coupling heads, nipples, and seals conform to figure 9, figure 10, figure 11, and figure 12 in RSU 271?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 712, Section 8.7	For straight air, coupling cocks are breakaway 12 mm type 'B' coupling mounted 300 mm on each side of towing pin.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7	All cocks are side venting when in the closed position.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.7	All cocks are in the vertical up position when closed and horizontal and in line with the pipe when open.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 273, Section 17	All pressure vessels comply with AS 1210?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

7.16 Toilets

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 150, Section 6.7	Vehicle is fitted with toilets? If fitted, what type of toilets are fitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____ _____	<input type="checkbox"/>	_____ _____ _____
RSU 150, Section 6.7	If fitted, toilets have holding tanks and decanting features?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 150, Section 6.7	If fitted, toilets have waste processing features and do not discharge untreated water to track?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	If the toilets are fitted with any other features, please describe these:	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

7.17 Marking, livery, and identification

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 700, Section 5.3 RSU 713, Section 9.5.1	Is the vehicle fitted with a code and number on each side of the vehicle with minimum 125 mm lettering in contrasting colour to the body?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 700, Section 5.3 RSU 713, Section 9.5.1	Is the vehicle fitted with a code and number on each end of the vehicle with minimum 125 mm lettering?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.5.2	Is the vehicle fitted with markings detailing the maximum speed, fully provisioned mass, tare mass, and coupling length with minimum 50 mm lettering at underframe/solebar level?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 715, Section 11.12	Maximum speed marking fitted in driving cab.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.5.3	Are vehicle ends painted in contrasting colours against the vehicle and operating environment, a minimum of 1m ² and 0.6 m continuous height or width?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.5.4	Is the vehicle body colour or livery green or red?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.5.5 RSU App H	Is the vehicle fitted with automatic equipment identification (AEI) tags within the allowable location and coded in accordance with RSU App H?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.5.6 RSU App I	Is the vehicle fitted with reflective delineators in accordance with RSU App I?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 713, Section 9.5.2	All cut-out or isolation cocks, operating handles and embossed letters of the air brake equipment are painted white?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 712, Section 8.7	Straight air brake couplings and cocks are painted red?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.18 Safety equipment

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 714, Section 10.1 RSU App D, Section 6.3	The vehicle is fitted with a driver safety system as per RSU App D?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.1 RSU App D, Section 6.3	The vehicle is exempt from a driver safety system (kinetic energy less than 600 kNm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU App D	The following driver safety systems are fitted: Vigilance control system	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Operator enabled system	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Trip gear system	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Automatic train protection system	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Second person	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Other (please provide details)	_____	<input type="checkbox"/>	_____
		_____		_____
		_____		_____
		_____		_____
		_____		_____
RSU App D, Section 11	The vigilance control system has the following features:			_____
	Task linked	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Non-predictive	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Speed dependant	<input type="checkbox"/> Yes <input type="checkbox"/> No		_____
	Reduced timing for driver only operation	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU App D, Section 6.3	Onboard control system fitted which does not allow powering/moving the vehicle if driver safety systems are isolated unless under defined/degraded conditions?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU App D, Section 6.3	For driver only operation the vehicle has two independent driver safety systems?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU App D, Section 6.3	For driver only operation an ONRSR approved process to enable suppression of the vigilance system whilst the vehicle is in work mode within a possession?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 714, Section 10.2	Is the vehicle fitted with a speed indicating device at each driving position?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.2	Are speed indicating device accuracy and compensation as detailed in RSU 714?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.3	Is the vehicle fitted with a data logger? What is the data logger type?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	The following information recorded in the data logger:			
	Date	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Time	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Speed	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Throttle position	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Brake handle position	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Brake pipe pressure	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Brake valve position	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Vigilance acknowledgment	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Sanding operation	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Horn operation	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Headlight operation	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.5 RSU App D, Section 6.3 RSU App D, Section 8	Is the vehicle fitted with a drivers emergency cock at each driving position that vents BP?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 714, Section 10.4	Is the vehicle fitted with a pressure indicator that indicates pressures of MR, BP, Spring Brake, and BCP where fitted in kPa ?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.6 TS TOC 1, Section 9	Is the vehicle supplied with emergency equipment as per TS TOC 1 section 9?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.7 RSU 190	Is the vehicle fitted with the following train radio system: National Train Communication System (NTCS)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	Digital Train Radio System (DTRS)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.1	Headlights fitted with an effective peak intensity of at least 200,000 cd?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.1	Headlights fitted to vehicles which operate solely within a possession area have an effective peak intensity of at least 100,000 cd?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.1	Headlights are dimmable with a low beam peak intensity of not more than 80,000 cd?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.1	Headlights aimed at centre of track at rail level at least 240 m ahead?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.1	Headlights are located 2.3 m above rail level?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 714, Section 10.8.2	Marker lights fitted with a pair of red marker lights at any trailing end and a pair of white maker lights at any leading end when in travel mode?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 714, Section 10.8.2	Marker lights, when in work mode, show white marker lights at both ends?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.2	Marker lights fitted with an intensity of at least 75 cd each?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.2	Marker lights fitted as high and wide as practicable on both sides of each end (with sufficient separation from other light sources)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	A pair of visibility lights fitted at each end with an intensity of at least 20,000 cd?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights fitted at least 600 mm ARL?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights fitted not more than 1200 mm ARL?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights separated laterally by 900 mm or 1500 mm if below 1500 mm below or above headlights?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights aimed 25 m in front of vehicle at rail level and 7.5 deg to 15 deg cross-eyed ?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights flash alternatively on and off at the leading end when the horn is sounded or when the vehicle changes direction?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	Visibility lights flash at 40 to 180 flashes per min for at least 15 s?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	The vehicle is fitted with a flashing orange beacon or beacons?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 714, Section 10.8.4	The flashing orange beacon is visible by a person standing 4 m from the vehicle in any direction?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	The flashing orange beacon has an intensity of at least 18,000 cd and a flash rate of 40 to 180 flashes per minute?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 714, Section 10.8.4	The flashing orange beacon operates under the following conditions:		<input type="checkbox"/>	<input type="checkbox"/>
	In travel mode when brakes apply	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
	In travel mode when horn is sounded	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
	In travel mode as required for safety	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
	In work mode at all times	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
	When marshalled in a train consist	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
RSU 714, Section 10.9	Vehicle is fitted with the following horns:			<input type="checkbox"/>
	Country/High horn	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
	Town/Low horn	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

7.19 Vehicles with wireless control

Applicable operating standard

RSU 760, Section 31

Requirement

If the vehicle is fitted with any wireless control or communications (not including train radio), do they meet the requirements detailed in RSU 760?

Owner/Operator

Yes No N/A

RSU compliance

VDR (AMB use only)

AMB officer name

Signature

Date

8 Part C – Vehicle static tests

If the RSU compliance is not met, it is expected to be supported with evidence to show that the noncompliance is acceptable using the AMB concession process (refer to TS 00003.1).

8.1 Static rolling stock outline test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 281, Section 19 RSU 110, Section 2.3.2	A rolling stock outline test in accordance with RSU 281 has been conducted and the vehicle complies with the rolling stock outline?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 281, Section 19 RSU 110, Section 2.3.2	The vehicle complies in the tare condition with new wheels and maximum packing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 281, Section 19 RSU 110, Section 2.3.2	The vehicle complies in the solid suspension with worn wheels (simulated or measured clearance)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	A report detailing the static outline test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

8.2 Static vehicle weigh test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.6 RSU 282, Section 20 TS 04232 (EPR 0026)	Has the vehicle had a static weigh test as per the requirements of TS 04232 (EPR 0026)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 282, Section 20 TS 04232 (EPR 0026)	Is the vehicle within the balancing requirements of TS 04232 (EPR 0026)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	Vehicle measured tare mass? (t)	_____ t	<input type="checkbox"/>	
	Vehicle measured fully loaded mass? (t)	_____ t	<input type="checkbox"/>	
RSU 120, Section 3.6 RSU 282, Section 20.5	Is the measured maximum axle load within the axle load limits of the network?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	A report detailing the static weigh test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.3 Static vehicle twist test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.7 RSU 283, Section 21	The vehicle has been tested in accordance with RSU 283, Section 21?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 715, Section 11.7	Twist test not conducted as the vehicle is fitted with a pivoting axle? (yes = not conducted)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 283, Section 21.6	Type A and B or Type C twist test carried out?	<input type="checkbox"/> A & B <input type="checkbox"/> C	<input type="checkbox"/>	_____
RSU 283, Section 21.6	Specify the wheel packing used? (mm)	_____ _____ _____ _____ _____	<input type="checkbox"/>	_____ _____ _____ _____ _____
RSU 283, Section 21.5	Twist test carried out in tare condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Maximum % wheel unloading (corner 1L)	_____ %	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Maximum % wheel unloading (corner 1R)	_____ %	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Maximum % wheel unloading (corner 4L)	_____ %	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Maximum % wheel unloading (corner 4R)	_____ %	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Does the vehicle exceed 58% wheel unloading and require 20% of the fleet to be twist tested?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 283, Section 21.4	Has the 20% fleet twist test been carried out and submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 283, Section 21.3	Maximum centre bearing lift during twist test? (mm)	_____ mm <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 283, Section 21.3	Minimum centre bearing engagement with bogie centre casting? (mm)	_____ mm <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
	A report detailing the twist test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

8.4 Static vehicle-bogie swing test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	Bogie swing test not conducted as the vehicles is not fitted with bogies? (Yes = not conducted)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 715, Section 11.8 RSU 284, Section 22	The vehicle has been tested in accordance with RSU 284 to confirm the vehicle-to-bogie swing function?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	What method was used to swing the bogie (traverser, turntable, and so on)?	_____		
RSU 284, Section 22.2	Was the bogie suspension in the solid condition (or simulated solid condition) and fitted with new wheels?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 284, Section 22.3 RSU 284, Section 22.5	What is the required bogie yaw angle to achieve a simulated 70 m curve? (Deg)	_____ Deg	<input type="checkbox"/>	
RSU 284, Section 22.1	What bogie yaw angle was the bogie tested to? (Deg)	_____ Deg	<input type="checkbox"/>	
RSU 284, Section 22.4	All bogie-vehicle components are free of interference and contact?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 284, Section 22.4	All bogie-vehicle components have adequate clearance to account for all possible modes of bogie-vehicle relative movement?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	A report detailing the vehicle-to-bogie swing test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.5 Static vehicle-vehicle swing test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.9 RSU 285, Section 23 RSU 140, Section 5.1.3	The vehicle has been tested in accordance with RSU 285 to confirm the vehicle-to-vehicle swing function?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 285, Section 23.1	What method was used to carry out the swing test (physical test or CAD)?	<hr/>		<hr/>
RSU 285, Section 23.3	The vehicles were simulated on a 100 m curve?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 285, Section 23.3	The vehicles were simulated on a 120 m reverse curve?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 285, Section 23.4	The vehicles were simulated on a 300 m vertical curve?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 285, Section 23.2 RSU 285, Section 23.5	The vehicle was simulated by coupling to an identical vehicle, a base vehicle, and other vehicles that may be coupled in service or recovery?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 285, Section 23.6	All vehicle-vehicle components are free of contact or interference?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 285, Section 23.6	All vehicle-vehicle components have adequate clearance to account for all possible modes of vehicle-vehicle movement?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
	A report detailing the vehicle-to-vehicle swing test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> <hr/>

8.6 Static brake test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 286, Section 24 RSU 712, Section 8	The vehicle has been tested in accordance with RSU 286 and RSU 712?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	The function of the brakes applying and releasing has been tested?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 286, Section 24.3 RSU 712, Section 8.4 RSU 441, Section 6.1	What are the masses used in determining net brake ratio: Tare mass? (t)	_____	t <input type="checkbox"/>	_____
	Maximum loaded fully provisioned mass? (t)	_____	t <input type="checkbox"/>	_____
	What is the automatic net brake ratio when the vehicle is at tare load? (%)	_____	% <input type="checkbox"/>	_____
	What is the automatic net brake ratio when the vehicle is at the maximum load? (%)	_____	% <input type="checkbox"/>	_____
	What is the independent net brake ratio when the vehicle is at tare load? (%)	_____	% <input type="checkbox"/>	_____
	What is the independent net brake ratio when the vehicle is at the maximum load? (%)	_____	% <input type="checkbox"/>	_____
	What is the parking brake net brake ratio when the vehicle is at the maximum load? (%)	_____	% <input type="checkbox"/>	_____
RSU 286, Section 24.5 RSU 441, Section 6.3	The parking brake can hold the vehicle at maximum load indefinitely on a 1:30 grade?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	A report on the parking brake performance has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.4 RSU 286, Section 24.4 RSU 441, Section 6.4	Has a single car air test been carried out and met the pressure and timing requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____ _____

8.7 Static (basic) kinematic test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.10	The vehicle exceeds 15 km/h for a gross mass equal to or less than 5 t, or 30 km/h for a gross mass greater than 5 t?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 289, Section 27	The vehicle has undergone a basic (static) kinematic outline test in accordance with RSU 289, Section 27?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 289, Section 27.3	The loading has been arranged to give the highest mass/centre of gravity (CG)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 289, Section 27.3	What is the maximum superelevation (cant) that has been simulated? (mm)	_____	<input type="checkbox"/>	_____
RSU 289, Section 27.3	What is the maximum measured body roll relative to the track plane? (Deg)	_____	<input type="checkbox"/>	_____
RSU 289, Section 27.3	What is the maximum measured lateral body movement relative to the axle? (mm)	_____	<input type="checkbox"/>	_____
	A report detailing the static kinematic test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> _____

8.8 Signal visibility test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.4 RSU 293, Section 30 RSU160, Section 7.6	The vehicle has been assessed for signal visibility from all driving positions?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 293, Section 30 RSU160, Section 7.6	Seated ground mounted signals visible?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 293, Section 30 RSU160, Section 7.6	Seated gantry mounted signals visible?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 293, Section 30 RSU160, Section 7.6	Standing ground mounted signals visible?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	A report or appropriate drawing detailing the signal visibility has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.9 Electrical safety inspection

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 713, Section 9.1 RSU 713, Section 9.6 RSU 294, Section 31	The vehicle has been inspected in accordance with TS 04054 (T HR RS 00200 ST), Section 31 (RSU 294)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	Are warning signs required?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	Warning signs have been fitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.10 Signal compatibility test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 700, Section 5.6 RSU 710, Section 6 RSU 715, Section 11.11 TS TOC 1, Section 9	Is the vehicle to be block worked?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 700, Section 5.6 RSU 295, Section 32 T HR SC 00006 ST	The vehicle has been tested for signal compatibility as per T HR SC 00006 ST?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	A report has been submitted detailing the signal compatibility?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.11 Signal/communication interference test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 296, Section 33 RSU App F T HR SC 00006 ST	The vehicle has been tested for signal/communications interference as per T HR SC 00006 ST?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 717, Section 13	The vehicle complies with the requirements for operating under the control of track signals as per RSU 717?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	A report has been submitted detailing the signal/communication interference?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

8.12 Safety system function test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)	
RSU 299, Section 36.2 RSU App D, Section 11	The vigilance control system timing has been tested and has the following timings and functions:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>		
	Acknowledgement to visual warning (s)		s <input type="checkbox"/>		
	Visual warning to audible warning (s)		s <input type="checkbox"/>		
	Audible warning to emergency brake application (s)		s <input type="checkbox"/>		
	Reset time (s)		s <input type="checkbox"/>		
	Each button/pedal resets vigilance cycle?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>		
	Each button/pedal resets vigilance cycle if continuously pressed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>		
	For task linked vigilance, do all task linked functions reset vigilance cycle?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>		
	RSU 299, Section 36.2 RSU App D, Section 10	Operator enabled device has been tested and functions correctly (brakes apply if pedal or handle released)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
	RSU 299, Section 36.2 RSU App D, Section 9	Trip gear system tested and functions correctly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 299, Section 36.2 RSU 160, Section 7.5	Automatic train protection tested and functions correctly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>	

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 299, Section 36.2	Any other driver safety system fitted has been tested and functions correctly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	_____
RSU 299, Section 36.3	All drivers emergency cock tested to ensure BP vents and brakes apply?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.4 RSU 714, 10.8.1	Operation of all headlights function has been confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.4 RSU 714, 10.8.2	Operation of all marker light function has been confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.4 RSU 714, 10.8.4	Operation of all high visibility light function has been confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.4 RSU 714, 10.8.4	Operation of all high visibility light flashing function has been confirmed when horn is sounded or vehicle changes direction?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.4 RSU 714, 10.8.3	Operation of flashing beacon light function has been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.5 RSU 714, Section 10.9	All horns function have been checked and all horns tested to confirm Country/High and Town/Low horns are within external noise limits (88 to 93 dB(A) at 200 m and 85 to 90dB(A) at 100 m)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 299, Section 36.6 RSU 714, Section 10.2	All speed indicating devices function has been checked and accuracy against true vehicle speed has been tested across the speed range and is within the accuracy requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

AMB officer name

Signature

Date

9 Part D – Vehicle dynamic tests

If the RSU compliance is not met, it is expected to be supported with evidence to show that the noncompliance is acceptable using the AMB concession process (refer to TS 00003.1).

9.1 Dynamic brake performance test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 287, Section 25 RSU 712, Section 8.5	The vehicle has been tested in accordance with RSU 287 and RSU 712, for brake performance and complies with the required brake performance in all loading conditions:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
	What is the maximum measured vehicle deceleration? (m/s/s)	m/s/s		_____
	What is the average measured vehicle deceleration (without fill time)? (m/s/s)	m/s/s	<input type="checkbox"/>	_____
RSU 286, Section 24.5 RSU 712, Section 8.3	The parking brake has been tested on grade (1:30 or equivalent) for performance and meets the requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 712, Section 8.2 RSU 712, Section 8.5	For non-automatic brake systems, the parking brake meets the brake performance requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 287, Section 25.8 RSU 712, Section 8.5 RSU 715, Section 11.13	A brake functionality test has been carried out?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	What is the stopping distance for the brake functionality test? (m)		m	<input type="checkbox"/> _____

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
	A report detailing the dynamic brake performance has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

9.2 Ride performance test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 716, Section 12.1	The vehicle exceeds 30 km/h with a gross mass equal to or greater than 5 t, or 50 km/h with a gross mass less than 5 t?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 288, Section 26, RSU 716, Section 12	The vehicle has been tested in accordance with RSU 288 and RSU 716?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 288, Section 26.4 RSU 716, Section 12.4	Vehicle tested in tare condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
RSU 288, Section 26.5	Vehicle test wheel profile?		<input type="checkbox"/>	
RSU 716, Section 12.2	Location of accelerometers on vehicle?		<input type="checkbox"/>	
RSU 288, Section 26.6 RSU 716, Section 12.5	Test location?		<input type="checkbox"/>	
RSU 288, Section 26.6	Test track condition index (TCI)		<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 288, Section 26.6 RSU 716, Section 12.6	Distance that test speed was maintained? (km)	_____ km	<input type="checkbox"/>	_____
RSU 288, Section 26.3	Test speed (km/h)	_____ km/h	<input type="checkbox"/>	_____
RSU 288, Section 26.3 RSU 716, Section 12.3	Mean peak lateral acceleration (g) at 110% of design speed	_____ g	<input type="checkbox"/>	_____
RSU 288, Section 26.3 RSU 716, Section 12.3	Peak lateral acceleration (g) at 110% of design speed	_____ g	<input type="checkbox"/>	_____
RSU 288, Section 26.3 RSU 716, Section 12.3	Mean peak vertical acceleration (g) at 110% of design speed	_____ g	<input type="checkbox"/>	_____
RSU 288, Section 26.3 RSU 716, Section 12.3	Peak vertical acceleration (g) at 110% of design speed	_____ g	<input type="checkbox"/>	_____
RSU 716, Section 12.3	Ride index (Lateral)	_____	<input type="checkbox"/>	_____
RSU 716, Section 12.3	Ride index (Vertical)	_____	<input type="checkbox"/>	_____
RSU 288, Section 26.3 RSU 716, Section 12.3	Hunting within limits (greater than 0.5 Hz at less than 0.35 g for less than 10 s)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
	A report detailing the ride test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

9.3 Pitch and bounce test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 290, Section 28	The vehicle has been tested or simulated in accordance with RSU 290, Section 28?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	_____
RSU 290, Section 28.3	The maximum and average vertical accelerations are within limits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 290, Section 28.3	The minimum vertical wheel loads are within limits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 290, Section 28.5	If the test has been simulated, has the simulation been validated with data from measured dynamic response of the vehicle?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>
RSU 290, Section 28.3	A report detailing the pitch and bounce test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

9.4 Dynamic kinematic performance test

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 715, Section 11.10	The vehicle exceeds 15 km/h for a gross mass equal to or less than 5 t, or 30 km/h for a gross mass greater than 5 t?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 289, Section 27	The vehicle has been tested in accordance with RSU 289, Section 27?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
	The loading has been arranged to give the highest CG/mass?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
RSU 289, Section 27.5	Test location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Testing speeds? (km/h)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RSU 289, Section 27.4	Tested cant deficiency? (mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 289, Section 27.4	Percentage tested cant deficiency above design cant deficiency? (%)	%	<input type="checkbox"/>	
RSU 289, Section 27.6	Maximum measured lateral body displacement relative to wheelset? (mm)	mm	<input type="checkbox"/>	
RSU 289, Section 27.6	Maximum measured body roll relative to wheelset? (Deg)	Deg	<input type="checkbox"/>	
RSU 289, Section 27.7	The vehicle kinematic behaviour has been simulated to determine the maximum kinematic movement?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 289, Section 27.7	The simulation has been validated using data from measured dynamic responses from the vehicle?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 289, Section 27.6	Maximum simulated lateral body displacement relative to wheelset? (Deg)	Deg <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 289, Section 27.6	Maximum simulated body roll relative to wheelset? (mm)	mm <input type="checkbox"/> N/A	<input type="checkbox"/>	
RSU 289, Section 27	A report detailing the dynamic kinematic test has been submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>

9.5 Environmental tests

Applicable operating standard	Requirement	Owner/Operator	RSU compliance	VDR (AMB use only)
RSU 700, Section 5.5 RSU 150, Section 6.2, 6.3 RSU 292, Section 29.2	The vehicle has been tested for noise emissions as per RSU 292/RSU 150?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
	A report has been submitted detailing the test results of the type testing for noise performance?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 700, Section 5.5 RSU 150, Section 6.5 RSU 292, Section 29.3	The vehicle has been tested for vibration as per RSU 292/RSU 150?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
	A report has been submitted detailing the test results of the type testing for vibration performance?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
RSU 700, Section 5.5 RSU 150, Section 6.6 RSU 292, Section 29.4	The vehicle has been tested for exhaust emissions as per RSU 292/RSU 150?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<hr/>
	A report has been submitted detailing the test results of the type testing for vibration performance?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/> <hr/>

AMB officer name _____

Signature _____

Date _____

10 Vehicle summary (AMB use only)

Additional notes or details with vehicle design review:

Is the vehicle design and operation fully within the scope of TS 04052 (T HR RS 00000 ST) *RSU 000 Series – Minimum Operating Standards for Rolling Stock – General Requirements?*

Yes No

If 'No', provide reference to the TfNSW internal safety change management standard:

11 Vehicle acceptance (AMB use only)

Code/Plant	Description	Maximum Speed (km/h)	Maximum Gross Mass (t)	Coupling Length (m)	Remarks	Notes

Special conditions / notes:

11.1 Publication

TOC Waiver authority not issued: (TOC Waiver not issued, vehicle rejected)

TOC Waiver authority number issued: _____

TOC Waiver authority will expire on: _____

Amendment to appear in TOC amendment pages: _____

11.2 Sign-off

AMB officer name: _____

Signature: _____

Position: _____

Date: _____

AMB Fleet